# 2020 VISION

The Arizona University System
Long-term Strategic Plan
2008-2020

Arizona Board of Regents

www.azregents.edu/2020.pdf

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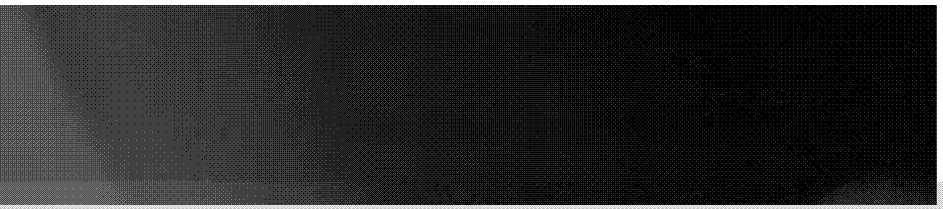
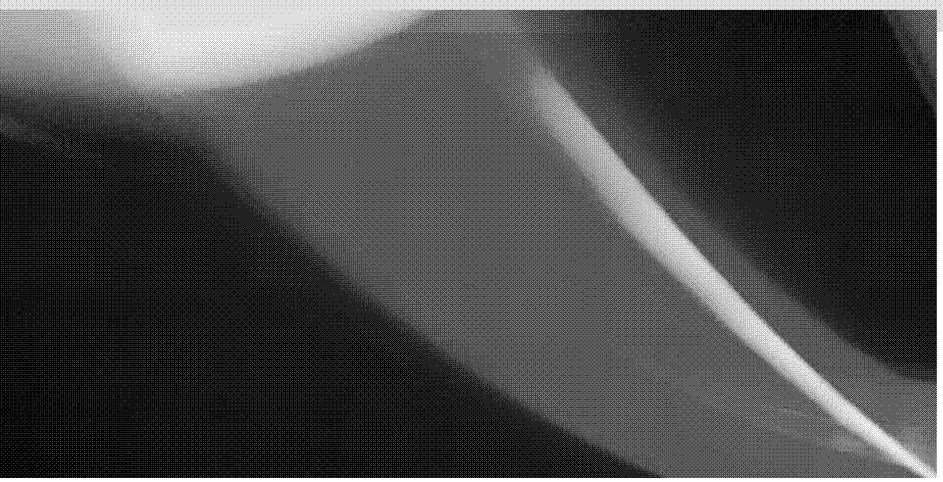


# ARIZONA'S UNIVERSITIES

"A top-performing state university system, nationally recognized for excellence in academic and research pursuits that support and stimulate a growing vibrant economy and a high quality of life for Arizonans."



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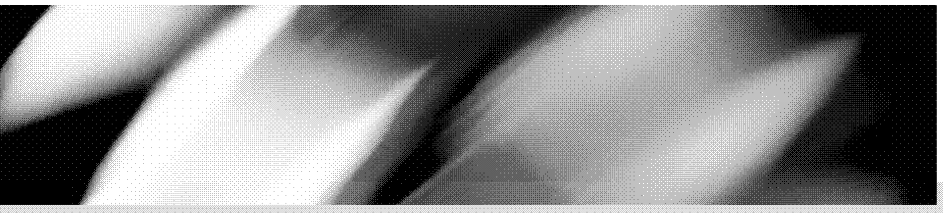

# INTRODUCTION TO THE STRATEGIC PLAN

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# INTRODUCTION TO THE PLAN

## The Mission

- To increase the educational attainment of Arizona citizens by producing enough high-quality university degrees for the state to be nationally competitive by the year 2020.
- To increase the prominence of the system's research enterprise so that it can contribute to the knowledge economy and improve the quality of life in Arizona.
- To provide the educated workforce needed to fill shortages and to stimulate demand for higher paying jobs in Arizona.

The Arizona Board of Regents presents in this 2020 Vision a framework for the Arizona University System to improve the economic strength of our state and quality of life for Arizonans over the next 12 years. This plan lays out a series of touchstones for this ambition organized around four key themes: Educational Excellence, Research Excellence, Community Engagement and Workforce Impact, and Productivity.

This plan builds on a foundation manifested in previous strategic planning efforts of the universities and the Board, including the establishment of a medical college in Phoenix, development of new health professions programs not offered by public institutions in the state, growth in the research enterprise, and increasingly intensive efforts to provide baccalaureate access to all regions of the state.

## Why the Plan is So Important

Educated Arizonans will enjoy greater economic prosperity

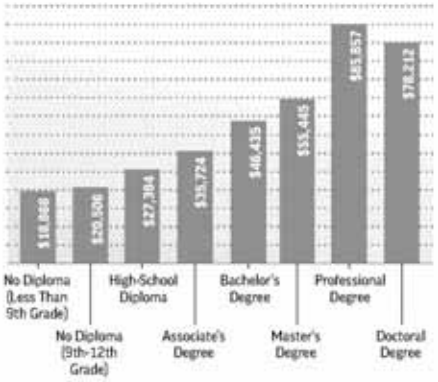
All Arizonans, not just those with a degree, will benefit as more become educated

Arizona will reap both economic and social rewards from university research

Moving Arizona's economy forward will demand higher paying, more economically diverse jobs that require a more highly educated workforce

Connecting the work and service of the universities to the communities will improve the quality of life in Arizona

## Median Earnings by Education: 2006




Source: U.S. Census Bureau, Current Population Survey, Educational Attainment in the U.S.: 2006

## MORE EDUCATION
# HIGHER LIFETIME EARNINGS

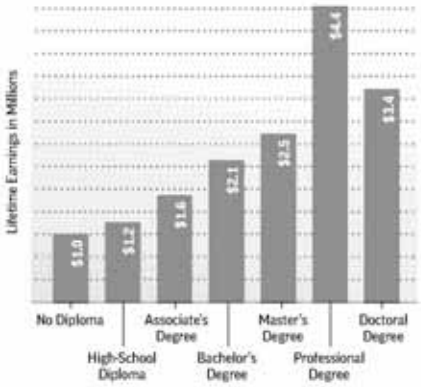
The more education a person attains, the higher that person's lifetime earnings. The financial impact over a person's working life is significant. Someone with a bachelor's degree can expect to earn, on average, over $1 million more than someone with only a high school education.[1]

Furthermore, this differential between the lifetime earnings of college graduates and high school graduates has increased over time. For example, full-time male workers between the ages of 35 and 44 experienced an increase in this differential from 38% between 1980-84 to 94% between 2000-2003.[2]

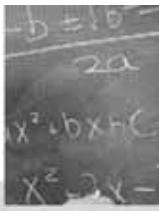
Additionally, people without a degree also benefit as others become more educated. A recent study found that a 1 percentage point increase in the proportion of a state's population with a bachelor's degree raises wages in all educational attainment groups, even those without a college degree. This benefit ranged from about 1.2% for workers with some college to almost 2% for those with less than a high school diploma.[3 2]

2020 Vision calls for Arizona to add between 670,000 and 700,000 new bachelor's degree educated workers over the period between 2006 and 2020 which would increase the proportion of our adult population with a bachelor's degree between 3.7 and 4.1 percentage points.

### LIFETIME EARNINGS BY EDUCATION




[1] Census 2000
[2] Dennis Hoffman, March 2008, Quantitative examples of the financial and economic benefits of higher education
[3] Enrico Moretti, Journal of Econometrics, "Estimated Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Sectional Data," 2004



# RESEARCH ACTIVITY

## More Research Activity – Higher Economic Returns and Quality of Life

This plan focuses on increasing the number of college-educated citizens so we can reap the benefits just discussed; however, the universities also contribute a great benefit to Arizona through their research. University research expenditures flow down to private-sector activities, having significant effect on both the level of industrial research and development and the transfer of technology to the public. This in turn creates innovations and higher paying jobs in the same fields; the average real wage in urban areas with research universities is nearly $3,300 higher than the average wage in all urban areas, and the per capita income differential is about $2,800.

While most studies of the impact of research revolve around spending or money circulating in the economy–the creation of jobs, wages and sales–knowledge creation itself is important.[1] Significant knowledge is created by university research and can be measured by inventions, patents, and start-up companies, all of which fuel the private sector and translate into jobs–high paying, highly skilled jobs.

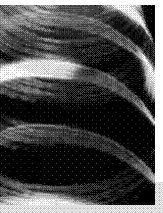
The full impact of research is hard to measure, but several studies suggest two impacts that contribute to the multiplier effect of research spending:

- Direct impact of university expenditure of research funds; and
- Indirect impact on private sector companies that license university technology and start-up and spinoff companies, including general corporate research and development operations.

These studies suggest that the university research multiplier could be as high as 7 or 8. Therefore, a $100 million research grant could have a total impact in Arizona of about $750 million.[2]

- More college-educated people produce benefits, but to achieve optimal impact it must be coupled with economic development strategies stimulating more higher quality jobs
- Financial benefits of research are important, but benefits to the quality of life include the infusion of well-trained graduates into the economy and services for our communities

[1] Council for Community and Economic Research Cost of Living Index
[2] Hoffman, 2008



## PROFILE OF
# ARIZONA IN 2020

What will Arizona look like in 2020 if the plan is successful? The following chart illustrates specific outcomes of the plan ranging from the educational attainment rates to degree production and performance targets necessary to meet these objectives.

The outcomes and assumptions are displayed in a range. There are three standards referred to as Bronze, Silver, and Gold. Achieving any of the standards will result in increases in performance, but the magnitude of change is differentiated within a range. The differentiation reflects the extent to which success will depend on the performance of other sectors, not just the university sector.

**Profile of Arizona Now and Arizona in 2020**

| **Arizona Now** | **Arizona in 2020** | | |
|---|---|---|---|
| | **Bronze** Target | **Silver** Target | **Gold** Target |
| 25% Of Adults Have Bachelor's Degree 1 Million Adults | 26% | 29% | 30% |
| 19,100 Bachelor's Degrees Produced Annually In Arizona University System | 20,200 | 28,200 | 36,000 |
| 78% Freshman Retention Rate | 80% | 84% | 86% |
| 56% 6-Yr Graduation Rate | 57% | 59% | 65% |
| 45% College Going Rate (from K-12) | 50% | 52% | 53% |
| 8,400 Community College Transfers | 8,900 | 16,000 | 24,000 |
| 5,700 Community College Transfers Who Go On To Earn A Bachelor's Degree | 5,800 | 10,500 | 15,700 |
| 99,700 Undergraduate Enrollment | 105,400 | 128,300 | 155,800 |
| $783 Million Total Research Expenditures | $822 Million | $1.7 Billion | $1.8 Billion |

Achieving either the Silver or Gold standard will depend heavily on how well the K-12, Community College, and University sectors are able to attract more students through the pipeline and for more of them to be prepared to succeed.

In some ways, this plan extends beyond the ambition of our own university system, since a large part of the plan revolves around increasing the educational attainment rate of the entire state. Achieving either the Silver or Gold standard will depend heavily on how well the K-12, Community College, and University sectors are able to attract more students through the pipeline and for more of them to be prepared to succeed. In other words, the university system alone lacks the ability to reach either the Silver or Gold standard. These levels of increase in the system can be achieved only if significant change occurs throughout the entire educational pipeline. Universities also have a role in making sure the pipeline is strengthened and continue to share in this responsibility through collaborative programs and partnerships with both sectors.

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PROFILE OF
# ARIZONA IN 2020

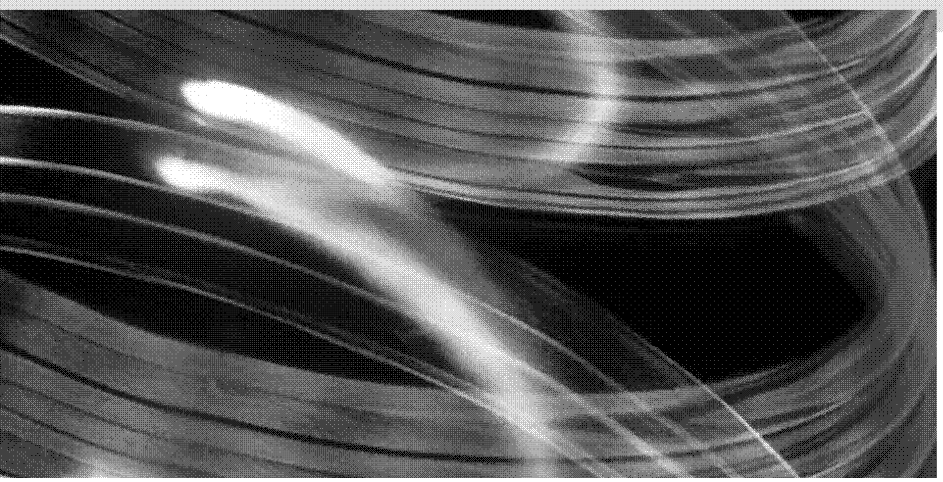
Currently, just over 25% of our adult population, or just over 1 million Arizonans, have at least a bachelor's degree. This plan outlines a range of ambitious targets for improving this statistic so Arizona can enjoy all the rewards associated with an educated population.

### THE CURRENT ECONOMIC CRISIS WILL IMPACT THIS PLAN

The current economic crisis has punished Arizona more deeply than any other state in the nation. Achieving the goals and objectives of this plan will depend on the ability of the system to minimize the impact of drastic reductions in state appropriations, not only to the higher education sector, but also to our K-12 and community college pipeline. In the worst-case scenario, achieving the gold targets could be put out of reach and the Silver targets very challenging.

The framework and the priorities of the long-term plan will drive strategies for managing the impact over the short term while the economy is recovering. In addition, the longer-term horizon of the plan allows for thoughtful planning in spite of short-term economic setbacks.

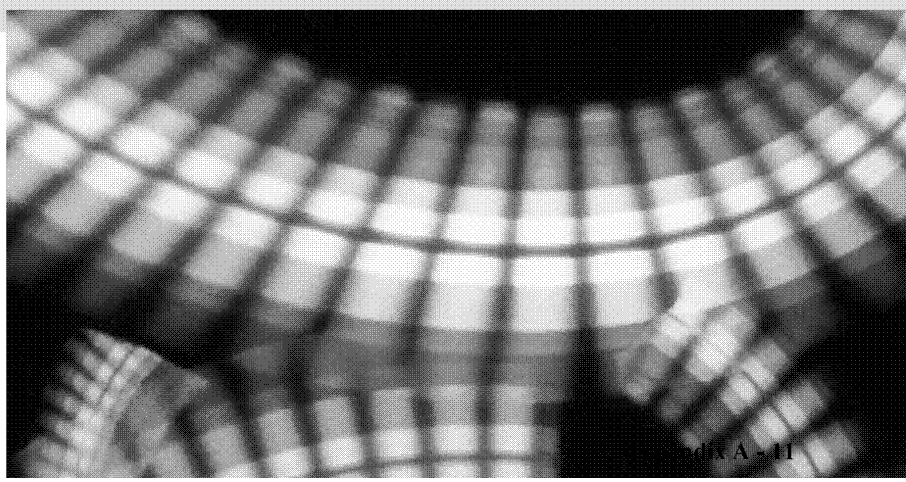
# GOALS AND METRICS OF THE PLAN



# 01 EDUCATIONAL EXCELLENCE

GOAL ONE

"To be nationally competitive in the percentage of Arizona's citizens with a high-quality bachelor's degree by providing affordable access through a well-coordinated and aligned system."



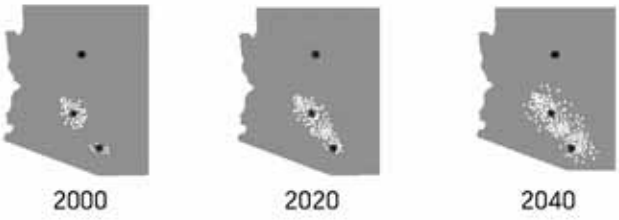
# 01 GOAL ONE BACKGROUND

In 2006, Arizona was the fastest-growing state in the nation and is regularly among the top growth states. As can be seen in the figure below, tremendous growth (shown in white) is predicted between 2000 and 2020, with even more dramatic growth between 2020 and 2040.

| KEY INDICATORS OF PROGRESS |
|---|
| Number of bachelor's degrees awarded |
| Number of Master's degrees awarded |
| Number of Arizona community college students who transfer to a university |
| Number of Arizona community college transfer students awarded bachelor's degrees |
| Educational quality as reported in National Survey of Student Engagement (NSSE) |
| Cost of attendance as a percentage of Arizona median family income |

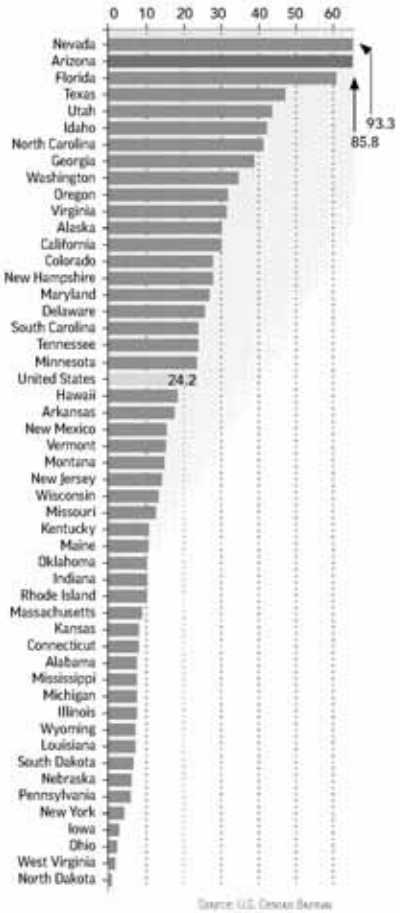
Only Nevada is expected to grow faster than Arizona between now and 2025. The national average expected growth rate is about 24%, with Arizona at just under 86%.

## POPULATION GROWTH




Source: ASU Decision Theater

## Projected Percent Change in Total Population, 2000 – 2025




Source: U.S. Census Bureau

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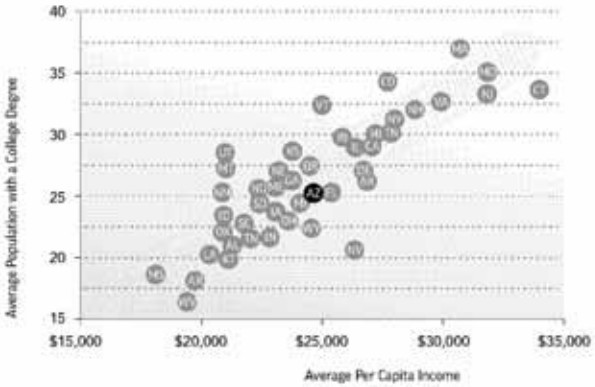
# AN EDUCATED POPULATION

Currently, just over 1 million Arizonans–barely 25% of our population, have at least a bachelor's degree. This plan outlines a range of ambitious targets for improving this statistic so that Arizona can enjoy all the rewards associated with an educated population.

## College Degrees vs. Per Capita Income




Numerous studies and data bear out a strong correlation between educational level and personal income, productivity, civic participation, life expectancy, employment status and community strength. The quickest way to increase the per capita income is to increase the percentage of Arizonans with a bachelor's degree, which is at the heart of this plan.

## Benefits of Higher Education

| | |
|---|---|
| Public economic benefits | Increased tax revenues, greater productivity, increased consumption, increased workforce flexibility, decreased reliance on government financial support |
| Individual economic benefits | Higher salaries and benefits, higher employment levels, higher savings levels, improved working conditions, personal/professional mobility |
| Public social benefits | Reduced crime rates, increased charitable giving and community service, increased quality of civic life, social cohesion, appreciation of diversity, improved ability to adapt and use technology |
| Individual social benefits | Improved health and life expectancy, improved quality of life for children, better consumer decision making, increased personal status, more hobbies and leisure activities |

"States with more college graduates have stronger economies... lower unemployment and poverty rates, higher ranking on measures of economic strength."

- The Information Technology and Innovation Foundation

# ACHIEVING THE GOLD STANDARD

The 2020 Vision calls for Arizona to be nationally competitive in educational attainment by 2020. The plan defines this ambition within the following range:

- **Bronze Standard** – the increase in educational attainment based mainly on changes in population, assuming some increases in performance rates, such as graduation and retention rates. It will be more difficult to maintain current performance levels as demographic changes require greater resources to serve a larger concentration of students who historically have lower college preparation and college-going rates.
- **Silver Standard** – the increase in educational attainment assuming modest improvements in performance from other educational sectors in the pipeline and ambitious improvements in performance from the Arizona University System necessary to achieve the national average by 2020.
- **Gold Standard** – the increase in educational attainment assuming very significant improvements in all sectors of the educational pipeline, including early education, K-12, community colleges, private colleges and universities, and our three public universities. This target represents what will be required of all sectors in order to achieve Governor Napolitano's call in her January 2008 State of the State address to double the number of bachelor's degrees produced in the Arizona University System.

Achieving the Gold Standard – doubling the number of bachelor's degrees produced – would take Arizona above the national average in educational attainment by 2020.

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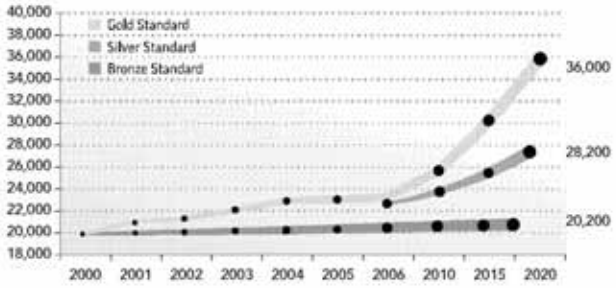
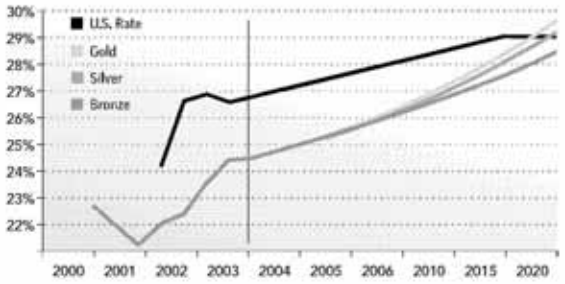
## Bachelor Degree Targets




## Moving Arizona to National Average



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# ACHIEVING THE GOLD STANDARD 01

Demographers predict that in 2020, about 1 of 3 Americans will have a bachelor's degree. In 2000, fewer than 1 in 4 Arizonans had a bachelor's degree. If past trends continue, Arizona will fall short of the national average by about 220,000 college graduates.

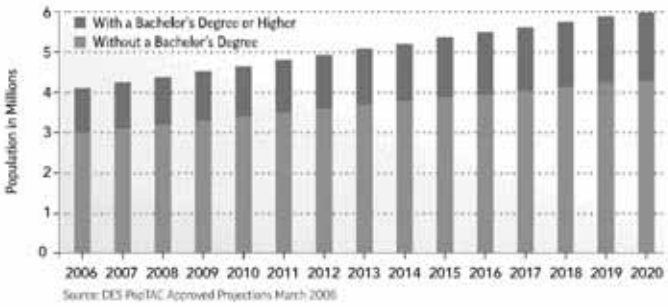
### What will it take for Arizona to achieve or exceed educational parity with the rest of the nation?

- Decision Theater models quantify the challenge through a dynamic decision support tool
- Assumptions concerning population projections crucial to the modeling was based on the most sophisticated projections available from the U.S. Census Bureau[1]
- Final analyses show that as much as 28.7% of the adult population in the U.S. will have a bachelor's degree by 2020–a full 3.7% higher than Arizona's current 25%
- Arizona must add more than 670,000 bachelor's degree holders to reach national parity

### So what will this mean for Arizona?

- Gold standard moves Arizona above the expected national average to 30% of adults with a bachelor's degree
- Silver standard would achieve national parity in adults with a bachelor's degree at 28.5%
- 2020 university graduates are already in the 5th grade – thus success will require immediate and concerted efforts from all sectors
- Rapid improvements and immediate investments to increase performance in K-12 and connections between community colleges and universities will be critical to achieving these goals

Moving Arizona Educational Attainment to National Average
Population 25 Years and Older



Source: DES PopTAC Approved Projections March 2006

[1] Day, Jennifer Cheesman and Bauman, Kurt J. Have we reached the top? Educational Attainment Projections of the U.S. Population Working Paper Series No. 43, Population Division, U.S. Census Bureau: Washington D.C. May 2000

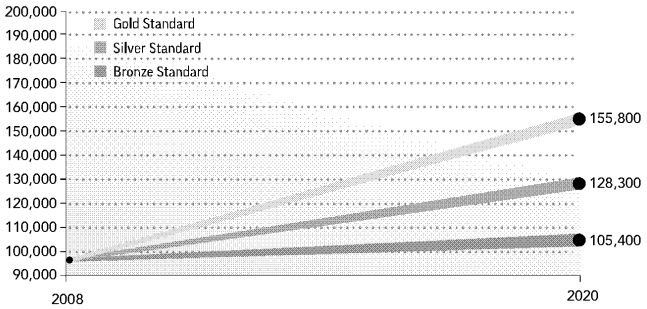
# 01 INCREASED CAPACITY

While degree production is the standard measure of the goals, achieving the degrees requires a substantial increase in enrollment capacity in the system. The chart below illustrates the level of capacity change that must be addressed by 2020 in order to achieve the degree targets. In 2008 the undergraduate enrollment in the Arizona University System was just under 100,000 students (about 130,000 in total enrollment). The Gold standard would require almost a 60% increase to just over 156,000. The Silver standard would require a 47% increase to about 128,000 undergraduates.

- Achieving the Gold standard would add about the same number of students in 12 years than currently attend Arizona State University (one of the largest universities in the nation)
- Achieving the Silver standard would add more students in 12 years than currently attend Northern Arizona University

Achieving these goals will require dramatic new investments to support larger numbers of students as well as changes in system design that may include the creation of new educational platforms and campuses, the expansion of on-line and distance education programs, more 2+2 programs, and other collaborative partnerships. In addition, the system would have to deliver academic programs by every means possible, to every corner of the state, and to students of all ages – this without reducing the value of an Arizona university diploma.

## Undergraduate Enrollment Targets




# ALIGNMENT OF THE EDUCATIONAL PIPELINE 01

Achieving the 2020 Vision is attainable only to the extent we are successful in motivating more of our K-12 students to plan for, prepare for, and succeed in earning a bachelor's degree.

Arizona ranks low in the percentage of students in our K-12 system that proceed on to a bachelor's degree. The U.S. average is just over 38% compared to about 30% in Arizona.

If Arizona is to achieve the aggressive degree production outlined in the 2020 Vision, more work will be needed to shore up this pipeline and encourage more of our K-12 students to plan, prepare, and succeed in obtaining a bachelor's degree. The chart below illustrates the pipeline issues by showing how many students out of every 100 students in the 9th grade make it through the system and how Arizona compares to the United States and to best-performing states.

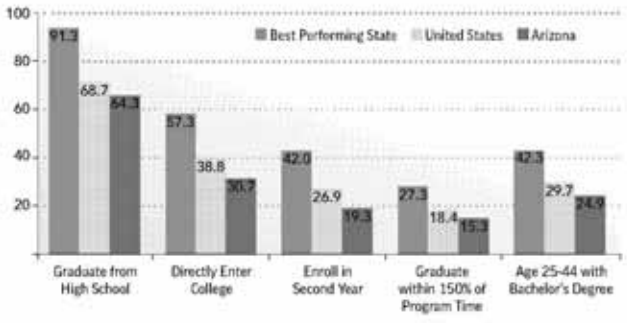
### STRENGTHENING THE PIPELINE WILL REQUIRE:

- Successful collaborative partnerships between and among all educational sectors with clearly articulated and aligned expectations
- Innovative methods to engage first-generation, rural, and non-traditional students in higher education
- Smooth transitions from one sector to the next
- Support for Governor's and P-20 policy changes aimed at ensuring that more students are prepared to succeed in college and careers

### INITIATIVES INCLUDE:

- Increasing high school graduation requirements
- Expanding early college options
- Improving rigor of academic standards
- Improving assessments
- Creating multiple pathways to earn a high school diploma

### EDUCATIONAL PERFORMANCE




Source: Ben Mortenson

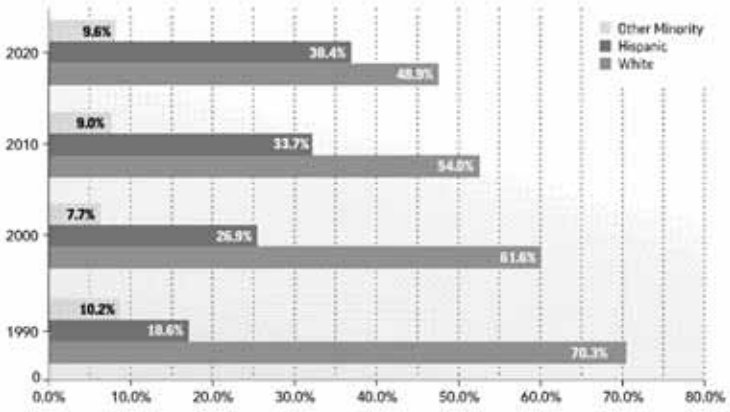
# 01 CLOSING THE GAPS

The 2020 Vision assumes that the opportunity to earn a bachelor's degree will be available to all Arizonans. In fact, the plan will not succeed without addressing the participation and achievement gaps of Arizona, especially those segments that have participated in college at lower rates. Of particular interest is the forecasted growth in the Hispanic population. The chart below details the shifts in demographics expected over the next 12 years. In 1990 over 70% of our population was white, which is expected to decline to less than 50% by 2020. By contrast, the Hispanic population is projected to move from less than 20% in 1990 to just under 40% by the year 2020.

Evidence suggests that in order to achieve the 2020 Vision, we must address several college participation and success gaps in our system:

(1) Racial and ethnic gaps
(2) Low income families
(3) Younger generation in Arizona
(4) Students from rural areas
(5) Non-traditional students

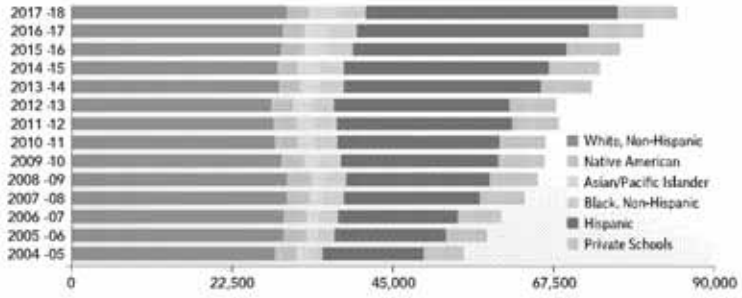
POPULATION DISTRIBUTION 1990-2020
BY RACE AND ETHNICITY



# CLOSING THE GAPS 01

Additionally, the chart below shows the pipeline of high school students necessary to achieve the degree production needed for the goals over the next 12 years to 2020. The university system must reach out to these underserved populations with resources and strategies so that more can be successful. Sufficient support services will be needed as well, to ensure smooth transitions from year to year. Without specific and effective strategies to close the gaps, parity with the national average by 2020 will be unattainable.

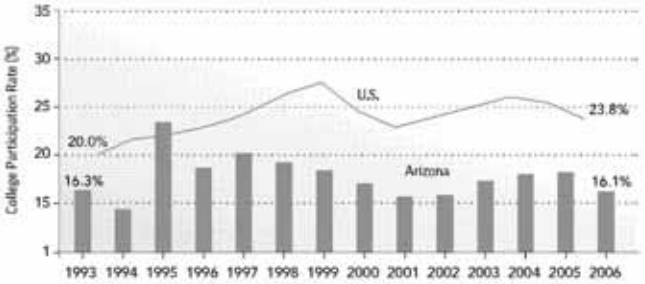
AVERAGE HIGH SCHOOL GRADUATES BY RACE AND ETHNICITY




College participation among Arizona's low income families is also well below the national average and likely to get even worse without policy intervention. In 2006 only 16% of children from low income families went to college compared to over 23% nationally.

# 01 COLLEGE PARTICIPATION IN LOW INCOME FAMILIES

ARIZONA COLLEGE PARTICIPATION RATES FOR STUDENTS FROM LOW INCOME FAMILIES FY1993 TO FY2006




Source: Arizona Postsecondary Commission - November 8, 2007 - Phoenix, AZ
www.postsecondary.org

Part of the 2020 Vision involves ensuring that financial barriers do not prevent students from low income families from participating in college. The chart above shows a significant gap between Arizona and the national average on participation in college for low income students. A key to success will be our ability to align the system's policies to balance the need for additional resources against the desire to maintain affordability for all students. This policy balance will incorporate tuition policy, state funding policies, and financial aid policies.

Three additional points of emphasis include the younger generation in Arizona, students in rural areas, and adult non-traditional students. Universities must recruit enrollments beyond traditional first time freshmen in order to meet the goals. Strategies to engage a diverse group of students will be important, especially since the predicted number of K-12 students in the pipeline over the next 12 years, even with increases in college going rates, will be insufficient to meet the enrollment and degree demands of the Silver and Gold standards.

The chart to the right illustrates how Arizona ranks in the proportionate difference between our college-educated younger and older generations. Furthermore, data suggest this gap may be widening.

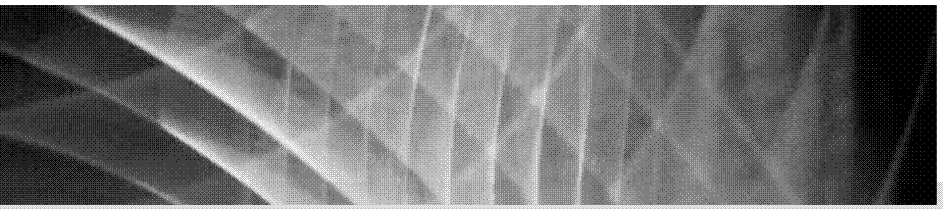
PERCENTAGE DIFFERENCE BETWEEN YOUNGER (AGE 25-34) AND OLDER (45-54) POPULATIONS WITH COLLEGE DEGREES, ASSOCIATE AND HIGHER, 2005


Source: U.S. Census Bureau, 2005 ACS

# STRATEGIES FOR EXCELLENCE 01


## MACRO STRATEGIES FOR EDUCATIONAL EXCELLENCE:

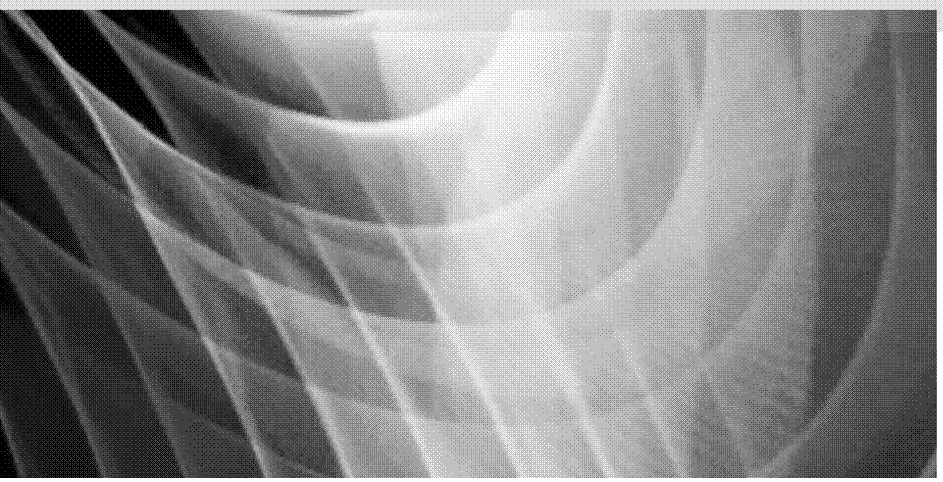
1. **Align the educational pipeline**
   a. Strengthen existing and support new partnerships with all educational sectors to facilitate and improve the pipeline to university education (enrollment initiatives, curricula alignment, teacher education improvements, etc.)
   b. Increase transfers and degree completions from the community colleges to the universities
2. **Close opportunity and success gaps**
   a. Increase opportunities for students from low income families and from rural areas with low educational attainment rates
   b. Increase the number of younger adults in the population with a bachelor's degree
   c. Close the opportunity and success gaps for underserved ethnic and racial groups of students
   d. Provide student support such as mentoring, tutoring, and advising
3. **Plan for and incentivize higher degree production**
   a. Provide incentives and rewards to increase the degree production and to serve additional students
   b. Expand the capacity to serve additional students (examine potential for creative solutions–joint admissions (hybrid) models, distance learning, technology, new branch campuses, 2+2 programs, and other collaborative partnerships, etc.)
4. **Minimize financial barriers for low income families**
   a. Improve tuition policies to ensure affordability for low income families, to balance state and student share of the costs, to increase predictability, and to ensure resources are available to achieve the plan



# RESEARCH EXCELLENCE 02

GOAL TWO

"To increase the research capabilities and performance of the Arizona University System to a level of competitive prominence with peer rankings of top American research universities."



# BACKGROUND 02

"Greener" energy sources, crops that thrive in the desert, cheaper and faster communications devices, ways to secure international borders but still promote trade, personalized medicine, protecting our country and the world from pandemic disease--advances like these are the products of intense research and development and are needed now more than ever.

Much of the innovation that improves people's lives and drives societal change springs from research performed in universities, by researchers and scholars educated and trained in universities. Universities around the world serve as incubators for innovative activity and educate a populace that is creative and capable.

| Key Indicators of Progress |
| --- |
| Total research expenditures |
| Number of doctoral degrees awarded |
| Number of invention disclosures transacted |

"Twenty-nine of the top thirty high-technology metropolitan areas in the U.S. are home to, or adjacent to, major research universities. The presence, or absence, of high-technology enterprises explains most of the difference in economic growth across U.S. metropolitan areas."

- Milken Institute; America's High-Tech Economy, July 13, 1999.

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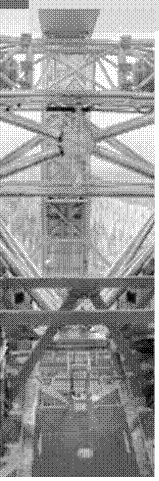
# 02 THE INTERNATIONAL MARKETPLACE

## U.S. Losing Position in International Market

U.S. universities have been international leaders in generating research and development and have helped to fuel the strongest economy, the greatest affluence, and among the most well-educated citizenry known.

Some fear that the U.S. may soon lose its position as the world's leader in science and technology. This trend is coupled, almost certainly causally, with a declining level of basic science literacy in the U. S.

The university enterprise, and research-enriched education it provides, constitute the essential foundation of a knowledge-based society. Yet today the maintenance of that foundation is seriously threatened.



"...the age of the global knowledge economy is firmly taking root... Of particular importance in today's super-charged technology world is the convergence of technology and the value it brings into new markets and technology advances... This new emphasis on technology convergence is most pronounced in academic research where scientific discoveries and advances are often found at the intersection of key fields..."

- Advancing Arizona's Innovation Economy, Arizona Economic Resource Organization, 2008.

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# RESEARCH FUNDING 02

## The Funding Challenge:

- In recent years federal support for university research has not kept pace with past growth – funding levels are basically flat
- Non-defense related support has decreased since 2004
- Private sector investment in research is high but not focused on the basic research that ultimately must form the basis for applications

## Return on Investment

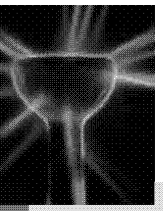
All three of Arizona's public universities can demonstrate through economic impact studies that the state gains a solid return on investment for funds that go into the research enterprises. Even though the Arizona Board of Regents' Technology and Research Initiative Fund (TRIF) is a small portion of the entire research enterprise, it provides a strong illustration of this point. TRIF includes a myriad of examples of strong returns on investments from the various programs at the three universities. In 2008 The University of Arizona's investments from TRIF yielded about $5.70 for every $1.00 invested. In the same year, Arizona State University will generate almost $4.00 in grant and contract expenditures for every dollar invested in research from returned overhead and TRIF. Northern Arizona University is generating $3.50 of competitive funding for every TRIF dollar invested.

## The Transfer of New Knowledge

The transfer of new knowledge is crucial to the quality of life in Arizona and the economy. Better solutions to difficult problems facing society make a profound and measurable impact on the well-being of Arizonans.

### Benefits of New Knowledge

| |
|---|
| More licenses, patents, spin-offs and venture capital investment in Arizona |
| Increased national and international recognition – improves competitiveness in the international marketplace |
| Better solutions to difficult problems facing society – makes a profound and measurable impact |
| Better researchers = better educators – brings innovation and discovery to the classroom, which will better prepare Arizona's workforce |



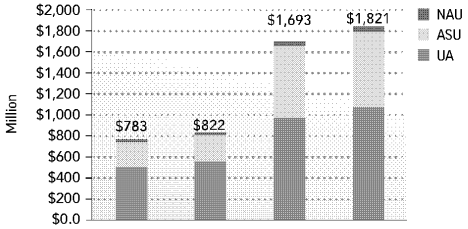
# 02 2020 TARGET FOR RESEARCH EXPENDITURES

The 2020 target for building the research enterprise is measured by total research expenditures in the three universities. Research expenditures, as defined by the National Science Foundation as a basis for national rankings of universities, are a measure of the total R&D activity of an institution, including that funded by extramural grants and contracts and that performed with institutional support.

The goals for the Arizona University System were generated by the Vice Presidents for Research at the three universities. Rather than a simple one-size-fits-all analysis, each university made estimates based on assumptions and goals consistent with its particular mission; and the goals for Gold, Silver, and Bronze levels of growth reflect the differences in each unique mission. While research is important at all three universities, the focus of research activities and the overall magnitude varies.

Collectively, the System's research expenditure levels were about $780 million in 2007. The Bronze level of research expenditures are predicted to reach $822 billion in 2020. The Gold scenario extends this to $1.8 billion in 2020.

## Projected FY 2020 Research Expenditures




| | FY 2007 ACTUAL | FY 2020 BRONZE | FY 2020 SILVER | FY 2020 GOLD |
|---|---|---|---|---|
| NAU | $27 | $28 | $40 | $50 |
| ASU | $224 | $236 | $655 | $730 |
| UA | $532 | $558 | $998 | $1,041 |

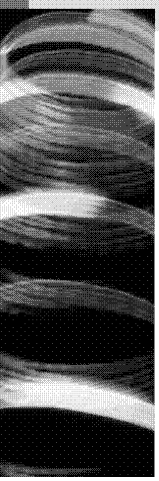
Actual annual research expenditures will be those reported to NSF

## Doctoral Degrees Produced

Increased doctoral degree production is essential for the creation and transfer of new knowledge. Doctoral students are a critical part of the university research workforce. If we can keep them in Arizona, the new Ph.Ds we produce will drive the research engine of tomorrow and help create new high wage jobs.

## Translating Research to Serve Arizona

Research leads to innovation that has the capacity to improve the human condition. Arizona's public universities do research that is responsive to community needs and push their discoveries and inventions into the community for practical and beneficial use in many ways. Formal technology transfer through the licensing of intellectual property is a key facet of a broader portfolio of knowledge transfer. Licensing provides a mechanism for entrepreneurial commercialization of products and generates revenues that can be reinvested in the universities' research enterprises. New knowledge also is transferred in many ways that are harder to measure but have critical impact. These mechanisms of dispersion include public lectures and workshops, county extension services, telemedicine, continuing education for working professionals, and diverse forms of public service.



## MACRO STRATEGIES FOR ACHIEVING RESEARCH EXCELLENCE

1. **Increase access to new and existing sources of federal and state research support:**
   a. Strengthen information-gathering capacity at all three universities for the early identification of federal and state research opportunities and promote collaboration among the three universities
   b. Develop support for a powerful research infrastructure distributed across the universities as appropriate to their missions and opportunities to advance the larger research agenda; coordinate activities in areas most likely to provide future economic benefit to Arizona
   c. Create a long-term and sustainable research funding plan for Arizona that supports research and innovation and particularly the research agenda in areas key for Arizona
2. **Recruit, develop, and retain top research faculty and faculty teams**
   a. Increase support for top-quality faculty who can compete and succeed in the peer-reviewed granting environment
   b. Increase support for Master's and Ph.D.-level education, both as a faculty recruiting tool and as a tool for developing the workforce needed for a knowledge-based economy; provide incentives for Post-doctoral students and research scientists to locate in Arizona
3. **Promote the transfer of new knowledge into the Arizona and global communities**
   a. Support and provide incentives to facilitate technology transfer and commercialization of intellectual property, and to encourage entrepreneurship activities from research faculty
   b. Establish strong clinical and corporate partnerships both inside and outside Arizona to improve the translation of research into practice

# STRATEGIES FOR EXCELLENCE 02

"To compete in the global economy, the US depends on its ability to conduct basic and applied research and then translate that research into technological innovations. Economic growth results when the commercialization of technology takes place."

- NATIONAL GOVERNORS ASSOCIATION, 2007

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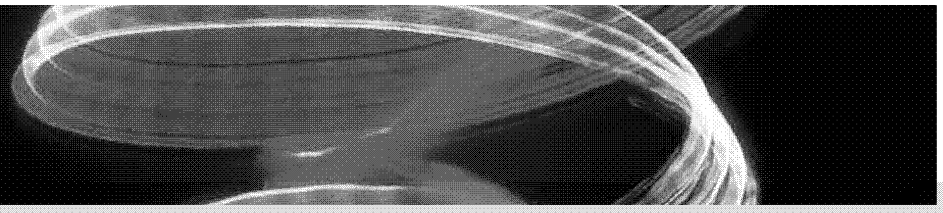
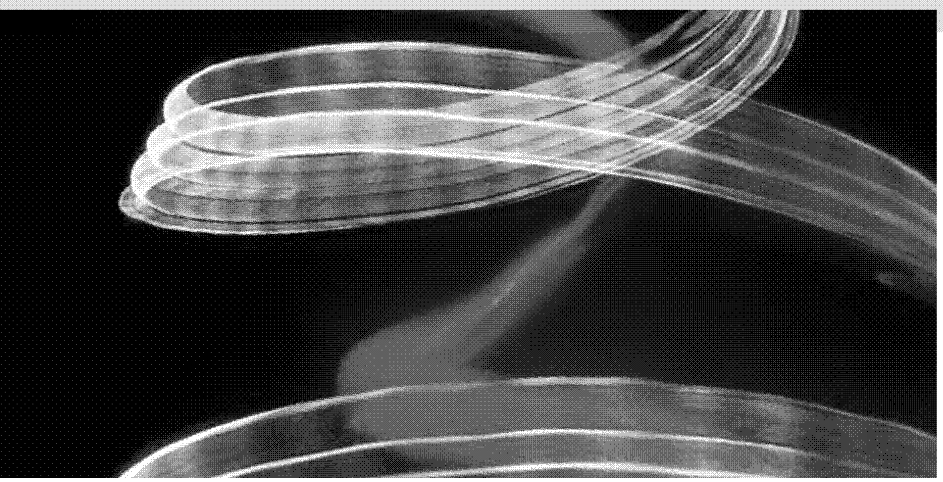


# WORKFORCE & COMMUNITY 03

GOAL THREE

"To utilize research, economic development, community engagement, and service contributions of the universities to create and disseminate knowledge to strengthen Arizona's economy and improve Arizona's quality of life."



GOAL THREE

# BACKGROUND 03

## Community Engagement and the Arizona Economy

America's public university system is founded on three primary missions: teaching, research, and service or community engagement. Our communities benefit not only through formal technology transfer and infusion of well-trained graduates into our economy, but also through programs such as forest health and environmental sustainability efforts, mentoring and professional development of teachers, community planning or development efforts, Cooperative Extension programs and telemedicine.

Our universities also host extensive public access programs, whether through art or research museums or direct-participation outreach programs. Moreover, the universities are directly impacting the entire educational system in Arizona, providing extensive support to the state's K-12 system through training, curriculum development and the development of new teaching methodologies and technologies.

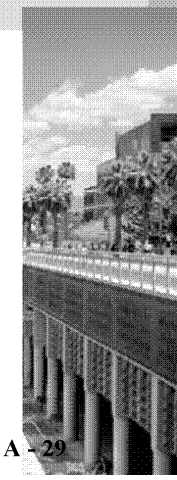
A recent report by the National Association of State University Land Grant Colleges (NASULGC)[1] noted that engagement is a fundamental and essential characteristic of public higher education equal with learning and discovery. The authors noted that while universities use learning and discovery to educate students and extend knowledge to communities, they must take this effort further by "fostering interaction with communities to assure that students and university-based knowledge provide more direct benefits to society."

| Key Indicators of Progress |
| --- |
| Impact of community engagement activities |
| Total income and expenditures related to service and engagement activities |
| Number of degrees awarded in high demand fields |

[1] NASULGC position paper dated Oct 26, 2007, "NASULGC on Engagement"

"...institutions do not engage in occasional community service, but rather make a sustained commitment to the economic, social, and cultural vitality of communities and regions through collaborative leadership on key issues."

- AASCU on Regional Stewardship, 2005



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# 03 COMMUNITY ENGAGEMENT

Sharing knowledge through service mechanisms drives an economy through direct and early adoption of that knowledge. Further, community engagement often most directly expresses the fundamental public understanding of a university's role in developing and delivering that knowledge. Our universities must partner closely with our communities to assure economic success for Arizona, and our plan specifically encourages and evaluates that engagement.

In "The Rise of the Creative Class," Richard Florida notes the importance of livable and engaged communities in advancing an economy. Universities are a critical part of a successful community, not only through degrees granted and the resulting increase in earning capacity and tax revenue, but also through the exposure to arts, culture, new technology, cutting-edge information, and the provision of services uniquely suited to the capabilities of our universities. In addition, engagement has a direct impact on the nature of our students' educational experience.

"Public engagement is a fundamental and essential characteristic of public higher education... an equal with learning and discovery."

- NASULGC ON ENGAGEMENT, 2007

# WORKFORCE IMPACT 03

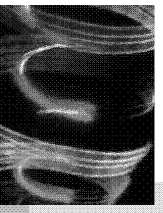
While this plan has at its core the goal to increase educational attainment of Arizonans, the types of degrees produced and their impact on Arizona's economy are critical measures of success in meeting workforce demands. Creating a stronger economy is not just about degree production; it also requires an increase in demand for greater numbers of high paying jobs. Universities play a role here by disseminating practical knowledge to help advance Arizona industry, spinning off and attracting new companies, and producing graduates with the engaged and relevant experience which allows them to have a more immediate impact in those companies and in our communities.

According to a recent study released by the National Center for Higher Education Management Systems (NCHEMS), the state's 12 industries of opportunity account for about 30% of Arizona's employment. Over the past 15 years, it has become more important to have a college degree in these major Arizona industries, as all but one have increased the percentage of their employees with college degrees over that time period. A recent study by Public Works shows that almost all of these occupational areas that pay a livable wage will require some postsecondary education.[1] Arizona's economy will advance only as we rise to meet the need for an educated population.

"High levels of 'educational capital' are key to the economic development of their states and the quality of life of their citizens."

- EWELL, 2003

[1] "Education to Work: Is Arizona Prepared, The Alignment Project Report." Public Works, 14, February 2006



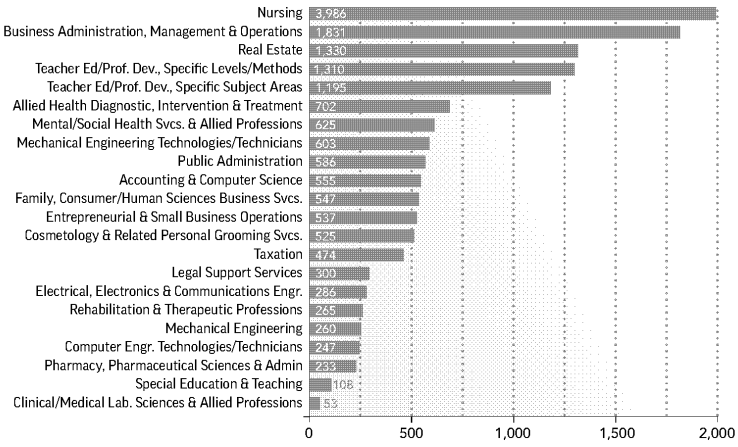
# 03 HIGH DEMAND FIELDS

The chart below illustrates the need to address high demand fields such as health-related occupations, teacher education, business, and science, technology, engineering, and mathematics (STEM) fields. Openings projected in these fields through 2025 will require a workforce enabled with a college education that goes beyond simply holding a high school diploma. Further, we will expect our universities to enhance the performance of Arizona's economy by embedding and engaging our universities in Arizona's communities and meeting the growing need of our state for relevant knowledge, whether disseminated through our graduates, through sharing that knowledge with Arizona industry and communities, or through other mechanisms of knowledge diffusion.

The 2020 Vision calls for increases in the kinds of degree production that will benefit the workforce and support the economy of Arizona in 2020. These fields include education, science, technology, engineering and math (STEM), health professions, medicine, and other high demand fields to be identified as further analyses become available.

## Projected Annual Shortages in Arizona Occupations, 2005-2025

(Annual Openings Minus Annual Degree Production)




Source: Arizona Dept. of Economic Security;
NCES, IPEDS Completions Surveys (2003-04 to 2005-06)

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# STRATEGIES FOR EXCELLENCE 03

## MACRO STRATEGIES FOR COMMUNITY ENGAGEMENT AND WORKFORCE IMPACT

1. **Expand partnerships with business and community**
   a. Increase the number of partnerships with business, industry, government, community, and educational entities to stimulate Arizona's economic vitality

   b. Develop mechanisms for incentivizing partnership opportunities which have a direct impact on Arizona's economy, with direct and measurable benefits to Arizona industry and communities through the sharing of new knowledge, processes and technologies

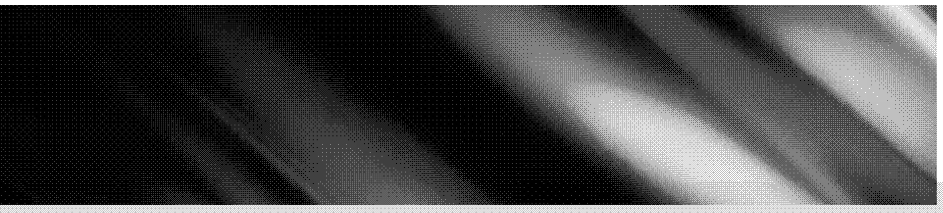
2. **Advance Arizona's communities through more extensive service and engagement**
   a. Develop comprehensive system-level survey tools to evaluate community support for university-based service activities

   b. Advance Arizona's quality of life through measurable knowledge dissemination and public programs aimed at health, environmental and regional stewardship, community and economic development, life-long learning, and access to arts and culture

   c. Evaluate federal, state and community investment in engagement activities and create processes for leveraging those investments for increased service output

3. **Prepare Arizona's workforce for the knowledge economy**
   a. Identify high demand fields and increase the production of degrees in these fields in collaboration with educational and community partners

   b. Develop new pathways for workforce training and degree attainment for non-traditional and adult populations



# PRODUCTIVITY 04

## GOAL FOUR

"To maximize the use of existing resources so that the system can produce greater numbers of degrees and with greater efficiency of resources per degree without sacrificing quality."

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# GOAL FOUR
# BACKGROUND 04

This strategic plan calls for aggressive increases in the production of degrees at the three public universities, which could require adding into the system as many as 80,000 undergraduate students by 2020. The reality of finite state resources combined with the magnitude of funding needed to serve such a large increase in student population illustrates why productivity will be so important. The system will need to assure effective and efficient expenditures per degree while finding ways to maintain quality. The strategies incorporated in the plan seek to provide this crucial balance.

The productivity component of the plan encompasses three important policy issues:

(1) Producing more degrees more efficiently without sacrificing quality (includes maximizing use of current resources)

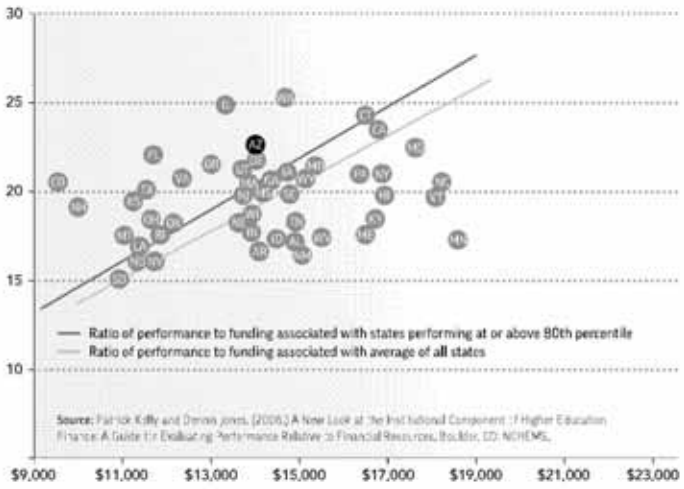
(2) Determining adequate funding levels to achieve the plan while factoring in appropriate levels of increased productivity

(3) Evaluating our financial strength and productivity

According to research completed by the National Center for Educational Management Systems (NCHEMS), Arizona ranks high on the metric used to evaluate productivity. In bachelor's degrees awarded per 100 FTE, and total funding per FTE, Arizona ranks above the 80th percentile.

| Key Indicators of Progress |
|---|
| Number of bachelor's degrees awarded per 100 FTE students |
| Total educational expenditures per degree awarded |
| Composite financial index (CFI) |

## Performance Relative to Resources: Degree-to-Enrollment Ratio

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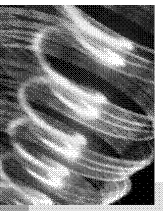


# 04 EDUCATION COSTS

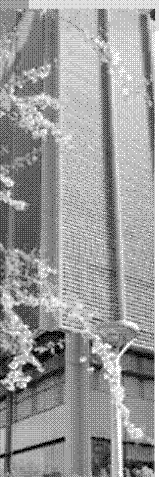
## Delta Cost Project

Significant research into university costs, productivity, and accountability is currently underway by the Delta Project on Postsecondary Education Costs, Productivity, and Accountability (Delta Cost Project). ABOR is following this work closely and will retain best practices, strategies and metrics that follow from this national initiative.

According to Dr. Jane Wellman of the Delta Cost Project[1], measuring productivity will require considering total costs and how resources are used to produce outcomes, which include graduates, trained workers, and new knowledge. In addition, examining the relationships among the quality of entering students, costs, and learning outcomes will allow institutions, boards, and state policymakers to better understand the consequences of a change in any one of these variables on total productivity.

## Productivity Initiatives

- Board initiative utilizing the best practices of national policy analyses through the Delta Cost Project
- Facilitate deeper understanding of college costs, the role of tuition, state subsidies, net price, and financial aid impact
- Utilize performance metrics with national comparability
- Identify cost-saving, cost containment, and cost avoidance measures
- Examine university cost drivers
- Advance innovative qualitative changes that will lead to more effective and efficient educational programs



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# EVALUATING PROGRESS 04

Additional analyses and background measures will be employed to evaluate and track progress related to productivity such as:

- Number of bachelor's degrees awarded per 100 FTE students
- Average number of years to graduation for students who began as freshmen
- Average cumulative hours at graduation for students who began as transfer students
- Full educational costs per FTE student enrolled and per degree awarded
- Student share of costs (discounted price, or net tuition)
- Average subsidy portion of costs (average dollar amount of full educational costs covered by institutional resources, endowment, or state funding) per FTE student

This work will enable ABOR to make informed decisions about where resources can be deployed more effectively in order to produce more outcomes--degrees--while maintaining access for students with financial need and educational quality.

### Evaluating Financial Strength:

Effective management of financial resources is critical to achieving the goals of this strategic plan. Four financial ratios will be calculated using data in the universities' audited annual financial statements:

- Primary Reserve Ratio
- Viability Ratio
- Return on Net Assets Ratio
- Net Operating Revenues Ratio

These four ratios will then be used to calculate a composite financial index (CFI), one overall measurement of each institution's financial health. The CFI is useful in helping governing boards and senior management understand the financial position that the institution enjoys in the marketplace. "Moreover, this measurement will also prove valuable in assessing future prospects of the institution, functioning as an 'affordability index' of a strategic plan"[1] Such an index will help the system maximize its strengths while adopting strategies to mitigate any weaknesses.

[1] Strategic Financial Analysis for Higher Education, 6th edition, KPMG

### Funding the Vision:

The ability of the system to fully articulate and integrate all sources of revenue with methods and best practices for spending those resources more effectively will be crucial to achieving the plan. Strategic planning efforts in this regard include:

- Comprehensive funding review – to define funding adequacy for the system in light of specific goals and targets of the 2020 Vision
- Budget recommendations – to articulate more explicitly the link between resources needed to fuel the 2020 Vision and outcomes the state can expect for the funding
- Long-term financial projections – to articulate funding necessary for the next 12 years to successfully achieve the 2020 Vision including capital and operating needs
- Tuition policy – to align the tuition setting process more closely to resource adequacy related to the 2020 Vision balanced with the policy goal to ensure affordability and predictability for students with financial need

# 04 STRATEGIES FOR EXCELLENCE

## MACRO STRATEGIES FOR PRODUCTIVITY

1. **Productivity initiatives**
   a. Productivity initiatives to identify strengths and weaknesses and to develop recommendations for better utilization of resources in the future including, among others, policies that encourage students to improve predictable and efficient time-to-degree and increased university access for rural students

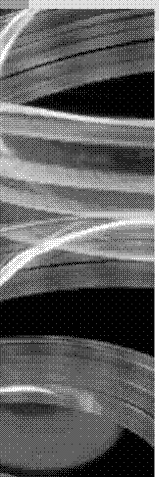
2. **Comprehensive funding review**
   a. Complete a comprehensive funding policy review:
   (1) determine adequate funding levels for the system to achieve 2020 goals; and
   (2) examine allocation of current resources and appropriate incentives to meet priorities of the plan

   b. Consistent with the funding review, complete a long-term financial projection model that identifies resources needed in both operations and capital, aligned to system and state priorities in the 2020 Vision

   c. Incorporate the use of peer and national benchmark data to assess productivity and new initiatives in the system and at the universities

3. **Track the financial strength of the universities**

4. **Improve tuition and financial aid policies to align with affordability needs, funding adequacy and share of responsibility for educational costs**



## Members, Arizona Board of Regents

| | |
|---|---|
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| **Janice K. Brewer** | Governor |
| **Robert B. Bulla** | |
| **Ernest Calderón** | |
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| **Fred P. DuVal** | |
| **LuAnn Leonard** | |
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| **David Martinez III** | |
| **Bob McLendon** | |
| **Ross Meyer** | |
| **Tom Horne** | |

## Council of Presidents

| | | |
|---|---|---|
| **Michael Crow** | President | Arizona State University |
| **John Haeger** | President | Northern Arizona University |
| **Robert Shelton** | President | University of Arizona |
| **Joel Sideman** | Executive Director | Arizona Board of Regents |

# Arizona Memorandum of Understanding for Participating LEAs

# in the Race to the Top Grant Project

This Memorandum of Understanding ("MOU") is entered into by and between the State of Arizona (the State) and _____ ("Participating LEA"). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of Arizona's implementation of an approved Race to the Top (RTTT) grant project.

## I. SCOPE OF WORK

The Preliminary Scope of Work outlined in Exhibit 1 indicates all or a significant portion of Arizona's proposed reform plans described in its RTTT application (Arizona Plan) that the Participating LEA is agreeing to implement.

## II. PROJECT ADMINISTRATION

### A. PARTICIPATING LEA RESPONSIBILITIES

In assisting the State in implementing the tasks and activities described in Arizona's Race to the Top application, the Participating LEA subgrantee will agree to the following:

1) Implement the LEA plan as identified in Exhibits I and II of this agreement;
2) Use Race to the Top subgrants to implement the LEA plan as identified in Exhibits I and II of this agreement, and, as appropriate, leverage additional sources of federal, state, local, or private funding to support the LEA plan;
3) Actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by the State or by the U.S. Department of Education ("ED");
4) Post to any website specified by the State or ED, in a timely manner, all non-proprietary products and lessons learned developed using funds associated with the Race to the Top grant;
5) Participate, as requested, in any evaluations of this grant conducted by the State or ED;
6) Be responsive to State or ED requests for information including on the status of the project, project implementation, outcomes, and any problems anticipated or encountered;
7) Participate in meetings and telephone conferences with the State to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Race to the Top grant period, and (d) other matters related to the Race to the Top grant and associated plans.

**B. STATE RESPONSIBILITIES**

In assisting Participating LEAs in implementing their tasks and activities described in the State's Race to the Top application, the State grantee will:

1) Work collaboratively with, and support the Participating LEA in carrying out the LEA Plan as identified in Exhibits I and II of this agreement;
2) Timely distribute the LEA's portion of Race to the Top grant funds during the course of the project period and in accordance with the LEA Plan identified in Exhibit II;
3) Provide feedback on the LEA's status updates, annual reports, any interim reports, and project plans and products; and
4) Identify sources of technical assistance for the project.

**C. JOINT RESPONSIBILITIES**

1) The State and the Participating LEA will each appoint a key contact person for the Race to the Top grant.
2) These key contacts from the State and the Participating LEA will maintain frequent communication to facilitate cooperation under this MOU.
3) State and Participating LEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.
4) State and Participating LEA grant personnel will negotiate in good faith to continue to achieve the overall goals of the State's Race to the Top grant, even when the State Plan requires modifications that affect the Participating LEA, or when the LEA Plan requires modifications.

**D. STATE RECOURSE FOR LEA NON-PERFORMANCE**

If the State determines that the participating LEA is not meeting its goals, timelines, budget, or annual targets or is not fulfilling other applicable requirements in regard to the RTTT program, the State grantee will take appropriate enforcement action, which could include a collaborative process between the State and the LEA, or any of the enforcement measures that are detailed in 34 CFR section 80.43 including, for example, putting the LEA on reimbursement payment status, temporarily withholding funds, or disallowing costs.

**III. ASSURANCES**

The Participating LEA hereby certifies and represents that it:

1) Has all requisite power and authority to execute this MOU;
2) Is familiar with the reform plan proposed in State's Race to the Top grant application and is supportive of and committed to working on all or significant portions of the State Plan;
3) Agrees to be a Participating LEA and will implement those portions of the State Plan indicated in Exhibit I, if the State application is funded,

4) Will provide a Final Scope of Work to be attached to this MOU as Exhibit II only if the State's application is funded; will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe in Exhibit II the LEA's specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures ("LEA Plan ") in a manner that is consistent with the Preliminary Scope of Work (Exhibit I) and with the State Plan; and
5) Will comply with all of the terms of the Grant, the State's subgrant, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

**IV. MODIFICATIONS**

This Memorandum of Understanding may be amended only by written agreement signed by each of the parties involved, and in consultation with ED.

**V. DURATION/TERMINATION**

This Memorandum of Understanding shall be effective, beginning with the date of the last signature hereon and, if a grant is received, ending upon the expiration of the grant project period, or upon mutual agreement of the parties, whichever occurs first.

**VI. SIGNATURES**

**LEA Superintendent** (or equivalent authorized signatory)**:**

_____

Signature/Date

_____

Print Name/Title

**President of Local School Board** (or equivalent, if applicable)**:**

_____

Signature/Date

_____

Print Name/Title

**Local elected AEA or AFT leader's signature** (if applicable)**:**

_____

Signature/Date

_____

Print Name/Title

**State Superintendent of Public Instruction** - required**:**
By its signature below, the State hereby accepts the LEA as a Participating LEA.

_____

Signature/Date

_____

Print Name/Title

## A. EXHIBIT I – PRELIMINARY SCOPE OF WORK

Arizona's Race to the Top application (Arizona Plan) addresses education reforms in four assurance areas: (1) standards and assessments, (2) data systems to support instruction, (3) great teachers and leaders, and (4) turning around the lowest-achieving schools. The Arizona plan describes Arizona's goals within each of these areas and its policy and implementation strategies to meet these goals. Meeting these goals will require a strong partnership between the State and LEAs to plan, coordinate, and implement reforms.

By signing this MOU, the LEA agrees to implement the Arizona Plan in each of the areas below. It is the State's expectation that all signatory parties to the MOU will collaborate in the development of Final Work Plan referenced in Section III-4. The LEA superintendent will submit the Final Work Plan for the Superintendent of Public Instruction's approval.

| Elements of State Reform Plans | LEA Participation (Y/N) | Comments from LEA (optional) |
|---|---|---|
| **B. Standards and Assessments – The LEA will participate in implementing aspects of the Arizona Plan to develop and implement high-quality standards and assessment systems:** | | |
| (B)(3) Support the transition to enhanced standards and college- and career-ready assessments by participating in the state's rollout plan for the common standards, developing interim assessments, and providing professional development on the new standards and the development and use of formative assessments | | |
| **C. Data Systems to Support Instruction – The LEA will participate in implementing aspects of the Arizona Plan to develop and implement high-quality data systems to support instruction:** | | |
| (C)(3) Using data to improve instruction: | | |
| (i) Adopt and use a local instructional improvement system that provides educators with tools for improving instruction, curriculum, and interventions for students, including the Arizona Growth Model | | |
| (ii) Provide professional development on use of data for instructional improvement | | |
| (iii) Make data available and accessible to researchers | | |
| **D. Great Teachers and Leaders – The LEA will participate in implementing aspects of the Arizona Plan to develop and implement systems to enhance the effectiveness of teachers and leaders:** | | |
| (D)(2) Improving teacher and principal effectiveness based on performance: | | |
| (i) Adopt and use the Arizona student growth model | | |
| (ii) Use the State's model teacher and principal evaluation framework as described in SB 1040 which requires the SBE to adopt and maintain a model framework for a teacher and principal evaluation instrument that includes quantitative data on student | | |

| Elements of State Reform Plans | LEA Participation (Y/N) | Comments from LEA (optional) |
|---|---|---|
| academic progress that accounts for between 33-50% of the evaluation outcomes and best practices for aligned professional development and evaluator training before December 15, 2011. The Law mandates that school districts and charter schools use an instrument that meets the data requirements established by the SBE to annually evaluate individual teachers and principals beginning in school year 2012-13. | | |
| (iii) Conduct annual evaluations of teachers and principals | | |
| (iv)(a) Use evaluation results to inform professional development | | |
| (iv)(b) Use evaluation results to determine compensation, promotion, and retention | | |
| (iv)(c) Use evaluation results to inform tenure and/or full certification | | |
| (iv)(d) Use evaluation results to inform dismissal | | |
| (D)(3) Ensuring equitable distribution of effective teachers and principals: | | |
| (i) Develop and implement a plan to ensure that students in high-poverty and/or high-minority schools are not taught and led by ineffective teachers and leaders at higher rates than students in other schools | | |
| (ii) Develop and implement a plan to ensure effective teachers in hard-to-staff subjects and specialty areas | | |
| (D)(5) Providing effective support to teachers and principals: | | |
| (i) Provide quality professional development through school-based, job-embedded approaches, and where needed, provide common time within the school day for teachers and leaders focused on professional development | | |
| (ii) Participate in research efforts to measure the effectiveness of professional development | | |
| **E. Turning Around the Lowest-Achieving Schools – The LEA will participate in implementing aspects of the Arizona Plan to intervene and turn around the lowest-achieving schools:** | | |
| (E)(2) Work in partnership with the State, regional networks, and external partners to turn around the lowest-achieving schools through one of the four intervention models (transformation, turnaround, restart, or closure) | | |

# Arizona's Next 100 Years:
## A Plan to Transform Public Education to Ensure College and Career Readiness for All Students

Arizona is poised to make fundamental changes to its public education system to ensure that all students graduate from high school ready for the demands and opportunities of postsecondary education and careers.

These fundamental changes fall into two categories: policies to ensure effective instruction for all students and partnerships to ensure effective implementation of Arizona's reform plan.

| Reform Area | Policies | Partnerships |
|---|---|---|
| Standards and Assessments | The State of Arizona will adopt the Common Core State Standards and implement common state assessments tied to college- and career-ready expectations. | In partnership with the State, regional support centers, and other partners, LEAs will participate in the state's rollout plan for the common standards, develop interim assessments, and provide professional development on the new standards and the development and use of formative assessments. |
| Data Systems to Support Instruction | The State of Arizona will build its statewide longitudinal data system and reporting capabilities to meet the America COMPETES Act elements. | In partnership with the State, regional support centers, and other partners, LEAs will adopt and implement local instructional improvement systems that provide educators with tools for improving instruction, curriculum, and interventions for students, including the Arizona Growth Model; provide professional development on the use of data to inform instruction; and make data available to researchers. |
| Great Teachers and Leaders | The State of Arizona will expand its Arizona Growth Model pilot statewide. The State of Arizona will develop a model framework teacher and leader evaluation system that includes 33-50% student growth or other student achievement data, at least four performance levels, and the involvement of teachers and leaders in the development of the framework. The State of Arizona will focus teacher and leader | In partnership with the State, regional support centers, and other partners, LEAs will adopt and use the Arizona growth model; use the State's model teacher and principal evaluation framework to develop, adopt, and implement a system that meets the State's criteria, including the participation of teachers and leaders in the development of the system, the use of at least four levels of performance, and the |

| | | |
|---|---|---|
| | recruitment, professional development, and compensation to ensure an equitable distribution of teacher and leaders. The State of Arizona will develop and publish a report card on teacher and leader preparation programs and expand the programs shown to graduate effective teachers and leaders. | incorporation of 33-50% student growth or other student achievement data; conduct annual evaluations of teachers and principals; use evaluation results to inform professional development, compensation, promotion, retention, full certification, and dismissal; develop and implement a plan to ensure that students in high-poverty and/or high-minority schools are not taught and led by ineffective teachers and leaders at higher rates than students in other schools; develop and implement a plan to ensure effective teachers in hard-to-staff subjects and specialty areas; and provide quality professional development through school-based, job-embedded approaches, and where needed, provide common time within the school day for teachers and leaders focused on professional development; participate in research efforts to measure the effectiveness of professional development. |
| Supporting Struggling Schools | The State of Arizona will provide support and assistance to its LEAs in turning around the lowest-achieving schools. | LEAs will work in partnership with the State, regional support centers, and other partners to turn around the lowest-achieving schools through one of the four intervention models (transformation, turnaround, restart, or closure). |

## Description of Appointing Boards for the Race to the Top Executive Board

### Arizona State Board of Education

The SBE is created by the Arizona Constitution and charged with the responsibility of regulating the conduct of the public school system. The SBE is composed of the following eleven members: the Superintendent of Public Instruction, the president of a state university or state college, four lay members, a president or chancellor of a community college district, a person who is an owner or administrator of a charter school, a superintendent of a high school district, a classroom teacher and a county school superintendent. Each member, other than the Superintendent of Public Instruction, is appointed by the Governor with the consent of the Senate. Members are appointed to a term of four years.

### State Board for Charter Schools

The State Board for Charter Schools is established consisting of the following members: The Superintendent of Public Instruction or the superintendent's designee, six members of the general public, at least two of whom shall reside in a school district where at least sixty percent of the children who attend school in the district meet the eligibility requirements established under the national school lunch and child nutrition acts for free lunches, and at least one of whom shall reside on an Indian reservation, who are appointed by the Governor, two members of the business community who are appointed by the Governor, a teacher who provides classroom instruction at a charter school and who is appointed by the Governor, an operator of a charter school who is appointed by the Governor, three members of the Legislature who shall serve as advisory members and who are appointed jointly by the president of the Senate and the Speaker of the House of Representatives, the Superintendent of Public Instruction shall serve a term on the State Board for Charter Schools that runs concurrently with the superintendent's term of office.

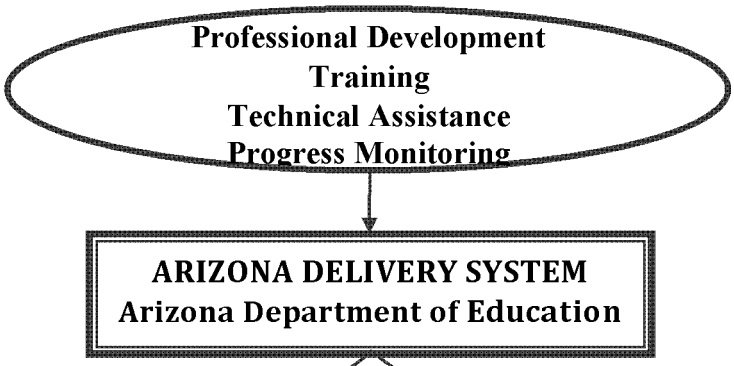
### Arizona Board of Regents

The Arizona Board of Regents consists of a total twelve members: eleven voting and one non-voting. This includes the Governor and Superintendent of Public Instruction as ex-officio members, each serving while they hold office, and two Student Regents. New Regents are appointed by the Governor and confirmed by the Senate.

### Arizona Early Childhood Development and Health Board

First Things First - the Arizona Early Childhood Development and Health Board (ECDH) is made up of 9 members chosen to represent the state's diversity. The Directors of the Department of Economic Security, Department of Health Services and the Superintendent of Public Instruction, or their chosen designees, serve as non-voting *ex officio* members. The appointees include men and women, Democrats, Republicans and an Independent from six counties. Each member brings experience in early education, K-12 education, health care, juvenile justice, higher education, philanthropy, business and Tribal government. All members have been confirmed by the Senate.

## SUPPORT AND TIERED ASSISTANCE TO LOCAL EDUCATIONAL AGENCIES AND SCHOOLS IMPLEMENTING ARIZONA'S REFORM PLAN




### Web-based Technology

**IDEAL, the state's web-based professional development portal,** will be used to provide technology-based professional development, training, resources, and related materials to support the reform efforts.

- All Arizona educators have access to this portal and it has been in use for several years.
- The resources on IDEAL will complement and be coordinated with the work of the AZ Regional Centers for Innovation and Reform.

**ALEAT, Arizona LEA** Tracker, the state's web-based planning and monitoring tool is designed for SEA/LEA communication and interaction, improvement planning and management, compliance and progress monitoring, and reporting. Using a modular architecture, this tool can be customized to include any federal and/or state programs.

- Currently it is fully operational in Arizona with every LEA using the system.
- ALEAT will be used for LEA RttT plans; ADE will be able to view real-time implementation activity in LEA RttT plans; holding LEAs accountable for progress and performance; inactivity will trigger communication with, and a site visit to identified LEAs. Lack of progress in reported performance measures will result in targeted assistance, course corrections, and intervention by ADE staff.

### Arizona Regional Centers for Innovation & Reform

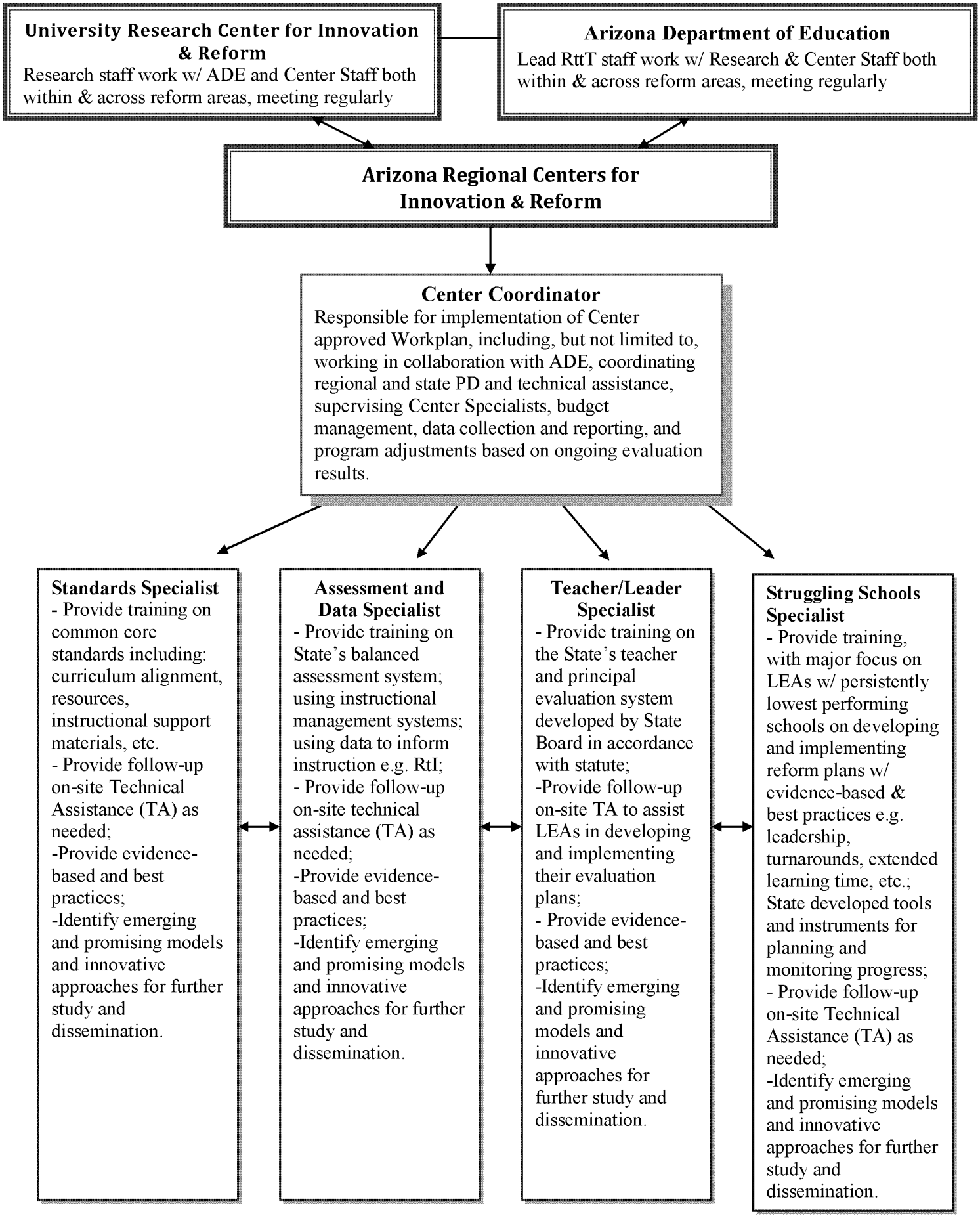
**Regional Centers for Innovation & Reform provide support and assistance through planned and coordinated delivery of on-site services to LEAs and schools, focused on-the four (4) reform priorities.**

Each Regional Center consists of a five-member team of educational specialist, who will be recognized by the Governor and State Superintendent of Public Instruction as "Distinguished Educators" for their participation in this reform effort:

- Academic Standards Specialist
- Assessment & Data Specialist
- Teacher Leader Evaluation Specialist
- Struggling Schools Specialist
- Regional Center Coordinator

Establishment of Regional Centers for Innovation & Reform:

- Ensures consistent, coordinated support and assistance across four reform priorities.
- Establishes a systematic approach to full implementation of reforms.
- Responds to local issues/challenges (*e.g.*, rural, ELL and charters).
- Creates unique opportunity to establish at least one Regional Center to serve Native American populations.
- Institutionalizes and sustains focus on statewide STEM education.


University Research Center for Innovation & Reform
Research staff work w/ ADE and Center Staff both within & across reform areas, meeting regularly
Arizona Department of Education
Lead RttT staff work w/ Research & Center Staff both within & across reform areas, meeting regularly
Arizona Regional Centers for Innovation & Reform
Center Coordinator
Responsible for implementation of Center approved Workplan, including, but not limited to, working in collaboration with ADE, coordinating regional and state PD and technical assistance, supervising Center Specialists, budget management, data collection and reporting, and program adjustments based on ongoing evaluation results.
Standards Specialist
- Provide training on common core standards including: curriculum alignment, resources, instructional support materials, etc.
- Provide follow-up on-site Technical Assistance (TA) as needed;
-Provide evidence-based and best practices;
-Identify emerging and promising models and innovative approaches for further study and dissemination.
Assessment and Data Specialist
- Provide training on State's balanced assessment system; using instructional management systems; using data to inform instruction e.g. RtI;
- Provide follow-up on-site technical assistance (TA) as needed;
-Provide evidence-based and best practices;
-Identify emerging and promising models and innovative approaches for further study and dissemination.
Teacher/Leader Specialist
- Provide training on the State's teacher and principal evaluation system developed by State Board in accordance with statute;
-Provide follow-up on-site TA to assist LEAs in developing and implementing their evaluation plans;
- Provide evidence-based and best practices;
-Identify emerging and promising models and innovative approaches for further study and dissemination.
Struggling Schools Specialist
- Provide training, with major focus on LEAs w/ persistently lowest performing schools on developing and implementing reform plans w/ evidence-based & best practices e.g. leadership, turnarounds, extended learning time, etc.;
State developed tools and instruments for planning and monitoring progress;
- Provide follow-up on-site Technical Assistance (TA) as needed;
-Identify emerging and promising models and innovative approaches for further study and dissemination.

**Arizona State University – Northern Arizona University – University of Arizona**

**A Research, Development and Evaluation Partnership**

Arizona is home to three state public universities: the University of Arizona, Arizona State University, and Northern Arizona University. All three have strong colleges of education that are fully engaged in educator preparation, research and development in the service of solving pressing educational challenges, and outreach to Arizona's P-20 communities. The three colleges have a long history of collaboration that can serve the needs of the RTTT program. Two current projects are examples of how the three universities can collaborate to support this application.

First, for the past two years, the three universities have collaborated on a Consortium to serve as the external evaluation arm to the state's First Things First early childhood program. Under the leadership of Dean Ron Marx at the College of Education at the University of Arizona and with co-principal investigators at each university, the consortium has developed a series of studies of the impact of First Things First. Currently, this organization employs about 250 people statewide, including faculty members in education, public health, and family studies; professional research and evaluation staff; database and IT support staff; and a cadre of highly trained qualitative and quantitative data collectors. The group has developed state-of-the-art training systems with substantial on-line capacities housed at ASU and delivered through their on-line course system and a sophisticated data infrastructure for data repositories, but also to support scheduling of personnel and data collection, and to provide cost accounting for system management. The Consortium is working with the Arizona Department of Education's data management office to align their data capacity with the state's k-12 system. They have also developed systems to secure IRB approvals across all three institutions and with Tribal authorities.

Second, the Fulton Teachers' College at ASU operates PORTAL: The Partnership Office for Research on Teaching Assessment, and Learning. Portal is based on an earlier teacher education assessment project housed at ASU under the leadership of Dean Mari Koerner, with collaborators at UA and NAU. PORTAL is a distributed research, evaluation, and support service offered to Arizona and its districts, schools, administrators, teachers, and staff and made available on-demand. Services include program evaluation, data systems (organization, data cleaning, longitudinal tracking), small- and large-scale assessment systems, value-added and adequate yearly progress (AYP) systems, instrument development, measurement, educational policy information, and professional development.

The University Research Center will build upon these existing collaborations. Based on earlier collaboration, PORTAL can easily serve this RTTT plan by mobilizing resources across the three universities.

**Appendix (A)(2)-4 - Proposition 100 Letter of Support**

**Joint Statement from Arizona's Public University and Community College Leaders**

Essential to Arizona's success in the 21st century is a well-educated workforce. In fact, economists predict that by 2014 roughly 79 percent of jobs in Arizona will require some education or training beyond high school. To meet this challenge, Arizona's community colleges and universities are successfully collaborating to expand partnerships to produce more bachelor's degrees at a lower cost for students.

We are strengthening transfer partnerships between community colleges and universities, working to create new institutional structures to produce more degrees at a lower cost through deeply integrated community college and university regional partnership campuses, establishing regional universities in partnership with community colleges, and developing a new student-centered system that uses technology to improve higher education advising and career planning.

Our higher education system is an evolving, reliable pipeline feeding skilled workers to the businesses that propel our economy forward. Arizona's public university and community college presidents are the guardians of public higher education quality and accessibility in this great state. The citizens of the state deserve the best higher education system available - and we are committed to providing it.

We have been asked to provide information about the effect that Proposition 100 would have on our efforts to reshape Arizona's higher education system to serve more students.

Passage of Proposition 100 – the proposed, temporary one-cent sales tax - will raise $1 billion annually for three years, much of which will help sustain education. Failure of Proposition 100 will trigger a contingency budget that will make up the $1 billion shortfall largely by cutting already reduced funding for K-12, community colleges, and universities.

If Proposition 100 fails, the universities will lose $107 million—more than 12 percent of current funding levels on top of other reductions over the past two years totaling more than $200 million. Community colleges will face cuts of more than $13 million, bringing average district reductions in state aid since FY 08 up to 23 percent, with some districts losing as much as 40 percent. Students at Arizona's public universities and community colleges face possible campus and facility closures, enrollment caps in higher-cost programs like engineering, science, architecture and nursing, larger class sizes, sections closing and reduced merit scholarships. Students could also face higher tuition and employees could see layoffs and furloughs.

Michael Crow
President, Arizona State University

John D. Haeger
President, Northern Arizona University

President, The University of Arizona

Rufus Glasper, Ph.D., CPA
Chancellor, Maricopa Community Colleges

Dr. Leah L. Bornstein
President, Coconino Community College

Roy Flores, Ph.D.
Chancellor, Pima Community College

Jeanne Swarthout, Ph.D.
President, Northland Pioneer College

Dennis A. Jenkins
President/CEO, Central Arizona College

J.D. Rottweiler, Ph.D.
President, Cochise College

Dr. Michael J. Kearns
President, Mohave Community College
Robert N. Shelton

Dr. James F. Horton
President, Yavapai College

Dr. Marc A. Nigliazzo
President, Arizona Western College

# Alhambra School District No. 68

4510 North 37th Avenue • Phoenix, Arizona 85019
(602) 336-2920 • Fax (602) 336-2266


May 17, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 W. Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

As Superintendent of the Alhambra Elementary School District, I am very excited about the Race to the Top competition and totally support the reform plan being submitted by the State of Arizona.

We believe that Arizona's future depends on a high quality educational system to produce a career and college ready workforce that can compete in a 21st century global economy. The goal of all students graduating from high school with the knowledge and skills needed for success in postsecondary education and careers is attainable through strong leadership and true partnerships among district and school leaders, teachers, the business community, communities, parents, and students themselves.

We will work together with the state of Arizona to plan, coordinate, and implement the educational reforms presented in the Race to the Top application. I know we can and will be successful by 2014.

If you have any questions, please contact me at 602-336-2921.

Sincerely,

James W. Rice

Dr. James W. Rice
Superintendent

JWR/jo

ARIZONA ASSOCIATION OF COUNTY SCHOOL SUPERINTENDENTS

1910 W. JEFFERSON • PHOENIX, ARIZONA • 85009
TELEPHONE: (602) 252-6563 • FACSIMILE: (602) 254-0969



May 21, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington Street
Phoenix, Arizona 85007

Dear Governor Brewer,

I write on behalf of the Arizona Association of County School Superintendents (AACSS) to extend our endorsement of the education reform plan as envisioned and outlined in Arizona's Race to the Top application.

We recognize the need for ensuring that Arizona students have the knowledge and skills necessary to succeed and thrive as productive citizens in a 21st century global economy. We strongly support efforts to transform Arizona's educational systems to increase expectations for student achievement and to ensure effective instruction in all Arizona schools and classrooms. At the same time, we understand the critical need and inherent challenge to provide the resources and supports necessary to achieve these goals.

Through our county Education Service Agencies, we look forward to potential opportunities to provide service, assistance and support to Arizona schools in partnership with the State. We are well-positioned to offer a broad range of services at the regional level to assist schools in planning, implementing and assessing reform and improvement efforts.

As regional educational leaders, County School Superintendents are uniquely qualified to serve as the 'spokes in the wheel' to reach out and work in partnership with local schools and their communities to bring about education reform and improvement. The Arizona Association of County School Superintendents supports the focused effort envisioned in the Race to the Top application to develop a high quality educational system that produces career, college and workforce ready citizens.

Respectfully,

Linda L. O'Dell

Linda L. O'Dell, Ed.D., President
Arizona Association of County School Superintendents

CC: Arizona County School Superintendents

ERNEST CALDERÓN
REGENT
*Please Contact Directly At*
2020 N. Central Avenue, Suite 1110
Phoenix, AZ 85004
Telephone: (602) 265-0004
Fax: (602) 251-2978
E-Mail: calderon@azlex.com

**Arizona Board of Regents**
**2020 North Central Avenue, Suite 230**
**Phoenix, AZ 85004-4593**
**602-229-2500**
**Fax 602-229-2555**
**www.azregents.edu**

***Arizona State University*** ***Northern Arizona University*** ***University of Arizona***

May 11, 2010

The Honorable Janice K. Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

As the President of the Arizona Board of Regents, I endorse your efforts to renew application for the Federal Government's Race to the Top award. I laud your commitment to simultaneously secure our children's future and promote the general welfare of our great state. The goals of Race to the Top— reforming low-performing schools, producing talented teachers, supporting effective administration, capturing data that informs policy and reinstating academic rigor –are emblematic of a shared desire to restore the nation's educational system to its preeminent standing. It is crucial that Arizona's schools realize the program's ambitious objectives and develop college-ready students to fulfill your 2020 Vision for doubling statewide baccalaureate production.

I applaud your decision to refocus Arizona's efforts around our state's history of economic development and dedication to its future as a center for advanced technology and energy innovation. Moreover, partnerships with established organizations, like WestEd, along with guidance from public and private stakeholders display a commitment to enhance the overall reform plan.

Throughout Arizona, education faces unparalleled fiscal challenges that demand acute and immediate intervention. Race to the Top offers the opportunity to gain valuable resources for innovative programs and initiatives that foster achievement and promote equitable educational outcomes for all students. Your resolve to pursue a share of this

$4.35 Billion program is not only fiscally prudent, it is essential. The universities, as vital economic engines and unwavering partners in the educational enterprise, faithfully support Arizona's intent to compete in the Race to the Top. Thank you for your leadership and dedication to this critical effort.

Sincerely,

Ernest Calderón
President

May 10, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

We, the **Arizona Business & Education Coalition (ABEC)**, write this letter in support of the Arizona Plan, submitted for "Race To The Top" funding. We believe that our public schools are the foundation on which the state's economy and its citizens' quality of life rest. Whether or not we attended public schools ourselves or send our own children to public schools, we interact each day in a world where the outcomes of our public education system are readily apparent. Throughout our state and our country, public schools educate countless children who grow up to be engaged, contributing members of their communities, who teach our children, run our corporations, and provide numerous goods and services. At the same time, we know that many students are leaving public schools each year without graduating from high school or with minimal skills and competencies.

The Arizona Plan offers the opportunity to encourage innovation and provide the training and support LEAs will need as they make new transitions as well as supporting ABEC's primary policy work: the redesign the school finance system for the 21st Century; creating one that supports high levels of learning for all students, regardless of geographic location, neighborhood wealth, or choice of traditional or charter public school.

To that end, ABEC has examined the connection between funding and student learning; questioned whether or not Arizona has set credible and meaningful goals for students; explored transparency in the system and weighed the degree of flexibility in the use of resources to focus and enable work of educators. We have engaged with local stakeholders and are reinforcing the urgent need for the development of an accurate, real-time data collection and reporting system that provides the tools to evaluate relevant, meaningful goals and we have brought forth a set of policy proposals that efficiently supports all public schools and students, makes room for innovation, and allows educators to deploy the best possible educational strategies to teach Arizona's children. The work of ABEC aligns well with the Race to the Top application.

It is clear that the results of the Arizona Plan will be integral to the success of transforming Arizona's school finance system. Establishing high expectations for all Arizona students and having in place an effective, accurate statewide data collection system are foundational for all that follows. In addition, it is vitally important to analyze best practices with an eye toward scaling up those strategies that work. ABEC endorses the Arizona Plan and will assist in all ways possible to ensure its success.

Sincerely,

Susan Carlson

Susan Carlson,
Executive Director

The Arizona Business & Education Coalition (ABEC) is a 501(c)3 organization providing a balanced forum for business and education leaders to collaborate and improve K-12 education policy, with linkages to pre-kindergarten and postsecondary education. Guiding principles include: increasing public awareness about the relationship between Arizona's future workforce and the quality of the K-12 system; actively and effectively influencing education policy; and sharing responsibility for the growth of student achievement in Arizona. For more information, visit www.azbec.org.

ARIZONA CHAMBER
of Commerce and Industry
Uniting Business. Advancing Arizona.

May 13, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

The Arizona Chamber of Commerce & Industry has long recognized the importance of a well educated workforce to Arizona's economic future. As Arizona competes in the global economy to retain and attract high wage employers, the state needs an education system capable of meeting the demand for increasingly skilled employees. We believe that the Arizona Plan includes reforms that will greatly improve the state's ability to develop local talent whose skills are compatible with the needs of employers. The Arizona Chamber has advocated in the past for many elements of the Arizona Plan, including the development of globally competitive standards and assessments, the use of data to support instruction, and the recruitment and development of highly effective teachers and principals. We are encouraged to see that these results-oriented approaches to reform are central elements of the proposal.

As Arizona prepares to transition into its second 100 years of statehood, the Arizona Plan helps to create the strong educational foundation that will be necessary in order to support Arizona's 21st century economy. The Arizona Chamber of Commerce & Industry recognizes the benefits of these reforms that will be realized by the employer community and supports the proposals in the Arizona Plan.

Sincerely,

Glenn Hamer
President/CEO

ARIZONA MANUFACTURERS COUNCIL

1850 N. Central Ave, Suite 1433 • Phoenix, AZ 85004
www.azchamber.com • Phone 602-248-9172 • Fax 602-265-1262

ARIZONA
CHARTER SCHOOLS
ASSOCIATION
*Advocacy for Choice. Resources for Quality.*

May 10, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Re: Arizona Race to the Top Phase II Application

Dear Governor Brewer:

Arizona Charter Schools Association is a membership association providing "advocacy for choice and resources for quality." The Association is dedicated to high student achievement through quality charter schools. Parents are choosing charter schools in record numbers. Total enrollment in Arizona has grown from 1,043,298 students in 2005 to 1,083,408 students in 2009, a 4% gain. Enrollment in charter schools during the same time period has grown from 85,683 to 113,393, a 32% gain, according to the Arizona Department of Education's October 1st enrollment figures. Charter students now make up more than 10% of Arizona's public K-12 students, and the 509 charter schools are 25% of Arizona's public schools.

Please consider this letter as written support for Arizona Race to the Top Phase II Application. Arizona is working diligently on transforming its educational system to ensure that all students receive the highest quality education and reach student achievement goals that will result in students graduating with the knowledge and skills necessary to succeed in postsecondary education and careers. The State is setting goals and working on education reform in standards and assessments, data systems to support education, great teachers and leaders, and turning around the lowest-achieving schools. The Arizona Charter Schools Association fully supports Arizona's vision for better education in Arizona.

I would ask that you give strong consideration to Arizona's application.

Sincerely yours,

E B Sigmund

Eileen Sigmund
President and CEO
Arizona Charter Schools Association

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Phn: 602.944.0644 Fax: 602.680.5743
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Arizona Commission for Postsecondary Education
2020 North Central, Suite 650
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Website: www.azhighered.gov

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

March 17, 2010

Dear Governor Brewer,

Fifteen Governor-appointed Commissioners of the Arizona Commission for Postsecondary Education (ACPE) and I enthusiastically support Arizona's application for the second round of the Race to the Top (RttT) competition. As the Arizona entity which administers federal student financial aid, state student grants, and the Arizona Family College Savings Program the ACPE Commissioners and staff are painfully aware of the need to increase student success and completion of associate, baccalaureate and graduate degrees.

It is my opinion that the RttT application submitted by Arizona delineates a clear plan of action for improvements in Arizona's K-12 system. These improvements combined with an enhanced longitudinal data system spanning all segments of education will allow Arizona to succeed in our goal, set by the Arizona Board of Regents, of doubling the number of baccalaureate degrees awarded annually. In addition, the Arizona Productivity Improvement Imperative, funded through the Lumina Educational Foundation grant, is placing the public community colleges and universities on a path of efficiency and affordability which is critical for increased participation and success of our middle and low-income students. Arizona is committed to reaching this goal for the benefit of students and families and because an educated workforce will be the engine which will drive Arizona's economic recovery.

The Commission stands ready to work toward these goals by (1) supporting students through efficiently managed and accessible student financial assistance programs and (2) assisting families to increase their aspirations, lay plans for college-going, and take appropriate actions through our publications and initiatives, such as College Goal Sunday. We view the Race to the Top competition as a means to sharpen our planning and as a vehicle to move forward cohesively to our desired future.

Sincerely,

Dr. Steven A. Corey, Chairman

**Arizona Community College Presidents' Council**

2411 West 14th Street Tempe, AZ 85281 480.731.8318

May 15, 2010

Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

On behalf of the Arizona Community College Presidents' Council, a statewide organization of the chief executive officers of each of the ten accredited community college districts in the state, I am writing to express our support of the Arizona Race to the Top (RTTT) Phase II Application. The community colleges wholeheartedly support its goal to ensure that all students graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and career.

As members of the higher education community in Arizona, we have long recognized the need to align and strengthen the P-12 system with post-secondary education and training if Arizona is going to have the skilled and trained workforce it needs to compete in the 21st century. The higher education system must have students who are prepared to successfully enter into and complete college level credit bearing coursework.

For the past few years, Arizona has started to gain momentum in its desire to improve and strengthen the entire P-20 education continuum and has set a goal of doubling baccalaureate degrees by 2020. Working together through the Governor's P-20 Coordinating Council, great strides have been made to raise graduation requirements, strengthen mathematics standards, improve the data warehouse, support struggling schools with needed interventions, and attract, train and retain highly effective teachers and principals in our elementary and secondary schools. Additionally, unprecedented communication has been fostered between the P-12 and higher education systems aligning efforts through the State Board of Education, the Arizona Community College President's Council, the Governor's Arizona Community College Council, the Arizona Board of Regents, and through initiatives such as the Lumina Foundation Making Opportunity Affordable Grant. But there is still much work to do.

The RTTT Phase II Application is a roadmap for continued reform for Arizona's education systems. With RTTT funding, we can jump start and accelerate our efforts to plan, coordinate and implement reform along the entire education continuum. This plan includes reform strategies, timeframes for implementation, metrics for measuring success, and identifies responsible parties that will be held accountable for the successful implementation of the plan. The plan will position Arizona for reforms that can be sustained after RTTT funds have been exhausted.

The community colleges stand ready and committed to work shoulder-to-shoulder with the P-12 system, policy makers, business and community leaders, parents and students to ensure the success of Arizona's RTTT reform plan.

Sincerely,

Rufus Glasper

Rufus Glasper, Ph. D., CPA
Chancellor, Maricopa Community Colleges

ARIZONA
COMMUNITY FOUNDATION

2201 East Camelback Road, Suite 202, Phoenix, Arizona 85016 • Tel: (602) 381-1400 • (800) 222-8221 • Fax: (602) 381-1575



May 11, 2010

The Honorable Jan Brewer
Governor of Arizona
Arizona Statehouse
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

We enthusiastically support Arizona's second round application for Race to the Top. As one of the largest foundations in the state with over $480M in assets and 10 affiliates statewide, we stand ready to support the state's efforts to systemically advance educational excellence.

As a nonpartisan foundation, we have appreciated the opportunity to serve on committees of the P-20 Councils under previous administrations and under your leadership. We have been particularly impressed with how you are approaching the second round of the Race to the Top application by engaging a broad range of stakeholders and key thought leaders in the state to shape our state's direction, and we have appreciated the opportunity to host some of those meetings for you.

We are particularly supportive of the state's efforts to advance several things that we have advocated for and researched – efforts to improve college and career readiness, to raise standards and enhance the methods of assessments, to draw on the lessons of years of investment in charter schools, to promote innovative, systemic reform models, to promote quality early education, and to accentuate our state's great work on STEM.

We look forward to deepening our partnership with you as we work together to carry out your ambitious plans.

Sincerely,

Steven G. Seleznow
President & CEO

Arizona
Education
Association

345 East Palm Lane
Phoenix, AZ
85004-1532

(602) 264-1774
(800) 352-5411
FAX
(602) 240-6887

Web site:
www.arizonaea.org

May 25, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

The Arizona Education Association's (AEA) 33,000 members—and indeed, Arizona's students, families, and future—are dependent on a modern and viable public education system that delivers a great public school to every student. On behalf of our members and Arizona's students, AEA's leadership will welcome our organization's participation in a constructive and collaborative effort to design, shape, and invest in Arizona's education system.

The Arizona Education Association recognizes that the Race to the Top (RTTT) initiative represents an opportunity to make a lasting impact on student achievement, the teaching profession, and public education. Further, AEA applauds the process used to develop the round 2 application. The process allowed AEA to provide input and advice about how to write the Memorandum of Understanding to better emphasize the importance of collaboration between districts and their representative AEA affiliates. Despite a compressed window of time in which to prepare the second application and numerous constraints, the Arizona process demonstrated a commitment to inclusive planning and to collaboration with stakeholders.

To the extent that Arizona's RTTT application signals the beginning of a new commitment to working with education representatives, of investing in public schools, programs, and employees rather than curtailing them, and developing a vision for quality public schools in every corner of the state, the Arizona Education Association pledges its support. While the AEA continues to have questions about the application and about Arizona's direction regarding public education, we commit to serving as a partner in shaping public education for Arizona's future.

The AEA has proven our commitment to participating in collaborative efforts to shape education policy in our previous work with Representative Crandall and education stakeholder groups on SB1040, addressing teacher and principal evaluations. Prior to SB1040's passage out of the legislature, it was the AEA that introduced into the stakeholder discussion district flexibility in weighing student learning data, the critical element of evaluator training, and the need for professional development aligned with evaluation outcomes. We look forward to continuing work in this area as Arizona develops its statewide framework for evaluation in an inclusive process and with a systemic approach.

We must note, however, that Arizona's RTTT application comes at a troubled time in the state—a time when the state's commitment to its educators is at best problematic. The AEA opposed legislation signed into law that sent mixed messages about the perceived value of experienced teachers, marginalized the importance of collaboration with local and state education unions, and diminished compensation for those who educate students. Alone, the RTTT grant—should Arizona receive it—will not undo the harm done at the state level to Arizona's public education system.

AEA's Mission

*AEA... keeping the promise of quality public education*

Simply put, Arizona needs a new ethical, economic, and strategic approach to supporting and sustaining public education. Arizona's state policy leaders and legislators must embrace the mandate evident in Race to the Top's design: Cooperate with—rather than attempt to marginalize—the state education union.

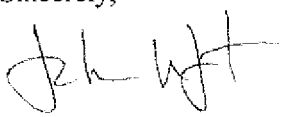
With the AEA's support for Arizona's application and our pledge for future action come questions about both the process for drafting the application and its content. The AEA believes that the hurried timeline to submit the round 2 application precluded thoughtful deliberation and public discussion about a vision for public education in Arizona and will continue to create difficulties in designing a systemic approach to education. We urge state and legislative policy makers to proceed under the mandate of inclusion rather than expediency in future work.

Regarding the content, the Association will participate with other stakeholders as Arizona articulates the tactics and choices that define the strategies outlined in the state's application. We will seek clarity regarding strategies, for example, that call upon Arizona to "expand quality pathways" for teachers, "address equitable distribution" of effective teachers, and intervene in support of struggling schools. AEA looks forward to participating with other stakeholders to build a systemic approach to teacher quality and performance that is not limited to teacher evaluation, and whose highest end is not merely efficient dismissal but high level performance. Furthermore, we will continue to promote the positioning of current educator practitioners in high-level decision making roles to both inform and shape the policies and initiatives that drive education reform. More broadly, we will advance and collaboratively study the research, experience, and data offered to support the policies in the current application and to guide future deliberation about public education in Arizona.

Race to the Top represents more than an application or funding; the application symbolizes a choice presented to our policymakers: to build a systemic approach to investing financial and intellectual capital in public education or continue to advance a politically-driven agenda that ultimately under serves students, families, and educators.

The Arizona Education Association is eager to inform that choice and to support a new direction in Arizona, a direction pursued through collaboration, respect, and investment. We look forward to additional opportunities—within Arizona's Race to the Top and beyond—to share the expertise of our members, our vision for public education in Arizona, and to build a great public school for every student.

Sincerely,



John Wright, President
Arizona Education Association

# Arizona House of Representatives
Phoenix, Arizona 85007

May 26, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer,

We applaud your efforts in submitting an application for Round Two for the Race to the Top Competition. We were disappointed that Arizona was not as competitive in the first round, however, we believe our second round application will be enhanced by the significant education reform legislation enacted in the 2010 legislative session.

As we develop Arizona's educational reform package, we must set standards and assessments for a high quality educational system that not only addresses our immediate needs, but those of our future generations. Our 21st century economy and workforce demands more of our K-12 system than merely completion of required courses and the passage of a tenth grade exam. We must provide our students with innovative educational pathways that prepare them to succeed in college or in a career of their choice. College and career preparedness not only enhances the lives of our children but strengthens the economic lives of all citizens in our great State. And how do we propose to achieve these lofty goals? The Legislature passed and you signed the "*Move on When Ready*" bill in the last legislative session. This ambitious initiative serves two main purposes: a) clarity and a specified path for students who have a sense of their future goals; and b) an intervention tool for high-risk students (dropouts) who lack the necessary focus toward achievement of educational goals.

It is not enough to say that we will transform the public education agenda – we must prove that we have! We know the key to measuring student academic performance begins and ends with a system of data collection, reporting and analysis. The construction of the longitudinal data system began years ago and we have had moderate success with the Student Accountability Information System (SAIS) and the Education Data Warehouse.

However, we know we must do better. Accordingly, the Legislature passed and you signed a bill instructing the Superintendent of Public Instruction to issue a request for proposal to evaluate our existing data systems for upgrades toward efficiency improvements in functionality and stakeholder accessibility. The end result is to have a system that meets the needs of our students, schools, and policymakers.

How we use the data is critical. In the past, we have looked at outputs – now we should refine these systems to improve instruction. The longitudinal data system should provide instructional tools and training for educators as they manage student academic targets – tools that track student progress through one academic year but also through the child's entire academic career. Additionally, consensus legislation passed this session directing the State Board of Education to create a framework for a teacher evaluation tool that would incorporate student academic progress in the determination of teacher performance for use by school districts and charter schools beginning in the 2012-2013 school year. Inherent in this framework are best practices for evaluator training and professional development strategies so that the evaluation tool could be used to improve teacher and principal effectiveness.

Our bold targets for improving student performance can only be met if we have highly effective teachers leading the classroom. While our universities and colleges do a good job developing prepared teachers, we recognize the need to find alternative pathways for professionals (mid-career or otherwise) to transition into our K-12 classrooms. These individuals can bring a wealth of skills especially in the fields of science and mathematics. To that end, the Legislature passed and you signed a bill providing the statutory support to the State Board of Education to create rules for alternative pathways to teacher certification through non-traditional and accelerated programs offered by qualified and licensed private providers.

We must also target effective management of student learning and preparedness. The Legislature passed and you signed a bill requiring that students read at third grade proficiency before they advance to the fourth grade. A mandate like this can not be achieved unless it includes interventions and strategies employed by teachers and principals, in collaboration with parents, that begin when the child enters kindergarten and through the second grade. Parents must have adequate notice to respond and schools must have the guidance and resources necessary to react.

The ultimate fate of this reform agenda rests on the actions of partnerships – those between policymakers in the Legislature and you, the business community, our school boards, superintendents, teachers, students, and parents. We recognize that our round two successes require all of us to believe we can achieve our courageous goals. We stand willing with you and all of the education community to meet this important challenge and offer our cooperation and support in getting this important work done.

Sincerely,

Kirk Adams
Speaker of the House
Arizona House of Representatives

Richard Crandall
House Education Chairman
Arizona House of Representatives

ARIZONA HOUSE OF REPRESENTATIVES
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PHOENIX, ARIZONA 85007-2844
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DEMOCRATIC LEADERSHIP

David Lujan, Minority Leader
Kyrsten Sinema, Assistant Minority Leader
Chad Campbell, Minority Whip

May 26, 2010

The Honorable Jan Brewer
Governor of Arizona
Arizona State Capitol
1700 W. Washington
Phoenix, AZ 85007

Dear Governor Brewer,

As the Leadership of the Arizona House of Representative's Democratic Caucus we would like to offer our support for the state's Race to the Top grant application. Our state has seen many changes in the past two years and has felt the effects of a recession at all levels of state government, including on our K -12 education system. Despite these challenges, one thing has not changed in our minds and in the minds of Arizonans: that education will continue to be a deciding factor in Arizona's long-term success.

We believe that as a state and nation, we must emphasize the strengths of our current system and strive to improve the elements that demand reform. For these reasons we would like to continue to support the efforts of President Obama and Secretary Duncan and are encouraged by the attention that the Race to the Top program has generated for our public education system. We also appreciate the availability of resources to assist our state in implementing reform initiatives. Our hope is that the attention and additional resources will translate into lasting reforms that will benefit Arizonans and Americans for generations to come.

Sincerely,

David Lujan
House Democratic Leader

Kyrsten Sinema
House Asst. Democratic Leader

Chad Campbell
House Democratic Whip

ARIZONA MANUFACTURERS COUNCIL

May 20, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

As the Arizona affiliate of the National Association of Manufacturers, the Arizona Manufacturers Council (AMC) stands behind your efforts to secure the resources our state needs to transform Arizona's public education system.

For Arizona students to succeed in today and tomorrow's global marketplace, they need sustained opportunities in math, science and technology that are connected to real-world jobs and high-wage careers that support our economy. And they need these opportunities throughout their schooling, not just in the final years of high school. As employers, our members are constantly challenged to find skilled workers – people who can think outside the box, who know their way around a computer and who come into their positions with the kind of knowledge that at one time was considered advanced, but that is now elemental. Supporting our students also means supporting our teachers and schools with the infrastructure they require to be able to meet this challenge.

Thank you for so thoroughly addressing these concerns in Arizona's application for Race to the Top funding.

Best regards,

(b)(6)

Mark T. Dobbins
Chairman

ARIZONA CHAMBER
of Commerce and Industry
Uniting Business, Advancing Arizona

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www.azchamber.com ◎ Phone 602-248-9172 ◎ Fax 602-265-1262

ARIZONA SCHOOL ADMINISTRATORS

May 13, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 W. Washington St
Phoenix, AZ 85007

Dear Governor Brewer,

The Arizona School Administrators, Inc., representing school district superintendents, principals, and staff providing educational services at the district level and in our institutions of higher education, extends its appreciation and its support to you as you submit an application for the second phase of the Race to the Top funding. The overall goals of the RTTT funding and specifically those addressed in our State's application reflect actions that will ensure that our students graduate from high school with the knowledge and skills they need to be successful in their post secondary experiences.

The Arizona School Administrators, Inc. stands ready to assist you and others in the implementation of the Race to the Top strategies. Our organization can contribute by providing a communication link to personnel in the 226 school districts and 15 counties in our State. We conduct annual statewide and regional professional development conferences, seminars and workshops in which important training or key information can be provided. ASA provides Qualified Evaluator Training which will be revised to reflect the expectations of the performance based evaluation systems. The Arizona School Administrators, inc. will be a partner to your office and to other government, philanthropic or private organizations involved in promoting a quality educational experience for our State's students.

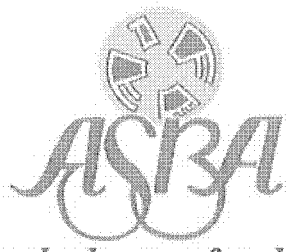
Our State has many strengths upon which to build, the least of which is an educational community eager to take the necessary steps to improve the Achievement of Arizona's students.

Sincerely,

Roger Short

Roger Short, Ed.D.
Executive Director

1910 W. WASHINGTON ST. PHOENIX, AZ 85009 602.252.0361 1.800.472.9[illegible] [illegible]2.8862



*"Quality leadership and advocacy for children in public schools."*



The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

May 14, 2010

Dear Governor Brewer:

The Arizona School Boards Association is a non-partisan, non-profit organization dedicated to promoting community volunteer governance of public education and continuous improvement of student success by providing training, leadership and assistance to public school governing boards. With over 240 traditional school district and charter governing boards as members, we very much appreciate being a part of the P-20 Coordinating Council process and associated task forces. As we embark on Arizona's Phase II application, ASBA looks forward to our continued dialogue and partnership in moving our students forward.

In order to encourage student achievement, a quality data system is critical. Not only will this provide us with the needed information on how our students and schools are currently performing, it will also provide our school leadership and teachers with the necessary information to transform and remediate struggling students. In addition, it will enable us to hold our leaders and teachers accountable. To that end, ASBA worked during the 2010 legislative session to implement crucial personnel reforms and support the development of effective evaluation systems for teachers and administrators. These teachers and instructional leaders who excel in their profession and inspire their students and colleagues are essential for a quality public education system. The best and the brightest must be recruited and retained in our classrooms. ASBA shares the vision that Race to the Top promotes with these reforms in acknowledging the importance of finding and retaining high-performing teachers in every classroom for every child. ASBA is eager to continue working on these reforms and can provide a unique perspective from the local governance level.

When it comes to standards and assessments, Arizona worked diligently in reforming our standards. In fact, Arizona has some of the most rigorous standards in the United States. Now, national Common Core standards are being discussed. ASBA understands how critical it is that every child is prepared for a successful future; however, we are cognizant that local communities have played, and should continue to play, a significant role in determining the full spectrum of what our students learn. We believe that as we pursue reform to standards, we must continue to

ARIZONA SCHOOL BOARDS ASSOCIATION
2100 North Central Avenue, Suite 200, Phoenix, Arizona 85004 ● 602.254.1100 ● FAX 602.254.1177

support and uphold those structures, including local school boards, that ensure communities are vested in and accountable for the success of their students and their public schools.

In addition, Race to the Top contemplates a tiered-system for intervention in low-achieving schools, an approach ASBA embraces. Due to the unique needs of each school and each community, a one-size-fits-all approach is illogical and unlikely to yield the desired results. Instead, appropriate interventions should be based on the needs of the community as well as the degree and persistence of the low student achievement. Arizona also has unique needs, whether it is our high English Language Learner population or the struggles faced on many of our Native American reservations. ASBA has experience in these tiered approaches and partnered with the State Board of Education and other stakeholders to develop a successful model for intervention in financially struggling schools. Intervention models need to respect local control and the diversity of communities throughout Arizona while implementing best practices and appropriate resources to assist these schools and districts.

ASBA is dedicated to the continuous improvement of Arizona's education system with a focus on student achievement. RTTT has allowed ASBA and other stakeholders to continue the conversations surrounding important education reform areas in a meaningful way. We are committed to staying in this dialogue as we work to implement education reforms that will benefit all students – regardless of the success of our RTTT application. However, a successful Arizona Phase II RTTT application will provide the resource assistance necessary to better ensure success. We look forward to this partnership in creating a world-class public education system that ensures all students receive a rigorous education that prepares them for a successful future.

Sincerely,

Panfilo H. Contreras
Executive Director

ARIZONA SCHOOL BOARDS ASSOCIATION
2100 North Central Avenue, Suite 200, Phoenix, Arizona 85004 ● 602.254.1100 ● FAX 602.254.1177

**Arizona State Board for Charter Schools**

1700 W. Washington Street, Room 164
Phoenix, AZ 85007

Phone: (602) 364-3080
Fax: (602) 364-3089

May 13, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

RE: Race to the Top Application

Dear Governor Brewer:

On behalf of the Arizona State Board for Charter Schools ("Board"), I am pleased to express their support of Arizona's application to the Race to the Top Fund.

Since its inception, the Arizona State Board for Charter Schools has operated with a mission to foster accountability in charter schools and to improve student achievement through market choice. The Board presently provides oversight of 379 charter operators who serve over 101,000 Arizona students.

The Board appreciates the opportunity it was provided to participate in the development of Arizona's Race to the Top application and the inclusion of charter schools as partners within each of the four assurance areas of the Arizona Plan. The fundamental changes in policy and partnerships embedded in the Arizona Plan will improve the quality of education of students attending public schools, both district and charter, and ensure that all students graduate from high school ready for the demands and opportunities of postsecondary education and careers.

Sincerely,

DeAnna Rowe
Executive Director

*STATE BOARD OF EDUCATION &*
*STATE BOARD FOR VOCATIONAL AND*
*TECHNOLOGICAL EDUCATION*

*Vince Yanez, Executive Director*
*Vince.yanez@azed.gov*
*www.ade.az.gov/stateboard*

*1535 West Jefferson*
*Phoenix, Arizona 85007*
*(602) 542-5057*
*FAX (602) 542-3046*



May 11, 2010

Race to the Top Review Committee
U.S. Department of Education, Application Control Center
*Attention:* (CFDA Number 84.395A) LBJ Basement Level 1
400 Maryland Avenue, SW
Washington, DC 20202–4260

Dear Committee Members:

As a member of the Arizona State Board of Education, I am writing this letter to express my strong support for Arizona's Race to the Top application for Round Two.

Arizona's application sets forth aggressive reforms in each of the four assurance areas. Each of these reforms focuses on how Arizona can enhance student achievement and ultimately produce high school graduates that are well-prepared for the challenges of higher education and the workforce.

Receiving funds through this competition will accelerate this important work, but stakeholders across Arizona are committed to moving forward with this agenda regardless of whether our application is successful. This is evidenced by the passage of new legislation and State Board policies pertaining to student assessment, school accountability, alternative teacher certification, school interventions and enhanced data capabilities. We understand the importance of this work and are eager to see the plan through.

I believe Arizona has put forth a solid, integrated reform agenda that will realize needed gains in student achievement.

I appreciate your consideration of Arizona's Race to the Top application.

Sincerely,

Thomas Tyree
Member, Arizona State Board of Education

May 23, 2010

The Honorable Arne Duncan
Secretary
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan:

As a member of the State Board of Education, I write in earnest support of Arizona's Race to the Top application.

For more than a decade, it has been my privilege to have had a hand in developing budgets and policies for our state's education system. During that time, Arizona has enacted rigorous reforms, with the intent to promote significant improvements in student performance, coupled with annual increases in state funding to boost resources for local education agencies with support from both the Legislature and voters.

Despite recent economic difficulties, Arizona continues to advance its agenda of better outcomes for all students and recently, voters statewide again ratified their desire to prioritize education funding as a constitutional priority.

This Race to the Top funding opportunity provides Arizona optimism where there is adversity, allowing our state to further invest and to unify its efforts in vigorous pursuit of improving student achievement despite our temporarily challenging financial conditions.

To that end, I encourage you to consider this application not only on the merits of its content but on the possibilities it presents to bring together our state under a shared vision and comprehensive strategy for educational advancement.

With respect and appreciation,

In service to the great State of Arizona,

Eileen I. Klein

*STATE BOARD OF EDUCATION &*
*STATE BOARD FOR VOCATIONAL AND*
*TECHNOLOGICAL EDUCATION*

*Vince Yanez, Executive Director*
*Vince.yanez@azed.gov*
*www.ade.az.gov/stateboard*

*1535 West Jefferson*
*Phoenix, Arizona 85007*
*(602) 542-5057*
*FAX (602) 542-3046*



May 11, 2010

Race to the Top Review Committee
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Committee Members:

As a member of the Arizona State Board of Education, I am writing this letter to convey my strong support for Arizona's Race to the Top application for Round Two.

Arizona's application mirrors the Arizona Legislature educational reforms in many ways. Arizona looks to transform our educational system into one of excellence. Our focus is directed towards enhancing student achievement and accountability. Our ultimate goals are to prepare students for higher learning and supply them with the skills needed to enter the job market.

Arizona's stakeholders are committed to moving forward with this agenda. Arizona lawmakers have curtailed social promotion by implementing a basic reading proficiency for third graders. Legislators have also expanded sources for new charter schools. We have added opportunities for experts in math, science and other areas to share their knowledge without first getting a teaching certificate from the college of education. The Arizona Department of Education is also developing a teacher and principal evaluation that include student performance.

Yes, Arizona is getting scheduled for an" Educational make-over." We understand the importance of this work and are eager to see the plan through. Your financial support would expedite this "Educational *facelift*." I appreciate your consideration of Arizona's Race to the Top application.

Sincerely,

Diane Ortiz-Parsons

Diane Ortiz-Parsons
Member, Arizona State Board of Education

State of Arizona
Department of Education

Tom Horne
Superintendent of
Public Instruction

May 14, 2010

Race to the Top Review Committee
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Committee Members:

As a member of the Arizona State Board of Education, I am writing this letter to express my strong support for Arizona's Race to the Top application for Round Two.

Arizona's application sets forth aggressive reforms in each of the four assurance areas. Each of these reforms focuses on how Arizona can enhance student achievement and ultimately produce high school graduates that are well-prepared for the challenges of higher education and the workforce.

Receiving funds through this competition will accelerate this important work, but stakeholders across Arizona are committed to moving forward with this agenda regardless of whether our application is successful. This is evidenced by the passage of new legislation and State Board policies pertaining to student assessment, school accountability, alternative teacher certification, school interventions and enhanced data capabilities. We understand the importance of this work and are eager to see the plan through.

I believe Arizona has put forth a solid, integrated reform agenda that will realize needed gains in student achievement.

I appreciate your consideration of Arizona's Race to the Top application.

Sincerely,

Tom Horne
Member, Arizona State Board of Education

*STATE BOARD OF EDUCATION &*
*STATE BOARD FOR VOCATIONAL AND*
*TECHNOLOGICAL EDUCATION*

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May 11, 2010

Race to the Top Review Committee
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

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Receiving funds through this competition will accelerate this important work, but stakeholders across Arizona are committed to moving forward with this agenda regardless of whether our application is successful. This is evidenced by the passage of new legislation and State Board policies pertaining to student assessment, school accountability, alternative teacher certification, school interventions and enhanced data capabilities. We understand the importance of this work and are eager to see the plan through.

I believe Arizona has put forth a solid, integrated reform agenda that will realize needed gains in student achievement.

I appreciate your consideration of Arizona's Race to the Top application.

Sincerely,

Vicki Balentine

Vicki Balentine
President, Arizona State Board of Education

ROBERT L. BURNS
DISTRICT 9

PRESIDENT OF THE SENATE
FORTY-NINTH LEGISLATURE

COMMITTEES:

RULES, CHAIRMAN
LEGISLATIVE COUNCIL, CHAIRMAN
LIBRARY, ARCHIVES & PUBLIC RECORDS
CHAIRMAN

# Arizona State Senate

May 25, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

I am writing to express my support for your continued efforts to explore new opportunities to reform Arizona's public education system and Arizona's proposal for funding under Race to the Top.

Arizona's long history of innovative reforms has gained national recognition and has served as a model for many states. Our robust charter school system, our statewide teacher performance pay, and our success in expanding school choice opportunities for our students and their parents make Arizona fertile ground for sustained efforts to improve accountability and efficiency in our system.

This year, the combined efforts of the Legislature and your office have enacted phenomenal education reform legislation. Together, we expanded school choice and set in motion numerous improvements to school and teacher quality while removing obstacles that stand in the way of student achievement and academic excellence.

I share your interest in Arizona's future and stand with you in support of Arizona's participation in Race to the Top.

Sincerely,

Robert L. Burns

RLB:meh

Capitol Complex, Phoenix, Arizona 85007-2890
Phone: (602)926-5993 Toll Free: 1 (800) 352-8404, x5993 Fax: (602)417-3226 Email: rburns@azleg.gov

**JORGE LUIS GARCIA**
**DISTRICT 27**

STATE SENATOR,
DEMOCRATIC LEADER
FORTY-NINTH LEGISLATURE

CAPITOL COMPLEX, SENATE BUILDING
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# Arizona State Senate

**COMMITTEES:**

GOVERNMENT INSTITUTIONS
RULES

The Honorable Janice K. Brewer
Governor, State of Arizona
1700 W. Washington St.
Phoenix, AZ 85007

May 26, 2010

Dear Governor Brewer,

I am writing to you today to offer my support for Arizona's application for round two of federal Race to the Top (RTTT) funding. At this moment, Arizona is at a crossroads in terms of its educational and economic policies. The actions taken in the coming months will have a profound and lasting impact on what type of economy Arizona is to have for perhaps decades to come. An infusion of federal RTTT funding will have a decisive positive impact on that outcome.

Arizona has already started along the path that President Obama has laid out for improving education in the United States. We were among the first states to establish a statewide school accountability system, and our statewide data system was a national leader at the time it was created. Our state universities are committed to developing high-quality teacher professional development and mentoring and induction programs. However, the economic downturn has limited our ability to commit significant resources to retooling theses programs and others for the 21st century.

The climate in Arizona is ripe for change. Recently, voters in Arizona approved a sales tax increase based largely on the premise that it would prevent further cuts to K-12 education. The people understand that the key to a brighter, more economically diverse future lies in building a quality P-20 education system. A vote of confidence by the department of education via a RTTT funding award would continue that momentum and let the voters know that their confidence was not misplaced.

Of particular concern to us as Democrats, who in Arizona represent the vast majority of our state's Hispanic and Native American population, is the promise of equitable access to highly qualified teachers that RTTT funding brings. A great many of Arizona's persistently low performing schools are located on Native lands or in areas populated largely by Latinos, and it is very difficult to attract and retain enough quality teachers in the more remote areas of the state. Given the trends in the demographics of the Southwestern United States, continuing this trend would result in nothing short of an economic catastrophe for our state.

Arizona is ready to act, but we cannot do it alone. We would welcome the department's support in our efforts to improve the quality of life in Arizona, and would endeavor to repay that trust with a demonstration that RTTT funding does in fact produce results.

Sincerely,

Jorge Luis Garcia
Leader, Arizona State Senate Democrats

JOHN HUPPENTHAL
ARIZONA STATE SENATE
1700 WEST WASHINGTON
PHOENIX, ARIZONA 85007-2844
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CAPITOL FAX: (602) 417-3157
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jhuppent@azleg.state.az.us

DISTRICT 20

# Arizona State Senate

COMMITTEES:

Education, Accountability & Reform, Chairman
Judiciary, Vice Chair

May 25, 2010

The Honorable Jan Brewer,
Governor, State of Arizona
1700 W. Washington St.
Phoenix, AZ 85007

Dear Governor Brewer:

My record as Chairman of the Senate Committee on Education, Accountability & Reform and as an 18- year veteran legislator is one of education reform. Over my career I have successfully sponsored and passed legislation that has expanded charter schools in Arizona, developed a statewide system of performance pay for our teachers, expanded alternative certification avenues, improved our assessments of academic gains and improved the accountability of various aspects of our state's education system. Arizona's Race to the Top application provides an excellent opportunity to accelerate the work for education reform and I confirm my support for this plan.

Recently, during Arizona's 2010 legislative session, we passed many additional education reforms, including those in assessment, accountability measures, teacher and principal evaluations, and the capacity of the data warehouse. With an award of Race to the Top grant funds, I am confident we will be able to effectively implement our academic reform agenda, leading to the improvement of outcomes for all of Arizona's students. The plan is carefully crafted to focus on the expansion of infrastructure in technology, professional development, and data driven accountability that ultimately will be sustainable long after federal funds have been expended.

I fully endorse and appreciate your efforts to pursue an additional opportunity for Arizona to further implement reforms and improve the quality of education in our state. Thank you, Governor Brewer, for your efforts on behalf of all the students and parents of our state.

Sincerely,

John Huppenthal
State Senator, District 20

Mary Lou Fulton Teachers College
ARIZONA STATE UNIVERSITY

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

RE: Race to the Top Phase II, Letter of Support

Dear Governor Brewer,

I am pleased to offer this letter of support for the State of Arizona's application for the Race to the Top Phase II. As one of the largest colleges of education in the country, and one that produces more than half of the teachers in Arizona, we believe it is vital for our work in PreK-12 schools that Arizona receives support from the resources available through the Race to the Top program.

With innovative teacher preparation programs and nationally-ranked graduate programs, Arizona State University's Mary Lou Fulton Teachers College is at the forefront of education reform in the country. We are committed to making a difference in the community through excellence in partnerships, programs and teacher preparation. Through this collaboration, we can continue to advance the profession of teaching and the academic achievement of our PreK-12$^{th}$ grade students in Arizona.

We stand ready to support and collaborate with the effort to advance the knowledge and skills of our children so they can succeed in postsecondary education and in their professions.

Sincerely,

Mari Koerner

Mari Koerner, Dean
Mary Lou Fulton Teachers College
Arizona State University

RICHARD L. BOALS
President and CEO
(602) 864-4305
FAX: (602) 864-4200

BlueCross BlueShield of Arizona



May 12, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

For Arizona, our future will rely upon the knowledge and actions of the next generation. This is why I support the Arizona Race to the Top Phase II Application.

Arizona was built on a courageous entrepreneurial spirit. We must honor this and boldly move forward so we can thrive throughout the next 100 years and beyond. Our State possesses a wealth of talent that we must cultivate, a history of innovation and cultural diversity with a wealth of experience waiting to be shared.

For our State to succeed, our students must succeed. In order to achieve this success, we have to take action now and clearly define our goal and how we're going to get there. Even more importantly is how we're going to get there together. It takes partnership and support to take courageous action and transform our education system. We owe this to our students, our community and our State.

Please join me in ensuring that all students graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and career.

Sincerely,

Richard L. Boals
President & Chief Executive Officer

Post Office Box 13466 • Phoenix, AZ 85002-3466
8220 North 23rd Avenue • Phoenix, AZ 85021-4872 • www.azblue.com

May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

Arizona has always been a state of pioneers. We have come from all over our country and many, many other countries to form a state of diversity, a state of innovation, a state of vision. As President of the Cactus Park West Neighborhood Association, the owner of a local business and a concerned parent, partnering with the Washington Elementary School District is critical in bringing our community together.

I am continually inspired by the solid commitment to education that I see in the Washington District as well as in educators from throughout our state. As the State of Arizona approaches its centennial celebration, I believe our leaders are determined to support an education system that will lead to Arizona students being well prepared to succeed in college, in their careers and in life. I believe our educators are committed to ensuring that each student, year after year, has the tools and teachers needed for future success.

The Race to the Top reform plan proposed by Arizona is an important step in achieving that goal. As a strong advocate of public education, I support and applaud these efforts on behalf of Arizona's future.

Sincerely,

(b)(6)

Dan Glauber

President, Cactus Park West

Owner, D&B Automotive Repair, Inc.

CAVE CREEK UNIFIED SCHOOLS
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www.ccusd93.org

May 21, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

RE: Letter of Support for Arizona Race to the Top Phase II Application

Dear Governor Brewer:

Cave Creek Unified School District is pleased to provide a letter of support to Arizona's application for the U.S. Department of Education's Race to the Top Phase II program. Our District fully supports the program's goal of providing a high-quality education for every young American. The Race to the Top grant will greatly assist Arizona's public schools by providing the necessary resources to stimulate reforms which will better prepare students for college and a successful and productive career.

Arizona has developed an education reform plan in the four assurance areas identified by the Race to the Top program. Our district continues to advance Arizona's public education by adding data elements and exploring optimal ways to collect and provide data. We will utilize an advisory council of technology and data experts. We will measure student success with appropriate standards and hold schools accountable for those standards. Our application during the first phase did not adequately outline what we have already accomplished but provides a base to build on plus all of the initiatives in the pipeline.

In a 21st Century world, education is the key component of keeping America strong both politically and economically. Arizona is facing dire economic conditions and tough budget decisions have been necessary over the last three years. During these tough times, however, policies have continued to evolve which further the commitment of preparing our youth based on college and workplace standards. The resources provided by the Race to the Top funds will help us advance more quickly to the benefit of current student in our K-12 system.

In furthering the strong support of the various education sectors in continuous improvement of Arizona's education system based on the reform plan that has been developed, I assure you that Cave Creek Unified School District is ready to play its role in this effort. I am confident that our phase II application for Race to the Top will demonstrate this commitment and am happy to provide this letter of support for this effort. Thank you for your leadership on this important endeavor.

Sincerely,

Dr. Debbi C. Burdick
Superintendent
Cave Creek Unified School District #93


May 14, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Jan Brewer:

On behalf of the Center for the Future of Arizona, I am pleased to provide this formal letter of support for Arizona's Race to the Top Phase II grant application. As a nonprofit organization focused on addressing issues critical to the state, the Center recognizes the future success of Arizona is directly linked to the future success of our young people and the steps we take now to transform our education system.

Arizona is poised to make fundamental changes to our public education system to ensure that all students graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and career. Although bold, this is absolutely a critical goal for Arizona as we approach our centennial celebration and begin to define our next 100 years. It is important to recognize that our state has many assets upon which we can build as we move forward in implementing Arizona's education reform plan. Arizona has an innovative, entrepreneurial history of education reform. We are culturally diverse. We have experience with what does and what doesn't work in education. And perhaps most important, we have leadership and true partnerships among the State of Arizona, district and school leaders, teachers, the business community, parents and students that our state can draw upon to realize this change.

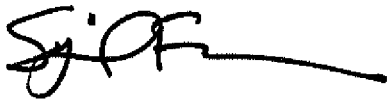
Arizona knows that in order to accomplish our goals we will need to focus on the single strategy that we have learned is most important to improving educational outcomes for young people which is ensuring all students have access to and benefit from effective instruction at every step in their educational career. The Center for the Future of Arizona is committed to realizing this strategy in our state. This is evidenced by the work of our Beat the Odds Institute which provides training, assistance and support to Arizona K-12 principals in over 85 schools across the state to implement research-based principles aimed at providing effective instruction and improving student achievement.

As a signal of Arizona's continued commitment to education innovation, the Center was actively engaged in the passage of the legislation you just recently signed into law establishing a "move on when ready" education model designed to increase academic achievement to national and international standards, preparing students for college and careers. The legislation provides for an alternative high school diploma available to students who demonstrate readiness for college

level work without remediation, enabling students to move forward in their educational career based on demonstrated academic achievement as opposed to seat time in class. Like the Beat the Odds Institute, this major education reform effort focuses on providing effective instruction for all students. The Center is positioned to lead the development and implementation of the move on when ready model which is part of our state's larger reform plan. We are pleased to support Arizona's educational innovation agenda and look forward to continuing this work.

Governor Brewer, we admire and respect the resolve and commitment you have demonstrated in protecting Arizona's educational enterprise even as we continue to face difficult budgetary circumstances. The Center is prepared to lend our support to your efforts to advance Arizona's educational innovation agenda and we fully support Arizona's Race to the Top Phase II Application. We look forward to working with you and educational stakeholders across the state put in place what we know is a very solid and comprehensive plan to transform our education system to benefit all Arizona children.

Sincerely,



Sybil Francis, Ph.D.
Executive Director, Center for the Future of Arizona

CENTER FOR THE
FUTURE OF ARIZONA

May 17, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 W Washington
Phoenix, AZ 85007

Dear Governor Brewer:

It is my pleasure to endorse in the strongest possible terms your decision to apply for Round Two of the Race to the Top Fund. In the last few years, the energy and strength of the public and private forces have gathered to create for every student in Arizona an educational platform worthy of the 21st Century requirements for a highly educated work force. This offers great promise for our future. The Gallup Arizona Poll, conducted recently by our Center, affirms very strong citizen support for ensuring that every Arizona high school student graduates college and/or career ready, and that Arizona's students be educated to global standards.

The adoption of several recent educational reforms, including the 'Move On When Ready' legislation signed by you last week and the confirmation of Arizona's participation in the National Commission on Education and the Economy's multi-state consortium to adopt nationally normed curricula and Board Assessments is clear evidence of Arizona's commitment to the kind of educational reform called for in the Race to the Top competition.

These steps give clear expression to Arizona's commitment to ensuring that all students benefit from effective instruction at every point along the education continuum. They affirm Arizona's commitment to make fundamental changes to its public education system in two significant ways: policies to ensure effective instruction for all students and partnerships to ensure effective implementation of Arizona's reform platform.

Center for the Future of Arizona
541 E Van Buren, Suite B-5
Phoenix, AZ 85004

Arizona is well-positioned to make the fundamental changes needed to reform our educational system. We have strong partnerships among state, district and school leaders, teachers, business leaders, community leaders, parents and students. We have a common goal, a history of educational innovation upon which we can build, and a common strategy in place to create the educational reform called for in your Race to the Top proposal.

I endorse your proposal with enthusiasm.

Sincerely,

Lattie F. Coor, Ph.D.
Chairman and CEO

Center for the Future of Arizona
541 E Van Buren, Suite B-5
Phoenix, AZ 85004

Communities
In Schools
Arizona

May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

The goals of the Washington Elementary School District are much like the educational goals of the State of Arizona – to prepare students for future success. Communities in Schools of Arizona has partnered with this district for over ten years, providing integrated school-based services. I am inspired by the commitment to children and their future that I see regularly in Arizona schools, and I am humbled by the service to children that I see in our educators. Arizona was built on an entrepreneurial spirit, and I see that spirit reflected in our education system today.

In order for Arizona to become an educational leader, our state must commit itself to preparing students for the future. I believe that Arizona's Race to the Top reform plan is an important part of reaching that goal. It shows a combined commitment to education reform, aided by strong leadership and true partnerships among the state, school districts, teachers, the business community, parents and students. It is time for Arizona to take the lead and show that we are advocates for our children and their future.

Sincerely,

Laura Magruder, M.Ed.
President and CEO
CIS of Arizona

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COCHISE COUNTY OFFICE
77 CALLE PORTAL, SUITE B-160
SIERRA VISTA, AZ 85635
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COMMITTEES:
ARMED SERVICES
SUBCOMMITTEE ON AIR AND LAND FORCES
SUBCOMMITTEE ON MILITARY READINESS
SCIENCE AND TECHNOLOGY
CHAIR, SUBCOMMITTEE ON SPACE AND AERONAUTICS
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT
FOREIGN AFFAIRS
SUBCOMMITTEE ON THE WESTERN HEMISPHERE

# Congress of the United States
## House of Representatives
## Washington, DC 20515–0308

www.giffords.house.gov

May 20, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan,

I am writing to offer my unqualified support for the state of Arizona's application for the Race to the Top (RTTT) competitive education reform grant program. In utilizing these federal funds, Arizona seeks to capitalize on its assets – a strong record on performance pay, a plan for revamped standards and assessments, and an expanded charter school system. Arizona's RTTT proposal builds upon these assets and will accelerate reforms necessary to support educational achievement and excellence.

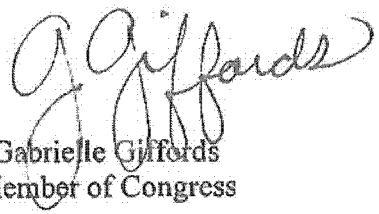
With the development and submission of the first phase application, Arizona has built on its experience and is even better prepared to adopt the challenging standards needs to measure student achievement, recruit and retain the best teachers, and turn around our lowest performing schools. I commend Arizona Governor Janice Brewer for submitting this RTTT application for phase two, and for establishing education task forces and the P-20 Coordinating Council whose mission is to develop real solutions drawn from the experiences of Arizona educators. She has taken the necessary steps to ensure that our state can comply with RTTT criteria and significantly improve student achievement in our state.

Governor Brewer's plan will attract qualified teachers through alternative certification, implement effective systems for monitoring student progress, and communicate school performance to parents. This is in addition to strong reading programs for younger students, early intervention services, and an end to the practice of social promotion. These steps will bring us closer to an education system that is capable of developing the innovators and leaders of the future.

It is imperative that the state of Arizona rebuild its education system and move forward with comprehensive reform so that every child has the skills necessary to compete in a global labor market. The students of Arizona deserve nothing less.

Arizona stands ready to be a partner with you in this Race to the Top on behalf of our students. Thank you for giving our application the strongest possible consideration.

Sincerely Yours,



Gabrielle Giffords
Member of Congress

ELLIS CENTER FOR EDUCATIONAL EXCELLENCE

NADINE BASHA
KAREN KINCADE-MUS
MARILYN HARRIS
JOHN LISCHER, ESQ.

STEPHEN D. MITTENTHAL, PH.D.
EXECUTIVE DIRECTOR

May 7, 2010

Honorable Jan Brewer
Office of the Governor
State of Arizona
Phoenix, AZ

Dear Governor Brewer:

I am pleased on behalf of the Ellis Center for Educational Excellence – a local foundation dedicated to improving the quality of education in Arizona – to support the state's RTT application for federal funding.

RTT is totally consistent with the mission and goals of the Ellis Center. By focusing on strategic education reform, Arizona's proposal would advance on a state policy level Ellis' operational initiative with the Creighton School District. That initiative embraces all the components specified in the RTT RFP.

The Ellis Center would welcome the state's active engagement in promoting district-wide comprehensive education reform. By instigating changes in state policies affecting standards and assessment, data systems, teacher quality and turn-around schools– to name a few – the RTT proposal would support our own commitment to long-term, district-wide systemic change and institutionalized capacity-building.

As part of the philanthropic sector, we welcome the opportunity to partner with others on comprehensive education reform. RTT can provide a catalytic stimulus to building systems and enacting reforms that can make a difference for Arizona's student population. We commend this effort to develop a statewide plan and resource capacity to improve the quality of public education in Arizona.

Sincerely,

Stephen Mittenthal, Ph.D.
Executive Director

5070 N. 40TH STREET, SUITE 205, PHOENIX, ARIZONA 85018 / TEL. 602-955-7711 • FAX 602-955-0000

FIRST THINGS FIRST

4000 North Central Avenue, Suite 800
Phoenix, Arizona 85012
Phone: 602-771-5100
Fax: 602-274-7040
www.azftf.gov



May 24, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

On behalf of First Things First—Arizona Early Childhood Development and Health Board, I want to express our support for and commitment to Arizona's Race to the Top application.

Research throughout the past decade has reinforced that learning begins at birth and that 90% of a child's brain is developed by age five. Through rich language experiences, access to health care and strong relationships with parents and caregivers, young children have a far better chance to meet the heightened demands of a rigorous academic program that now begins in kindergarten.

In 2006, the voters of Arizona approved a new tax on tobacco products to begin First Things First (FTF). Our mission is to ensure that all Arizona children start kindergarten healthy and ready to succeed. To that end, FTF funding supports:

1. Access to affordable, high quality child care.
2. Professional development for those in the early care and education field.
3. Family support services with an emphasis on literacy.
4. Preventative health services.
5. Coordination among and between early care and education funding, programs and services.
6. Parent education and awareness.

FTF's statewide program combined with funding in local regional partnership councils ensure that there is the necessary balance between statewide accountability while maintaining a commitment of local flexibility.

Current FTF funding addresses three of the four Race to the Top assurance areas:

**Standards and Assessments:** The Arizona Early Learning Standards were developed by the Department of Education to provide a framework for quality curriculum for all children 3 to 5 years of age. The standards are aligned with the K-12 learning standards and the Head Start Child Outcomes and cover a broad range of skill development that provides effective school readiness for children from diverse backgrounds and with diverse abilities. First Things First integrates the dissemination and utilization of these standards throughout early care and education settings including standards for pre-K expansion and in Quality First!, Arizona's quality improvement and rating system. Quality First! includes evidence of use of the early learning standards as an indicator of high quality and Quality First! coaches assure that early care and education participants are introduced to these standards and are

FIRST THINGS FIRST

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assisted to reflect the standards in all early education curricula. In September, First Things First will complete work on companion program guidelines for infants and toddlers.

- **Data Systems to Support Instruction:** The longitudinal impact study of the early childhood system to support school readiness is being undertaken by a University Consortia (University of Arizona, Arizona State University, Northern Arizona University) with monitoring by the First Things First's Evaluation Division. The first of two studies has begun data collection on over 8000 children (3500 infants and toddlers, 2800 preschoolers, 2200 kindergartners). Each participant will be assessed every other year on constructs including height and weight, language/math skills, child development, family and home environment, parenting, child care, child health, use of services, and household income. Measurements include the Battelle Developmental Inventory, Parent-Child Interaction Scale, Devereaux Early Childhood Assessment, Phonological Awareness Literacy Screening, Preschool Language Scale, Research-based Mathematics Assessment, measures of height and weight and a parent interviews on health status. Measures will occur at nine months, preschool age and at Kindergarten.

- **Great Teachers and Leaders:** T.E.A.C.H is a comprehensive scholarship program designed to increase the educational levels and skills of the early care and education workforce and was funded and approved to begin implementation in March 2008. T.E.A.C.H.® Arizona provides access to college coursework leading to a national Child Development Associates (CDA) Certificate, certificate of completion or an Associate degree in early childhood education. T.E.A.C.H. also supports an equitably paid and stable early childhood workforce by providing a financial incentive in the form of a bonus or raise upon completion of college coursework. As of March 31, 2010, 450 early care and education teachers and caregivers have been awarded T.E.A.C.H. scholarships. Nearly 70% are enrolled in spring semester classes; they have taken 1583 credits at 15 of Arizona's 19 community colleges that offer coursework, degrees or certificates in early care and education.

Though FTF is only a couple of years into implementation we have developed rich partnerships with the K-12 community—both through the Arizona Department of Education and in local school districts where we are collaborating on a wide variety of initiatives. Working with stakeholders across the state we can ensure that all children have the solid foundation they need to be successful in school and life.

Sincerely,

(b)(6)

Rhian Evans Allvin
Executive Director

# Flagstaff Unified School District

3285 East Sparrow Avenue Flagstaff, AZ 86004 928-527-6000

The Flagstaff Unified School District Governing Board and the Flagstaff Educators Association are in support of Arizona's application for Race to the Top. Many of the reforms listed in the preliminary scope of work are ones that our district has been implementing over the past couple of years.

In particular, we are interested in the "move on when ready" aspect of individualized education using data and student progress to inform student achievement. We are also working on improving our evaluation system to better reflect classroom activity and student academic growth. This will include the use of more frequent walk throughs by principals, more focused staff development based on the needs revealed by the walk throughs, and an evaluation tool that includes student academic growth.

Flagstaff Unified School District uses an Interest Based Strategies system of negotiations. The committee consists of members from the teaching, classified and administrative staff. We use IBS to arrive at consensus on most issues that involve evaluation and compensation. To that end, and with respect for our process, we will continue to use our IBS system in conjunction with the scope of work to devise, revise and implement an evaluation system that incorporates student growth, compensation, promotion and retention.

Respectfully,

Barbara Hickman
Superintendent
Flagstaff Unified School District

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Phoenix, Arizona 85004-1506

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FAX 602 744 6815

info@flinn.org
www.flinn.org

FLINN
FOUNDATION

May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington St., 9th floor
Phoenix, AZ 85007

Dear Governor Brewer,

I write today to affirm the Flinn Foundation's support of Arizona's application in the Race to the Top Phase II competition.

Since the Flinn Foundation's establishment in 1965 by Dr. and Mrs. Robert S. Flinn, we have dedicated our philanthropic resources to improving the quality of life in Arizona to benefit future generations. Inspired by Dr. and Mrs. Flinn's personal commitment to strengthening healthcare, the Foundation has given tens of millions of dollars to support medical education, biomedical research, community health care, and health-policy research.

The Flinn Foundation has also dedicated more than $20 million over the past 25 years to the Flinn Scholars Program, designed to enhance the ability of Arizona's public universities to attract the highest achieving graduates of the state's high schools. The Flinn Scholars have helped the universities' Honors programs become some of the finest in the United States.

Unless Arizona transforms its education system, however, the Flinn Foundation's decades of investment in our future will stand at risk. Arizona's transition to a more diversified and resilient economy depends on innovation in and reform of our education system, and failing to modernize will threaten our quality of life far more than the global recession has challenged our present circumstances.

The heart of a stronger education system is instruction that gives all students the tools for success in their postsecondary education and careers, and we are pleased that Arizona's application in the Race to the Top Phase II competition emphasizes proven approaches to make instruction more effective, such as adoption of the Common Core Standards Initiative, better use of data to inform instruction, and expansion of pathways to recruit and prepare excellent teachers.

As a foundation committed to improving the quality of life of *all* Arizonans, we are also encouraged that Arizona's application proposes the establishment of Regional Centers for Innovation and Reform, which will enable better support for low-achieving schools, and will

serve as critical resources for rural and Tribal schools, which our education system has historically underserved.

The era has passed in which Arizona could achieve prosperity by relying on natural resources, abundant sunshine, and low labor costs. At the Flinn Foundation, we see education as the economic driver of our state's knowledge-based economy in the 21st Century. The realization of our philanthropic vision depends on more effective instruction for all students, and Arizona's Race to the Top application shows that our state is ready to transform its education system. We enthusiastically endorse Arizona's application.

Sincerely,

(b)(6)

Jack B. Jewett
President and CEO
Flinn Foundation

LINDA L. O'DELL, ED.D.
SUPERINTENDENT

DEBRA R. MOYA
CHIEF DEPUTY

OFFICE OF THE
SUPERINTENDENT OF SCHOOLS
GILA COUNTY, ARIZONA

May 20, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington Street
Phoenix, Arizona 85007

Dear Governor Brewer:

It has been my honor to serve as a member of the P-20 Council's *Standards and Assessment Task Force* and be a part of the discussion about transforming Arizona's educational system. As a County School Superintendent and long-time educator, I know firsthand that it is long past time to reimagine and reinvent Arizona's educational systems, structures and operations to support our young people in succeeding in an ever-changing world.

In that regard, I write to offer my support for the education reform plan as outlined in Arizona's *Race To The Top* application. There is a need to Vision a transformed educational system in which all Arizona students have the knowledge and skills to succeed in college, careers and the workforce. The vision and attendant goals and strategies as described in the application provide a roadmap to meet increased expectations and performance targets for students, educators and schools.

I am very excited about potential opportunities for the Gila County Education Service Agency to become a state authorized regional provider of services and support for Arizona schools. We are very familiar with the challenges and issues facing our local schools, and look forward to partnering with the state to support efforts to improve instructional practices and increase student achievement. On a personal and professional level, I look forward to continued opportunities to assist in the implementation of Arizona's education reform plan.

Most Sincerely,

Linda L. O'Dell

Linda L. O'Dell, Ed.D.
Gila County Superintendent of Schools

1400 E. ASH STREET • GLOBE, AZ 85501 • PHONE 928.402.8784 • FAX 902.402.0038
719 SOUTH BEELINE HWY. • PAYSON, AZ 85541 • PHONE 928.472.5373 • FAX 928.468.2288

# GREATER PHOENIX EDUCATIONAL MANAGEMENT COUNCIL

***Dianne Smith, Executive Director***
3802 N. 91st Avenue Phoenix, AZ 85037
(623) 772-2214 Office (623) 877-2591 Fax


May 18, 2010

The Honorable Janice K. Brewer
Governor of Arizona
1700 W. Washington
Phoenix, AZ 85007

Dear Governor Brewer:

On behalf of the Greater Phoenix Educational Management Council (GPEMC) a consortium of thirty-four Maricopa County school districts, I would like to submit a Letter of Support for the Round 2 application for the Race to the Top dollars.

GPEMC and its Member Districts are willing and ready to work in collaboration with the State of Arizona to meet and exceed the plans and goals to improve student academic achievement for our Arizona students. We believe all students can succeed! We believe education is an investment in our children's future and represent students in need of a quality education; students preparing for higher education; students preparing for the workforce; and students preparing for life experiences and lifelong learning.

The Arizona's Race to the Top application (Arizona Plan) addresses the four assurance areas directed at the education reform process that leads to enhanced student success: (1) standards and assessment, (2) data systems to support instruction, (3) great teachers and leaders, and (4) turning around the lowest-achieving schools.

As we work together in this endeavor we want to commit our resources, time and efforts to ensuring the Arizona goals are both attainable and realistic. GPEMC has a long history of collaboration with federal, state and local government entities including, but not limited to the Arizona Department of Education, the Governor's Office, the legislature, and the business community to implement cost-effective programs that make a difference for student academic success.

Please include the Greater Phoenix Educational Management Council as a major support Organization to accomplish the goals and exceed the expectations for our students. We look forward to the challenge!

Sincerely,

Dianne Smith

Dianne Smith
Executive Director, GPEMC

**Greater Phoenix Educational Management Council (GPEMC)**
Dianne Smith, Executive Director
3802 N. 91st Ave.
Phoenix, AZ 85037
(623) 772-2214 Office
(623) 877-2591 Fax
dismith@pesd92.org

# GPEMC Member Districts

Agua Fria Union HSD #216
Alhambra Elementary #68
Arlington Elementary District #47
Balsz Elementary #31
Blueprint Education/ Phoenix SP&A
Buckeye Elementary #33
Buckeye Union HS District #201
Cartwright Elementary #83
Cave Creek Unified #93
Creighton Elementary #14
Dysart Unified #89
Fountain Hills Unified #98
Fowler Elementary #45
Glendale Elementary #40
Isaac Elementary #5
Laveen Elementary #59
Liberty Elementary #25
Littleton Elementary #65
Madison Elementary #38
Murphy Elementary #21
Nadaburg Unified #81
Osborn Elementary #8
Palo Verde Elementary #49
Pendergast Elementary #92
Phoenix Elementary #1
Phoenix Union HSD #210
Riverside Elementary #2
Roosevelt Elementary #66
Saddle Mountain Unified #90
Tolleson Elementary #17
Tolleson Union HSD #214
Union Elementary #62
Wickenburg Unified #9
Wilson Elementary #7

GREATER PHOENIX LEADERSHIP

400 E Van Buren Street, Suite #825 | Phoenix, Arizona 85004 | (602)252-5667 (O) | (602)252-5677 (F)

May 18, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

We are writing to fully endorse Arizona's Round 2 Race To The Top Application. Our organization represents the Chief Executive Officers (CEO's) of the largest business, professional firms, and philanthropy's in Arizona. We have sister organizations in Tucson and Flagstaff.

Greater Phoenix Leadership (GPL) has been a major force since 2002 in leading education reform efforts in Arizona. We have championed early childhood education by supporting the "First Things First Initiative" which was passed and implemented. We helped secure voluntary all-day kindergarten, raised the graduation standards, developed assessments that were college/career ready benchmarked, worked to secure a State data system P through 20, helped develop pathways for early college options and set a goal to double the number of "college goers". GPL has hired and placed a full time education executive to address the task of education reform, in Arizona, across the P-20 continuum. We have worked to bring collaboration among the institutions of Education, Government, Philanthropy and Business.

GPL supports campaigns that impact educational reforms and improve financing for our schools. Those elections have specifically supported the kind of education reform that is planned in Arizona's Race To The Top Round 2 application. We have worked with key legislators to secure laws that allow significant education reform to occur in the areas of transparency of data, graduation based on performance rather than "seat time", incentives for outputs that encourage student achievement and high performance.

We help place business leaders on governing boards, state boards, boards to raise funds for struggling students, and the "Teach For America" board. Our leaders have been at the table in the development of Round 2 of the Race To The Top application and GPL gives it our full support. We are committed to be part of the implementation that improves the education outcomes for Arizona students and look forward to a successful application.

Respectfully,

(b)(6)

Thomas R. Franz
President and CEO

Helios
Education Foundation

Engaging minds. Enriching lives.

May 19, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

Helios Education Foundation is pleased to submit this letter in support of Arizona's effort to reform and strengthen our state's education system through the federal Race to the Top initiative. Helios is dedicated to creating opportunities for every individual in Arizona and Florida to succeed across the education continuum and we know firsthand the commitment, coordination, consensus-building and investment it takes to change lives through education.

We are encouraged to see this same commitment reflected in Arizona's Race to the Top bid, and we applaud the consensus and team work exemplified in this application. The Race to the Top application process has galvanized education stakeholders in our community, bringing together a diverse group of voices, including local and state public sector leaders and advocates and private sector businesses and industries, all ready to implement innovative, cohesive education reform in Arizona.

Know that Helios Education Foundation stands ready to support Arizona's efforts to move the needle forward and improve the quality of our education system. By working together, we can lead the way in shaping statewide education reform in a way that better prepares every individual in Arizona to complete postsecondary education and enter the global marketplace equipped with the knowledge and skills necessary to compete and succeed.

Sincerely,

Paul J. Luna
President and CEO

Phoenix Office
2415 E Camelback Road
Suite 500
Phoenix, AZ 85016-4288
Tel 602 381 2260
Fax 602 381 2299

Tampa Office
100 N Tampa Street
Suite 1625
Tampa, FL 33602-5842
Tel 813 387 0221
Fax 813 387 0232

May 14, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

It is with great pleasure that I write this letter of support for Arizona's Race to the Top Application. With a significant presence in Arizona, Intel is a strong corporate partner in both education and economic development. The continued success of Intel and other 21st century employers depends on college and career readiness and STEM education for all Arizona students. Arizona's application demonstrates the vision and commitment to the education transformation needed to ensure an integrated Pre-K through 20 education system that supports innovation, economic development, and personal prosperity for all.

Arizona is poised to deliver on this mission. Early adoption of charter schools, implementation of a P20 committee that includes education, government and business leaders, and membership in the Achieve American Diploma Project, and the Partnership for 21st Century Skills, are key actions that have paved the way for work envisioned in the Race to the Top strategy. Arizona is again demonstrating innovative leadership in the adoption of the Common Core Standards and assessments tied to college- and career-ready expectations and the expansion of the Arizona Growth model, a performance management system that ties teacher pay and performance to student growth and achievement. The commitment to continue to implement a data system that informs parents, students, teachers and administrators as well as researchers and policy makers, and teacher preparation, professional development and assignment systems that ensures highly effective teachers for all students is essential and bold.

Intel is firmly committed to supporting Arizona as we transform our education system. We will continue to bring our leadership of organizations at the national level, like Achieve, and our collaborative leadership, with Cisco and Microsoft on the global Assessment and Teaching of 21st Century Skills project, to bear on this critical work. We look forward to continuing to convene and provide leadership to the essential partnership of the business community as we execute the aggressive plan described in the Race to the Top application.

Please contact me if you have any questions.

Sincerely,

Shelly Esque,
Vice President, Corporate Affairs
President, Intel Foundation

Intel Corporation
5000 W. Chandler Boulevard
Chandler, AZ 85226-3699
1.480.554.8080 direct
www.intel.com

# Kiwanis Club of Sunnyslope

*Serving the Community of Sunnyslope since 1985*

May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

The Sunnyslope Kiwanis organization has partnered with the Washington Elementary School District for several years, serving the district with many valuable programs that directly benefit the students. One of the most significant and successful programs the Kiwanis organization provides is the dictionary distribution program. These dictionaries are distributed annually to all third graders, with each student's name written on the inside cover; over 3,200 dictionaries have been distributed in the 2009-2010 school year. Over 15,000 have been distributed year-to-date.

Our members love spending time with children in their classrooms and admire the work of educators who make a huge commitment to the future of students and Arizona.

The Race to the Top reform plan speaks to Arizona's future – to a future in which every child benefits from effective instruction, year after year, grade after grade, in every course, in every school across the state. The entrepreneurial spirit that founded our great state is the same spirit that will make these goals a reality for our students and our education system.

The Arizona plan is based on accountability: standards and assessments, data systems, great teachers and leaders and turning around low-achieving schools. All of these accountabilities must work in tandem to ensure that all students graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and in their future careers.

I support Arizona's Race to the Top application and am confident that by working together (education, business, community, parents and students), we can achieve great things for our children.

Sincerely,

Brian Vance

Brian Vance

President, Sunnyslope Kiwanis

*P.O. Box 9855, Phoenix, Arizona 85068-9855*

La Paz County Education Service Agency
Office of the County School Superintendent
1112 Joshua Ave, Suite 205
Parker, AZ. 85344
Phone: 928-669-6183 Fax: 928-669-4406
E-Mail: jshelton@co.la-paz.az.us Web: www.lapazschools.org
Janice Shelton
County School Superintendent
Sandi Harper
Chief Deputy

May 24, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington Street
Phoenix, Arizona 85007

Dear Governor Brewer,

As the La Paz County School Superintendent, I am very supportive of the educational system reform plan proposed in Arizona's Race to the Top Grant application. In fact, it is a plan that must be embraced at all levels so our students have the skills, knowledge, and abilities essential for career and college success. The future of Arizona depends on it!

La Paz County is very rural with large geographic diversity, extremely small districts, low socio-economic challenges, and few resources. I am pleased to see grant support for equitable distribution of resources for our students and teachers throughout the state. This statewide plan provides a blueprint for change that is data driven, addresses equity, and implements a strong transition plan – all are necessary to the educational reformation.

I see the potential for my office to provide services, assistance, and support to our districts in cooperation with the State. Our office is uniquely capable of reaching out and working in partnership with our local schools and communities to bring about the educational reform and improvements specified in the application. All aspects of the reform plan must be addressed to achieve success.

My office supports the Arizona Race to the Top application and will endeavor to do all we can to develop the high quality education system needed so our students are career and college ready citizens.

Very sincerely,

Janice Shelton

Janice Shelton
La Paz County School Superintendent

LAVEEN ELEMENTARY
SCHOOL DISTRICT No. 59

**District Offices**
9401 S. 51st Ave.
Laveen, AZ 85339-2710
(602) 237-9100
(602) 237-9135 fax

**Cheatham Elementary School**
4725 W. South Mtn. Ave.
Laveen, AZ 85339-7396
(602) 237-7040
(602) 237-3376 fax

**Desert Meadows School**
6855 W. Meadows Loop East
Laveen, AZ 85339-3512
(602) 304-2020
(602) 304-2025 fax

**Laveen Elementary School**
5001 W. Dobbins Rd.
Laveen, AZ 85339-9733
(602) 237-9110
(602) 237-9134 fax

**Maurice C. Cash Elementary School**
3851 W. Roeser Rd.
Phoenix, AZ 85041-2615
(602) 237-9120
(602) 237-9133 fax

**Trailside Point School**
7275 W. Vineyard Rd.
Laveen, AZ 85339-9805
(602) 605-8540
(602) 605-8545 fax

**Vista del Sur Traditional School**
3908 W. South Mtn. Ave.
Laveen, AZ 85339-7897
(602) 237-3046
(602) 237-1976 fax

May 19, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

It is with pleasure that I write this letter of support for Arizona's Race to the Top Application. The goal of education here in Arizona is that all students will graduate from high school with the knowledge and skills they need for success in postsecondary education and careers. To effect these goals, we will target transition years to ensure students are prepared for the next level of their education. We will provide K-2 supports that will help to ensure that every child is reading proficiently by the end of third grade. We will also work to improve eighth grade reading and math proficiency and establish Arizona Education and Career Action Plans for all students. By tenth grade, we will work to increase proficiency in reading, Math, and STEM courses, while also providing students with multiple pathways to a high school diploma

Arizona has identified several performances indicators in its Race to the Top application that will measure the state's implementation of its reform plan and the progress toward meeting its goal, as well as what I consider ambitious but achievable targets for student performance, by the year 2020. With Race to the Top support, I anticipate that by 2014 Arizona will be well on its way to meeting or exceeding these higher targets. I fully support Arizona's efforts to improve education state wide.

Sincerely,

Ronald A. Dickson
Superintendent


May 20, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

As a member of the Arizona Business & Education Coalition (ABEC), the Marana Chamber of Commerce supports the Arizona Plan, submitted for "Race to the Top" funding. Arizona's Race to the Top application addresses education reforms in four key areas: standards and assessments, data systems to support instruction, great teachers and leaders, and reform for the lowest-achieving schools in our state. With Race to the Top support for the strategies the state has developed, Arizona will reach goals within these key areas and meet its targets for student performance by 2020.

Now is the time for these reforms. When Arizona ensures that its students are leaving public schools with a high school diploma and skills for careers or postsecondary education, we are ensuring that these young people will be contributing members of society, thereby benefitting all members of every community. Arizona's future depends on its education system to produce a competent and competitive workforce in a 21st century global economy.

The Marana Chamber's support for the Arizona Plan demonstrates our belief that partnerships between educational leaders, communities, businesses, parents, and students will form the framework to ensure that these strategies are successful in making true progress in our state's education system. We look forward to being a part of this process and watching the progress that is made when this plan is implemented.

Sincerely,

Ed Stolmaker

Ed Stolmaker
President/CEO
Marana Chamber of Commerce

# Maricopa County

**Superintendent of Schools**

4041 N. Central Ave
Suite 1100
Phoenix, AZ 85012
Phone: 602.506.3866
Fax: 602.506.3753
www.maricopa.gov/schools

**May 13, 2010**

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

***REF: Letter of Support for Arizona Race to the Top Phase II Application.***

The Maricopa County Superintendent of Schools serves more than 711,000 school aged youth enrolled in traditional and non-traditional K-12 schools, comprising 63% of all students in the State of Arizona. Our Education Service Agency enthusiastically supports Arizona's *Race to the Top II Application* and will actively assist in the making your powerful vision for Arizona youth a reality.

Your vision *"**Transformation of Arizona's education system that will lead to a future where all Arizona students are prepared to succeed in college and career,**"* is a true indicator of your commitment to all of our school aged youth. This vision articulates your clear and purposeful focus on the one strategy most important to improving student learning "***ensuring that all students benefit from effective instruction year after year, in every grade, in every course, in every school and in every area across the State.***" This vision is commendable, and with your leadership achievable.

Your commitment to ***build on Arizona's prior history of innovative, entrepreneurial education*** reform is applauded and will enable the State to rapidly operationalize the reforms articulated in your plan. Our Education Service Agency supports you with the accomplishment of your "Overarching Goal"—*All students will demonstrate the skills, knowledge and abilities essential for postsecondary success.*" We stand ready to assist you with the implementation, validation and actualization of each of your education reform areas of:

- *Standards and Assessments*
- *Data Systems to Support Instruction*
- *Great Teachers and Leaders*
- *Supporting Struggling Schools*

Sincerely yours,

Donald D. Covey, Superintendent
Maricopa County

School District No. 21 of Maricopa County, Arizona
**MURPHY ELEMENTARY SCHOOLS**
Administrative Center
2615 West Buckeye Road • Phoenix, AZ 85009-5783
Phone: 602-353-5004 • FAX: 602-353-5081



May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Honorable Brewer:

It is my pleasure to write this letter of support for Arizona's Race to the Top application (Arizona RTTT Plan). Murphy Elementary School District #21 fully supports programs specifically designed to improve academic achievement of children through education reform efforts.

Arizona's RTTT educational goal of ensuring that all students graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and career.

In this grant, the State has selected several student performance indicators to measure the state's progress toward meeting its goal through the implementation of its Race to the Top reform plan, along with ambitious but achievable targets for student performance in these indicators by 2020. If awarded this grant, Arizona will be able to exceed many targets already selected, and expects that in 2014 it will be well on its way to meeting these higher targets.

Arizona's Race to the Top application (Arizona Plan) addresses education reforms in four assurance areas: (1) standards and assessments; (2) data systems to support instruction; (3) great teachers and leaders; and (4) turning around the lowest-achieving schools.

Therefore, on behalf of Murphy Elementary School district #21, I will work collaboratively with the State, regional support centers, and other partners, to promote and sustain Arizona's Race to the Top application (Arizona Plan).

Please feel free to call me @ 602-353-5002 if you have any questions or if I can be of further assistance.

Sincerely,

(b)(6)

Kathy Granillo-Beebe
Consultant to the Governing Board

# NAVAJO COUNTY
Superintendent of Schools
*"Creating an Enriched Educational Environment"*

**Linda L. Morrow**
*County School Superintendent*

**Tami Phillips**
*Chief Deputy*

**Lannie Gillespie**
*Education Service Agency Director*


May 21, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

As Arizona approaches it Centennial celebration, it is imperative that we act upon everything within our reach to prepare the next generation of citizens. To that end our education system must be ready to provide the knowledge and skills necessary to be successful in a 21st century global economy. The success of our young people and of the state relies upon the actions that we are taking now to transform our education system. This transformation will need to draw upon that same courageous spirit that built this great state of today.

Each County Superintendent of Schools, through their Education Service Agency, is ready for the challenge of helping our local schools. We have the partnerships in place that support a broad range of services at a regional level to assist schools in planning, implementing, and assessing improvement efforts. We understand the communities in our area and the need that is unique to each. We also understand the inherent challenges to provide the resources and support necessary to achieve these goals.

As regional education leaders, the County School Superintendents are uniquely qualified to be the support system that is necessary for strategic reform and improvement in education. Through everyone's efforts, we can find the common ground to create the state that we all want to see in the next 100 years!

As the Navajo County Superintendent of Schools, I support the focused effort envisioned in the Race to the Top application to develop a high quality educational system that produces career, college, and workforce ready citizens.

Respectfully,

Linda L. Morrow

*"To penetrate and dissipate these clouds of darkness, the general mind must be strengthened by education" ~Thomas Jefferson*


• 928 524 4204 • Fax: 928 524 4209 • P.O. Box 668 • Holbrook, AZ 86025 •

NORTHERN ARIZONA UNIVERSITY

Office of the President

Northern Arizona University
PO Box 4092
Flagstaff, AZ 86011-4092

928-523-3232
928-523-1848 fax
www.nau.edu/president

May 11, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

*RE: Letter of Support for Arizona Race to the Top Phase II Application*

Dear Governor Brewer:

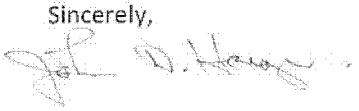
Northern Arizona University is pleased to provide a letter of support to Arizona's application for the U.S. Department of Education's Race to the Top Phase II program. Our University fully supports the program's goal of providing a high-quality education for every young American. The Race to the Top grant will greatly assist Arizona's public schools by providing the necessary resources to stimulate reforms which will better prepare students for college and a successful and productive career.

Arizona has developed an education reform plan in the four assurance areas identified by the Race to the Top program. As a member of the State Board of Education and a university president at one of three public universities in Arizona, I am confident in the steps taken to date. We continue to advance Arizona's public education by adding data elements and exploring optimal ways to collect and provide data. We will utilize an advisory council of technology and data experts. We will measure student success with appropriate standards, hold schools and school districts accountable for those standards, improve access to quality teachers by evolving our College of Education. One example at Northern Arizona University is to educate secondary education teachers through the college in the subject area in which they will be teaching. Our application during the first phase did not adequately outline what we have already accomplished but provides a base to build on plus all of the initiatives in the pipeline.

In a 21st century world, education is the key component of keeping America strong both politically and economically. Arizona is facing dire economic conditions and tough budget decisions have been necessary over the last three years. During these tough times, however, policies have continued to evolve which further the commitment of preparing our youth based on college and workplace standards. The resources provided by the Race to the Top funds will help us advance more quickly to the benefit of current students in our K-12 system.

In furthering the strong support of the various education sectors in continuous improvement of Arizona's education system based on the reform plan that has been developed, I assure you that Northern Arizona University is ready to play its role in this effort. I am confident that our phase II application to Race to the Top will demonstrate this commitment and am happy to provide this letter of support for this effort. Thank you for your leadership on this important endeavor.

Sincerely,



John D. Haeger
President

# PENDERGAST SCHOOL DISTRICT #92

3802 North 91st Avenue
Phoenix, Arizona 85037


| | |
|---|---|
| Administration Office | (623) 772-2200 |
| Human Resources office | (623) 772-2230 |
| Superintendent Fax | (623) 877-8188 |
| District Office Fax | (623) 877-3717 |

May 13, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer,

The Pendergast School District supports the State of Arizona in its Round 2 application for Race to the Top.

The reform agenda with four assurance areas are:

(1) standards and assessments,
(2) data systems to support instruction,
(3) great teachers and leaders, and
(4) turning around the lowest-achieving schools

The Arizona plan describes Arizona's goals within each of these areas and its policy and implementation strategies to meet these goals, and Pendergast School District is prepared to partner with the State to plan, coordinate, and implement reforms.

As Arizona approaches its centennial celebration, we deeply respect the courageous entrepreneurial spirit that built the first 100 years of our history and are determined to preserve that spirit as we boldly march forward to define our next 100 years. This future will rest on the success of our young people, and the success of our young people rests on the actions that we are taking now to transform our education system. The transformation of Arizona's education system will lead to a future where all Arizona students have the preparation to succeed in college, in careers, and in life. We are building on our innovative, entrepreneurial history of education reform, focusing on the one strategy we have learned is the most important to improving student learning – ensuring that all students benefit from effective instruction, year after year, in every grade, in every course, in every school, and in every area across the state. We are drawing on our courageous spirit to realize this strategy, aided by strong leadership and true partnerships among the State of Arizona, district and school leaders, teachers, the business community, communities, parents, and students.

As a state elementary district, our goal is to ensure that all students enter high school and graduate from high school with the knowledge and skills they need to be successful in their postsecondary education and career.

The State has selected several student performance indicators to measure the state's progress toward meeting its goal through the implementation of its Race to the Top reform plan, along with ambitious but achievable targets for student performance in these indicators by 2020. Due to Race to the Top, Arizona will be able to exceed many targets already selected, and expects that in 2014 it will be well on its way to meeting these higher targets.

Sincerely,

Ron Richards
Superintendent

Pima County
Workforce Investment Board

May 20, 2110

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer,

It is my pleasure on behalf of the Pima County Workforce Investment Board to submit this letter of support of the application for the Race To The Top Phase II application.

The components of the application link extricable with the goal in the application of having all students graduate from high school with the knowledge and skills needed for success in postsecondary education and careers.

It is my understanding that the strategies to ensure that students are ready for their next level of education are comprehensive and sustainable. It is essential to the state of Arizona that all students are reading at grade level by the end of third grade and that 8th graders are proficient in mating and reading with a stabled Arizona Education and Career Plan. The goals for 10th grade are equally strong in that they support STEM education as well as the listed proficiencies in math and reading. Each student at the end of 10th grade will have options for multiple pathways to a high school diploma.

In order to have a well educated workforce to support aerospace, biotechnology, alternative energy development and other types of 21st century development, students must be prepared for the future with a well established firm foundation in the elements essential to those skills. It is my understanding that the application for Race To The Top funding does exactly that in Phase II.

My sincerest wishes for success with this proposal.

(b)(6)

Clayton Hamilton
Chair, Pima County Workforce Investment Board

# Prescott College

For the Liberal Arts, the Environment, and Social Justice

May 17, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Governor Brewer:

Prescott College is pleased to support Arizona's Race to the Top effort as a means of enhancing and advancing Arizona's educational success.

As Arizona approaches its centennial celebration, it is racing to retool itself for high performance in the next 100 years, building on 5Cs: Cattle, Climate, Citrus, Cotton, Copper to transition to a new economy ABCDEs: Aerospace, Biotechnology, Computer Chips, Development, (Solar) Energy. Arizona's future will depend on a high quality educational system to produce a career and college ready workforce that can compete in a 21st century global economy. With a goal that all students will graduate from high school with the knowledge and skills they need for success in postsecondary education and careers, Race to the Top participation can help us to attain success.

Know that, as Arizona's private nonprofit liberal arts institution, Prescott College stands ready to partner with you, the Arizona Department of Education, and the Race to the Top initiative to achieve the success our citizens and State so rightly deserve.

Sincerely,

Daniel E Garvey, PhD
President

**OFFICE OF THE PRESIDENT**
**220 GROVE AVENUE • PRESCOTT, ARIZONA 86301**
**(928) 350-4100 • Fax (928) 776-5126 • www.prescott.edu**

Raytheon

**Taylor W. Lawrence, Ph.D**
President
520.794.1212 business
520.794.1414 fax
twlawrence@raytheon.com

**Missile Systems**
1151 East Hermans Road
Tucson, Arizona
85756 USA

May 20, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

I am writing to voice Raytheon's support for education reform in our state as outlined in Arizona's Race to the Top application.

As a leading aerospace and defense company, we depend on a high quality educational system that will produce a career and college ready workforce that can compete in the 21st century global economy. We feel that the strategies outlined in the reform plan are essential to help ensure that students graduate from high school with the knowledge and skills they need for success in postsecondary education and careers.

At Raytheon, we put a specific emphasis on math and science education, which we feel is the foundation for America's leadership in innovation. It is also an imperative for the defense industry, which relies on U.S. citizens with these technical skills to ensure our future success. We feel that the strategies in the RTTT application that address math and science proficiencies are particularly important in the transformation of Arizona's education system.

Thank you for your efforts to champion this reform in Arizona. We believe that improvements in both K-12 and higher education are a critical priority for this state.

Sincerely,

(b)(6)

Taylor W. Lawrence

The Honorable Jan Brewer
Governor of Arizona
1700 W. Washington
Phoenix, AZ 85007

Dear Governor Brewer,

Rio Salado College (RSC) is please to provide a letter of commitment for Arizona's Race to the Top application. It is our belief that the Race To the Top proposal will have a significant effect on Arizona's educational system, which in turn, broadens the opportunities afforded to students upon successful completion on their education career.

RSC's revolutionary approach to teacher preparation combines the flexibility, accessibility, and cost-effectiveness of online programs with critically important hands-on classroom experiences to deliver a state-approved teacher preparation program that produces Highly Qualified, successful classroom teachers. Rio Salado College's State Approved Teacher Education Program is in the business of supporting strategies and efforts that positively influence the lives of students, their schools within which they are enrolled and their communities as a whole. It is our belief that as Arizona seeks to reform 1)standards and assessment, 2)data systems to support instruction, 3) great teachers and leaders, and 4) turning around the lowest achieving schools, we can be an integral part of making this program a success.

As one of only two state approved teacher preparation programs at the Community College level in Arizona, RSC has the opportunity to influence the preparation of our educational personnel, from direct classroom instruction to professional development for administration and staff members. RSC works tirelessly to support students at all levels and understands the concept that some students will need immediate training for careers right after high school, while others should be prepared for the entrance into college, but baseline for success in the K-12 classroom should not be any different for the two groups. Thus supporting Arizona's goal that all students graduate from high school with the knowledge and skills needed to be successful in their postsecondary education and career.

Rio's Teacher Preparation Program is pleased to support the Race to the Top initiative of the state because the proposal capitalizes on strengths that are core to the State of Arizona and more importantly core to Rio Salado College; enhancement of STEM throughout all levels of the curriculum, recognition of cultural diversity, and a history of innovation.

We look forward to being a part of the RTT program and blending our program with the needs of the state of Arizona. We are eager to seeing how this program enhances the success of our students in Arizona classrooms.

Sincerely,
Janet Johnson, Ed.D
Chair, Department of Education

RODEL
FOUNDATION
OF ARIZONA

May 7, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

I'm delighted to write this letter of support for Arizona's Race to the Top (RTTT) grant application. As chair of your P-20 Coordinating Council, I have witnessed first-hand the great support received from business and community leaders as well as educators around the state. The planning process has brought together many stakeholders to improve education in Arizona. This includes the Arizona Department of Education, the House and Senate, school districts and the education associations.

The recently passed legislation pertaining to education has laid a strong foundation for successfully implementing Arizona's RTTT application. Additionally, as chair of the Arizona Grantmakers Forum, which represents 76 philanthropic organizations, I have witnessed the foundation community uniting to offer tremendous support of this grant.

I am confident that the bold ideas outlined in the application will substantially improve student achievement throughout Arizona, especially in urban, rural and tribal land schools. It is with great enthusiasm that we endorse this proposal, which if funded, will significantly improve public education in Arizona.

Sincerely,

Carol G. Peck

Dr. Carol G. Peck
President and CEO

6720 North Scottsdale Road, Suite 380 • Scottsdale, Arizona 85253
www.RodelFoundationAZ.org • T 480-367-2920 • F 480-348-0502

SCIENCE foundation ARIZONA

Innovation at Work

May 15, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Reference: Support letter for Arizona Race to the Top Phase II Application

Dear Governor Brewer:

Science Foundation Arizona is pleased to support the reform plan proposed in the referenced Race to the Top proposal and recognizes the earnest and compelling need to do all that is possible to invest in the future of our state through education, and particularly science, technology, engineering and mathematics "STEM" education.

The connection between STEM education and an innovation economy is critical and has been well understood by leaders in Arizona who, in 2006, created Science Foundation Arizona (SFAz) as a unique public/private 501(c)3 organization with the purpose of diversifying Arizona's economy into renewable energy, biosciences and communications. SFAz is accomplishing this by forging partnerships that leverage the research strengths of universities, research laboratories and industries in the state to attack critical technology problems of local and global significance. Funded by the state and supported operationally by Arizona's three CEO business organizations, SFAz demonstrates a broad commitment to expand Arizona's 21st century capacity and economic opportunity.

This commitment not only includes investments in advancements in research but also investments in STEM education that sets the foundation for developing the talent to support an innovation-inspired economy. In the spring of 2008, the SFAz board established the STEM Initiative (SFAz STEM). A first-rate, modern education system must be grounded in science and mathematics to reinforce the logic and critical thinking required of so many professions in today's marketplace. With the backing of private industry and community partnership support SFAz STEM is committed to enhancing Arizona's capacity and achievement in science, technology, engineering and mathematics for all students and serves as a vital bridge between business and those working to advance education in our state by enhancing relevant and effective education.

SCIENCE foundation ARIZONA
Innovation at Work

Through its global relationships, SFAz STEM strives to educate about the current and future needs of employers as well as identify opportunities to better align, integrate and embed STEM principles and practices at all levels of Arizona's education system. These objectives are tied to an overarching vision that will create "STEM pathways" throughout Arizona to increase quality, pre-college STEM education experiences in the classroom and through extra-curricular activities. Impacting over 1,200 teachers and an estimated 65,000 students statewide SFAz STEM has initiated a series of pilot pathway programs that builds on past successes, leverages and expands current investments and infuses new ideas and programs throughout the P-20 continuum in teaching and learning. These efforts and investments are reflected in Arizona's Race to the Top Phase II Application.

SFAz STEM supports the STEM education activities that are proposed in the Race to the Top Phase II Application. These programs collectively stress appropriate levels of rigor to maximize success in college and careers and are also project-based, giving students the ability to solve complex problems and apply the fundamental academic concepts in a real world context.

SFAz is committed to the future of Arizona and understands the critical role that a sound investment in education has on that future. You can count on our commitment to achieving this end. SFAz will support your effort fully.

Sincerely,

Darcy Renfro
Vice President and Executive Director, STEM Initiative

SOUTHERN ARIZONA LEADERSHIP COUNCIL

1400 E. Broadway
Suite 307
Tucson, AZ 85719
Ph. 520.327.7619
Fax 520.327.7613
www.salc.org

May 20, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

The Southern Arizona Leadership Council (SALC) supports the plan submitted for "Race to the Top" funding. We believe that our public schools are the foundation on which the state's economy and quality of life for all citizens depend.

The Arizona Plan offers the opportunity to encourage innovation and provide the training and support schools will need as they work to improve their systems to better support high levels of learning for all students, regardless of geographic location, neighborhood wealth, or choice of school.

To that end, SALC has examined the connection between funding and student learning; questioned whether or not Arizona has set credible and meaningful goals for students; explored transparency in the system and weighed the degree of flexibility in the use of resources to focus and enable the work of educators. We have engaged with local and state-wide education leaders and other community groups to examine relevant, meaningful goals for schools and have helped to both develop and encourage policy proposals that efficiently support all public schools and students, make room for innovation, and allow educators to deploy the best possible educational strategies to teach Arizona's children. The work of the Southern Arizona Leadership Council aligns well with the Race to the Top application.

It is clear that the results of the Arizona Plan will be integral to the success of transforming Arizona's school system. Our members stand firmly behind the principles upon which the Race to the Top funding has been built. We look forward to lending our support, not only to the application but to implementation of the actions that are required to make the Arizona plan successful.

Sincerely,

John Pedicone,
Vice President

Stand for Children

GRASSROOTS SOLUTIONS
LASTING CHANGE

May 24, 2010

Dear Governor Brewer,

Today I write to you in strong support of Arizona's Round 2 application for Race to the Top funds. Since Stand for Children arrived in Arizona nine months ago, we have witnessed a sustained, inclusive, and driven effort to build an education reform infrastructure that dramatically improves student outcomes over time. Race to the Top Funds will accelerate that progress.

Though arguably in the worst financial position of any in the nation, Arizona has not let this get in the way of pushing forward for an improved educational system.

More than a dozen laws that will meaningfully improve public education passed this year alone, including legislation to improve school accountability, assess and modernize data systems, diversify tracks for high school students, and improve articulation to post-secondary.

This package of bills includes SB1040, which *Stand for Children* helped draft and worked diligently with the Governor's Office, the Legislature, the State Board of Education and a range of statewide education associations to pass.

SB1040 puts into law a data-driven, student focused accountability system for teachers and principals statewide. This approach ensures that, for the first time, *individual* teachers and principals across the whole state are evaluated using student progress as a measure.

The failure to incorporate this information for teachers is a gap that has been glaring since the passage of Proposition 301, Arizona's dedicated sales tax for teacher pay approved in 2000. SB1040 resolves the evaluation piece of this system and gives districts and charters the balanced information they need to help students and make good decisions about their teaching and learning professionals.

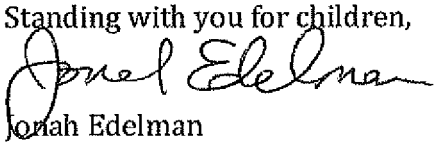
As you assess the level of commitment across stakeholders groups, please note that the final product was a consensus piece of legislation with substantive input from the Arizona Education Association, the Arizona School Boards Association, the Arizona Charter School Association, the Arizona Administrators Association, the business community, and many of the State's foundations and philanthropy organizations.

Indeed, this bill, as well as many others mentioned in the application, passed with overwhelming bi-partisan support. SB1040, the many other sensible, positive education reform bills passed this legislative session, and now the state's strong Round 2 Race to the Top Application, illustrate the depth of the commitment and the capacity that exists in Arizona to improve public schools for all children.

We wholeheartedly support the Round 2 application and we look forward to continue to working closely with you and a wide range of additional stakeholders to make measurable progress for Arizona students.

If you have any questions, please do not hesitate to contact me.

Standing with you for children,



Jonah Edelman
CEO – Stand for Children

STATE OF ARIZONA

JANICE K. BREWER
GOVERNOR

EXECUTIVE OFFICE

May 26, 2010

The Honorable Arne Duncan
Secretary, U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan:

On behalf of the State of Arizona, it is my privilege and honor to commend to you Arizona's Phase II Race to the Top application. The process of preparing this application over the last several months has brought together educators from traditional and charter schools, higher education, elected officials, business representatives, foundation leaders, Native American leaders, and innovative education policy experts to contemplate Arizona's future for education. The result is a bold and visionary path to education excellence.

In our application we tell the unique story of Arizona, building upon our history of strength, competitiveness and innovation. In doing so, we will accelerate the diversification of our economy to sectors representing aerospace, biotechnology, computer chips, development, and renewable energy. This, in turn, will continue to build a strong workforce for Arizona and contribute to your efforts to make our nation more competitive in the world economy.

The application incorporates the provisions of several pieces of significant education-related legislation enacted in Arizona earlier this year. We are proud to have put in place provisions for new alternative certification procedures for teachers and principals and a new program for teacher and principal evaluations. We have created a new systemic approach for managing education data that will promote the goals of transparency and accountability. Finally, we have new measures that will mitigate the achievement gap in a manner consistent with the goals set forth in Race to the Top. Taken together, these measures aggressively support the goals set forth in the Race to the Top application.

Elevating our standards and expectations for every child will continue to be necessary for our state as well as the nation as a whole for the foreseeable future. I intend to lead Arizona through this reform process even in the face of unprecedented revenue shortages. The budget challenges in our state will not deter us from our goal.

1700 WEST WASHINGTON STREET, PHOENIX, ARIZONA 85007
602-542-4331 • FAX 602-542-7602

Despite having one of the largest deficits of any state in the nation as a percent of its overall budget, I made a firm commitment that Arizona would not go below the education maintenance of effort requirement as part of the State Fiscal Stabilization Fund portion of the American Recovery and Reinvestment Act of 2009 (ARRA). The budget enacted for Fiscal Year 2011 keeps that commitment.

My pledge to education was affirmed on May 18 by the voters of this great state by virtue of the passage of Proposition 100 to provide for a temporary one-cent sales tax dedicated primarily to education funding. Proposition 100 brought together all Arizonans to support public education—from Republicans to Democrats, school administrators to teacher associations, urban to rural areas, charter to traditional public schools, and the business community to labor unions. The voters responded with an overwhelming 64% approval of the measure. This level of commitment by Arizonans of the need to support education in the future is a virtual guarantee of a high level of sustainability for Race to the Top reforms.

Mr. Secretary, Arizona is committed to the implementation of the systemic improvements to education embodied in Race to the Top. The approach detailed in this application will serve to close the student achievement gap and raise expectations for educators, parents and students alike. Our innovative approach is clearly worthy of your strongest support. Thank you for your consideration.

Sincerely,

Janice K. Brewer

Janice K. Brewer
Governor

JKB/rb

One day, all children in this nation will have the opportunity to attain an excellent education.

TEACHFORAMERICA

May 19, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer,

On behalf of the Teach For America • Phoenix region, I would like to express our support for Arizona's Race To The Top application. The Arizona plan will address what we believe to be the most critical issue facing our society – the achievement gap that exists between students growing up in low-income communities and their more affluent peers. By focusing on student achievement outcomes, we will be able to ensure that all of Arizona's students have access to a high quality education.

The Phoenix region of Teach For America is committed to continuing to work in partnership with the many other organizations and leaders dedicated to improving Arizona's education system. In particular, we are excited to contribute to the Arizona plan in the Race To The Top application by exploring opportunities to partner with Native American communities on reservations, work with the Arizona Department of Education to build the pipeline of school leaders with turnaround experience, and collaborate with the state and districts to expand Teach For America's footprint in Arizona. The Race To The Top application demonstrates Arizona's commitment to building supports necessary for real improvement in our schools.

The Teach For America • Phoenix region is honored to be a part of the conversation around our state's Race To The Top application. We are eager and willing to share our knowledge and intellectual capital with Arizona as we move forward together, and we look forward to all that is accomplished with this plan.

Sincerely,

Pearl Chang Esau

Pearl Chang Esau
Executive Director
Teach For America • Phoenix

AN AMERICORPS PROGRAM

3030 North Central Avenue, Suite 900 • Phoenix, AZ 85012 • P 602.304.0211 F 602.304.0213 • www.teachforamerica.org

Tucson Values Teachers

Creating an Education-First Community

May 24, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

Tucson Values Teachers (TVT) strongly supports the educational reforms outlined in Arizona's Race to the Top application.

TVT is a nonprofit organization in Southern Arizona that creates programming that provides economic support for all K-12 teachers, and also works to inform the public about the critical role that K-12 teachers play in the economic and societal well-being of the region. These efforts support our mission to recruit and retain the very best teachers.

The educational reforms that are detailed in Arizona's Race to the Top application are consistent with TVT's mission, and would assist in efforts to attract, retain and reward all K-12 teachers. In fact, the strategies outlined in the application are essential in efforts to transform Arizona's educational system.

Thank you for your strong advocacy of education in our state, and for all you have done to help assure a well-funded and high achieving educational system.

Sincerely,

Colleen Niccum
President of the Board
Tucson Values Teachers

Jacquelyn Jackson
Executive Director
Tucson Values Teachers

JON KYL
ARIZONA
730 HART SENATE OFFICE BUILDING
(202) 224-4521

COMMITTEE ON FINANCE

COMMITTEE ON THE JUDICIARY

REPUBLICAN WHIP

United States Senate

WASHINGTON, DC 20510-0304

STATE OFFICES:
2200 EAST CAMELBACK ROAD
SUITE 120
PHOENIX, AZ 85016
(602) 840-1891

6840 NORTH ORACLE ROAD
SUITE 150
TUCSON, AZ 85704
(520) 575-8633

May 25, 2010

The Honorable Arne Duncan
Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Duncan:

I have been informed that the State of Arizona has submitted an application for grant funding to your office.

According to Arizona Governor Jan Brewer, the grant funds will be used to help Arizona students graduate from high school with the knowledge and skills they need for success in postsecondary education and careers. This goal would be accomplished by implementing education reforms in the areas of standards and assessments, data systems to support instruction, great teachers and leaders, and improving the lowest-achieving schools.

Knowing funds are limited and proposals are reviewed through a competitive process, I request that this application be given the consideration it deserves within the parameters of available funding. Naturally, I do not expect any action to be taken in this matter that would contravene normal rules and regulations. Please provide a final notification once a decision has been made.

Thank you for your consideration.

Sincerely,

JON KYL
United States Senator

JK:ab

THE UNIVERSITY OF ARIZONA
College of Education

Office of the Dean
College of Education

1430 E. Second Street
P.O. Box 210069
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May 24, 2010

The Honorable Jan Brewer
Governor of Arizona
Executive Tower at the State Capitol
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

I write with my enthusiastic support for Arizona's application to the Race to the Top competition. My staff and I have been working with the program design team, and we are very excited about the funding of Arizona's application. As one of Arizona's three deans of education at public universities, I can assure you that we are all committed to the success of this enterprise.

The colleges of education at Arizona's three public universities have a long history of collaboration that has served our state well. For example, we currently work closely together on the state-wide evaluation of the First Things First early childhood program. This complex effort, with the University of Arizona serving as the lead agency, also has principal investigators at Arizona State University and Northern Arizona University. Similarly, we have had federal special education grants with Arizona State University as the lead institution and the University of Arizona as a partner.

Together, our three universities prepare the majority of teachers for Arizona's schools. We all have extensive networks of engagement with the P-12 community, and our colleges are all committed to high levels of clinical work in our preparation programs. Moreover, all of our universities have worked with charter schools as well as with school districts, so we are poised to leverage school reform across the full range of options available in our state.

I am looking forward to a positive outcome for this application and beginning to work on improving education for all of Arizona's children.

Sincerely,

Ronald W. Marx
Dean

VIRGINIA G.
PIPER
CHARITABLE TRUST



May 12, 2010

The Honorable Janice K. Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

I write in support of Arizona's Race to the Top and applaud the education reforms proposed. The Virginia G. Piper Charitable Trust has invested more than $250 million in Maricopa County over the past ten years in fields such as education, children, health and older adults. It is clear that the success of so many of the grants we have made depends on an educated work force and a strong public education system.

While I recognize that Arizona is facing daunting challenges in education, I would also observe that Arizona in many ways is the laboratory for a 21st century nation. The diversity and mobility of our population as well as the financial blows the state has experienced are conditions that demand new educational approaches and innovative schools.

The development of this Race to the Top proposal has been a thoughtful effort involving all constituencies, gaining the support of the philanthropic community. As in the past, the Virginia G. Piper Charitable Trust will look forward to public-private partnerships which will further advance the educational opportunities of Arizona's children, youth and students in postsecondary education.

Sincerely,

Judy Jolley Mohraz
President and CEO

1202 East Missouri Avenue | Phoenix, Arizona 85014 | ph. 480.948.5853 | fx. 480.348.1316 | www.pipertrust.org

WELLS FARGO

**David Howell**
Director
State Government Relations

MAC S4101-142
100 West Washington
Phoenix, AZ 85003
602 378-1894
602 378-4428 Fax
dave.a.howell@wellsfargo.com

May 17, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Dear Governor Brewer:

I write this letter in support of the Arizona Plan currently being submitted for "Race to the Top" funding from the U.S. Department of Education. The ability of Arizona's public schools to produce graduates prepared to compete in today's global economy and to be active, responsible citizens of our great state and nation is the foundation upon which Arizona's future will be built.

I have been actively involved as a parent, supporter and advocate in public education in Arizona since my wife and I moved with our four children to Phoenix more than 24 years ago. I know Arizona public schools can deliver an excellent education because our family has experienced it, but we've also seen the weaknesses in the system that make those pockets of excellence too much the exception and not the rule.

The Arizona Plan offers us the opportunity to encourage innovation and provide the framework for growth that our schools will need in the incredibly complex and competitive world in which we now live. The reforms and initiatives envisioned in the plan will help us indentify, develop and reward the best of our professional educators. They will ensure that all children throughout the state have the opportunity to learn from the best and to receive a world class education. It provides specific steps for intervening in the most struggling of our schools.

The Plan commits Arizona to holding its students and its public education system to the highest of standards, and it commits to building and utilizing a comprehensive and transparent data system to guide our decision making.

The elements of the Arizona Plan will form the foundation for transforming Arizona's K-12 public schools, but more importantly it provides the foundation for transforming the future for Arizona's children.

Sincerely,

(b)(6)

David Howell

YAVAPAI COUNTY EDUCATION SERVICE AGENCY

*Providing Service for Quality Education*

Tim Carter
County School Superintendent
1015 Fair Street, Suite 324
Prescott, AZ 86305-1852
Phone 928-771-3326
Fax 928-771-3329
Email: tim.carter@co.yavapai.az.us

May 15, 2010

The Honorable Janice K. Brewer
Governor of Arizona
1700 West Washington
Phoenix, Arizona 85007

Reference: Race to Top -- Letter of Support

Dear Governor Brewer,

As we have discussed on previous occasions, I strongly support the Race to the Top application. Please accept this as the Yavapai County Education Service Agency Letter of Support. On behalf of our twenty six (26) school districts and twenty five (25) charter schools, we are enthusiastic about the possibilities that this grant offers.

I agree with you..... that this application can be best used as a blueprint for the future of Arizona education. I am especially pleased to see the vision of the four target areas addressed and believe that our Education Service Agencies can play a significant role in their implementation.

Best wishes on the application. If we can be of assistance in any way, please let us know. We stand ready and willing to help.

Respectfully,

T. Carter

Tim Carter
Yavapai County School Superintendent

HARRY E. MITCHELL
5TH DISTRICT, ARIZONA

1410 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
PH: 202-225-2190

7201 EAST CAMELBACK ROAD, SUITE 325
SCOTTSDALE, AZ 85251
PH: 480-946-2411
FX: 480-946-2446

mitchell.house.gov

# Congress of the United States
## House of Representatives

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON AVIATION
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

COMMITTEE ON VETERANS' AFFAIRS
CHAIRMAN
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

COMMITTEE ON SCIENCE AND TECHNOLOGY
SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION

May 26, 2010

Secretary Arne Duncan
U.S. Department of Education
400 Maryland Ave. SW
Washington, DC 20202

Dear Secretary Duncan,

I write regarding the State of Arizona's application for round two for the Race to the Top competition.

According to the State of Arizona, Arizona's Race to the Top application addresses education reforms in four areas: standards and assessments, data systems to support instruction, great teachers and leaders, and turning around the lowest- achieving schools. The state included in its application several performance indicators to measure the state's implementation of its reform plan and the progress toward meeting its goal. According to the State of Arizona, these performance indicators and targets meet or exceed those previously set by the state.

I urge you to give this application full and fair consideration.

Thank you for your consideration.

Sincerely,

Harry E. Mitchell

Harry E. Mitchell
Member of Congress

ANN KIRKPATRICK
1ST DISTRICT, ARIZONA

COMMITTEE ON HOMELAND SECURITY
SUBCOMMITTEE ON
BORDER, MARITIME AND GLOBAL
COUNTERTERRORISM
SUBCOMMITTEE ON
INTELLIGENCE, INFORMATION SHARING AND
TERRORISM RISK ASSESSMENT
SUBCOMMITTEE ON
TRANSPORTATION SECURITY AND
INFRASTRUCTURE PROTECTION

kirkpatrick.house.gov

COMMITTEE ON VETERANS' AFFAIRS
SUBCOMMITTEE ON
DISABILITY ASSISTANCE AND
MEMORIAL AFFAIRS
SUBCOMMITTEE ON
ECONOMIC OPPORTUNITY

COMMITTEE ON SMALL BUSINESS
SUBCOMMITTEE ON
FINANCE AND TAX
SUBCOMMITTEE ON
RURAL DEVELOPMENT, ENTREPRENEURSHIP
AND TRADE

TOLL FREE: 1-888-737-1266

# Congress of the United States

## House of Representatives

May 28, 2010

The Honorable Arne Duncan
Secretary
Department of Education
400 Maryland Ave, S.W.
Washington, DC 20202-0008

Dear Secretary Duncan,

I write today in support of the state of Arizona's second round application for funding through the Department of Education's Race to the Top Program.

As the state works to build a 21st century economy, it is vital that all Arizona students are prepared for success in postsecondary education and equipped with the skills that are required for a rapidly changing workplace. Arizona has been a national leader in implementing entrepreneurial and innovative education reforms that incorporate parents, communities, and public and private entities in the project of offering all children a quality education.

For years, Arizona teachers, administrators, and policy makers have met the challenge of providing quality education in an economically, culturally, and geographically diverse state. With the implementation of the Arizona Academic Standards, the Department of Education laid the groundwork for a standards-based system that is focused on delivering results. In the past year, the state legislature has passed key provisions to end social promotion, track student achievement, and bolster teacher and principal performance. With the structure of a coordinated, state-wide effort to boost student preparedness across the board already in place, Arizona is an ideal recipient of Race to the Top funding.

Arizona has demonstrated its commitment to preparing all students for success. I am confident that Race to the Top funding will significantly help Arizona deliver the system-wide improvements required for future academic excellence and economic prosperity. For these reasons I ask that you grant the state of Arizona's application for Race to the Top funding all due consideration.

Sincerely,

Ann Kirkpatrick
Member of Congress

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WASHINGTON, DC 20515
PHONE: (202) 225-2315
FAX: (202) 226-9739

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PRESCOTT, AZ 86303
PHONE: (928) 445-3434
FAX: (928) 445-4160

211 NORTH FLORENCE STREET, SUITE 3
CASA GRANDE, AZ 85122
PHONE: (520) 836-3226
FAX: (520) 836-8417

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EXPECT MORE ARIZONA
*Ready Kids • Ready Graduates • Ready Workforce*

May 28, 2010

The Honorable Jan Brewer
Governor of Arizona
1700 West Washington
Phoenix, AZ 85007

Dear Governor Brewer:

Expect More Arizona, a statewide public-private partnership dedicated to making education the top priority in Arizona, is pleased to submit this letter in support of Arizona's federal Race to the Top initiative.

The collaboration and planning that has gone into the development of the Race to the Top application has fostered rich dialogue, stronger partnerships as well as innovative strategies for improving quality, performance and accountability across the entire education system. The inclusion of public and private leaders, education advocates and representatives from across the state has resulted in a roadmap for thoughtful education improvement and reform in Arizona.

Expect More Arizona is committed to creating a culture of high expectations and shared ownership by all Arizonans to improving education our state. We view a high quality education system as the key to Arizona's long-term economic prosperity and quality of life. As a result, we offer our continued support in your efforts to make Arizona's education system strong – from birth through career.

As you know, incredible work and partnering is already happening across the state as seen by the work of the Race to the Top process. We are confident that continued investment in Arizona education at the local, state and federal level will deliver powerful results for our children and our nation.

Sincerely,

Paul J. Luna
Chairman

Nicole Magnuson
Executive Director

# Arizona Race to the Top budgets and budget narratives

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## Budget Part I: Budget Summary Table

| Budget Part I: Summary Budget Table (Evidence for selection criterion (A)(2)(i)(d)) | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1** | **Project Year 2** | **Project Year 3** | **Project Year 4** | **Total** |
| 1. Personnel | $4,139,410 | $4,139,410 | $4,139,410 | $1,071,410 | $13,489,640 |
| 2. Fringe Benefits | $1,278,244 | $1,278,244 | $1,278,244 | $330,846 | $4,165,578 |
| 3. Travel | $250,236 | $212,112 | $193,048 | $56,548 | $711,944 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $308,940 | $223,440 | $209,690 | $109,690 | $851,760 |
| 6. Contractual | $26,626,483 | $24,099,583 | $21,523,283 | $14,247,783 | $86,497,132 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $32,603,313 | $29,952,789 | $27,155,455 | $15,816,277 | $105,527,834 |
| 10. Indirect Costs* | $545,084 | $533,810 | $530,818 | $143,045 | $1,752,757 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $5,000,000 | $4,750,000 | $4,750,000 | $3,000,000 | $17,500,000 |
| 13. Total Costs (lines 9-12) | $38,148,397 | $35,236,599 | $32,624,493 | $18,959,322 | $124,968,811 |
| 14. Funding Subgranted to Participating LEAs (50% of Total Grant) | $38,148,397 | $35,236,599 | $32,624,493 | $18,959,322 | $124,968,811 |
| 15. Total Budget (lines 13-14) | $76,296,794 | $70,473,198 | $65,248,986 | $37,918,644 | $249,937,622 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

**BUDGET PART I: BUDGET SUMMARY NARRATIVE**
**Evidence for Section A(2)(i)(d)**

Arizona's budget for the Race to the Top application reflects the priorities expressed in the narrative sections, goals, strategies and activities with primary focus on capacity building to improve instruction. In some cases the funds will help the state begin new important work, in most cases the RttT funding will accelerate work already underway. Taken as a whole, the budget represents another way to look at what Arizona hopes to accomplish in the next four years: improve the state's academic content standards and assessments, accelerate the full implementation of the data quality elements and an instructional management system, intensify the professional development of teachers and school leaders, implement effective strategies to improve low-performing schools and finally eliminate the achievement gap.
In order to accomplish these ambitious goals, approximately 7 % of the project budget is directed toward providing an effective technical assistance infrastructure to the states rural schools, 32 % to the improvement of teachers and principals, 18% for improved standards and assessments, 18% to invest in the state's data system, 11% to provide direct assistance to turning around low-performing schools. The remaining 5% will be spent on research and evaluation critical to the continuous improvement of the work of Arizona's RttT plan.

- **Human Capital** projects included expanding Teach for America with a focus on service to schools on the reservations. Other human capital projects receiving funding are the Rodel Exemplary teacher and Leader programs, the NAUTeach program at Northern Arizona University, T-Prep (a collaborative effort of the state's three state universities), the Arizona K-12 Center which trains and mentors teacher for service in under-served schools, mentors for the statewide coaching model and support staff to ensure the various programs and projects are run effectively and achieving their goals. Overall, the portion of the grant dedicated to human capital is 42.9% or $106,478,832 of the total grant.

  The state has in place several state and federal funding sources which have begun much of this work. The existing funds which will be leveraged to increase the pace of the work listed above are: Teach for America - $ 2 million allocation from ARRA and $ 2 million from state funds; ASU's Professional Development School program- $ 33.4 million Teacher Quality Partnership grant.

- **Professional Development** activities supported by RTTT include the funding of six Regional Centers for Innovation and Reform that will provide professional development to LEA/school leadership and instructional, assessment and data coaches to all LEAs and schools in their region, training on the common core standards and assessments, the newly developed principal and teacher evaluation system, the newly developed data dashboard and instructional management system, and STEM related programs and initiatives. Professional Development will also be provided through the expansion of resources on the IDEAL web-based professional development portal.

  Arizona will leverage existing resources for professional development. Currently, the ADE provides "Best Practices" Academies, contracting with nationally recognized experts in areas such as reading, mathematics, science, data-driven decision making, formative assessments, and curriculum alignment. These Academies are available to all LEAs and schools, with incentives provided for schools in need of improvement. In addition, the state's Math Science Partnership Grants are targeted for INTEL Math, a STEM professional development project serving high need students.

- **Interventions**

  Arizona will target funds to improve student achievement in its highest need, persistently lowest performing schools. The RTTT budget funds support capacity building activities of leaders and teachers to do turnaround work through the turnaround leader/teacher pipeline and the Teach for America initiative on Native American reservations that will place 150 TFA teachers on three reservations. RTTT funds will also support Regional Centers for Innovation and Reform staffed with specialists who will provide professional development to district/school leaders and instructional, assessment and data coaches to underperforming schools. Regional Center Specialists will also provide technical assistance on site to struggling schools in evidence-based instructional practices. And finally, RTTT funds will be used to assess and provide community-based services targeted for at-risk students in high need schools.

  Other state and federal resources will support the RTTT efforts, including $70 million in School Improvement Grant funds that will be awarded to LEAs over the next three years; Title I and state funding (AZ Proposition 301) that support schools in need of improvement beginning in Year One of improvement through restructuring/failing; and state funds to support structured English immersion programs for English language learners. The Arizona Department of Education will leverage the use of existing staff to support the improvement efforts targeted to the lowest

performing, using its federal and state funded School Effectiveness Division to provide assistance to Regional Center staff and LEAs that have schools in need of improvement. In addition, the state's web-based technologies will be adapted and expanded for use by the participating LEAs in RTTT efforts.

- **Implementation** funds will support effective management and quality assurance for the projects in the grant. The budget contains funds for the grants management office which will provide technical compliance with the grant requirements; funds for the Evaluation staff for the Educator Effectiveness Unit; funds for the Teacher Induction Program and AZ LEADS Executive coaches to ensure high levels of quality implementation of this important program; and staff for management of the Turnaround Office which will oversee the work of the turnaround schools project.

- **Research** Arizona will build on existing collaboration among the three state universities to fund research and evaluation specific to this reform plan with RTTT dollars. This University Research Center for Innovation and Reform will not only evaluate RTTT efforts and results, but also identify effective practices and LEAs and schools that can serve "lighthouse" sites for replication and scale up of model programs. In addition, the Research Center will conduct needed research and disseminate policy briefs and studies on various reform efforts underway.

## Project #1: Performance Management Office

**Budget Part II: Project-Level Budget Table**
**Project Name:** Performance Management Office
**Associated with Criteria:** A(2)
**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $125,970 | $125,970 | $125,970 | $125,970 | $503,880 |
| 2. Fringe Benefits | $38,898 | $38,898 | $38,898 | $38,898 | $155,592 |
| 3. Travel | $6,912 | $6,912 | $6,912 | $6,912 | $27,648 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $5,724 | $5,724 | $5,724 | $5,724 | $22,896 |
| 6. Contractual | $72,496 | $72,496 | $22,496 | $22,496 | $189,984 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $250,000 | $250,000 | $200,000 | $200,000 | $900,000 |
| 10. Indirect Costs* | $16,188 | $16,188 | $16,188 | $16,188 | $64,752 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $266,188 | $266,188 | $216,188 | $216,188 | $964,752 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #1: Performance Management Office

**1) Personnel - $503,880 for all four years. Below is an annual breakdown.**

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | # of FTEs | Total |
|---|---|---|---|---|
| Performance Management Office Staff: The staff of the Performance Management Office will meet regularly with the associate superintendents and ensure coordination among all reform areas. They will report directly to the Office of the Superintendent of Public Instruction. | 100 % | $62,985 | X 2 | $125,970 |

**2) Fringe Benefits - $155,592 for all four years. Below is an annual breakdown.**

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $125,970 | $9,636 |
| Workers Compensation | 2.5% | $125,970 | $3,149 |
| Insurance | 11.23% | $125,970 | $14,146 |
| Retirement | 9.5% | $125,970 | $11,967 |
| | | TOTAL | $38,898 |

**3) Travel**

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| Various Training and Technical Assistance Meetings | In-State | Mileage Reimbursement | 7,680 miles x .45 per miles x 4 years x 2 FTEs | $27,648 |
| | | | TOTAL | $9,000 |

**4) Equipment – N/A**

**5) Supplies**

| Item(s) | Rate | Cost |
|---|---|---|

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $194.75/mo. x 12 mos x 4 years | $9,348 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| BB/Cell Phone Purchase | $150 x 2 employees | $300 |
| BB/Cell Phone Usage | $75 X 2 employees x 12 mos x 4 years | $7,200 |
| Laptop or Desktop Computer | $1,500 x 2 employees | $3,000 |
| Printer | $300 | $300 |
| Proxima Projector | $900 | $900 |
| | TOTAL | $22,896.00 |

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract with an outside consultant in performance management systems to ensure that these processes and procedures are established with the guidance of an external expert. | $189,984 |
| | TOTAL | $189,984 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $900,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $64,752.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $964,752**

## Project #2: University Research Center for Innovation and Reform

**Budget Part II: Project-Level Budget Table**

**Project Name:** University Research center for Innovation and Reform

**Associated with Criteria:** A(2), B(3), C(3), D(2), D(4), D(5), E(2)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $1,500,000 | $1,500,000 | $1,500,000 | $1,500,000 | $6,000,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,500,000 | $1,500,000 | $1,500,000 | $1,500,000 | $6,000,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,500,000 | $1,500,000 | $1,500,000 | $1,500,000 | $6,000,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #2: University Research Center for Innovation and Reform

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract with a consortium of Universities to form the University Research Center for Innovation and Reform. This Research Center will be responsible for evaluating the Arizona RTTT reform plan's effectiveness, including all of its RTTT-supported activities. The Research Center will identify effective models and/or promising practices from emergent RTTT data and LEAs/schools that can serve as "lighthouse" sites for replication and scale-up. In addition, the Center will conduct research in various reform areas, such as effective practice in Arizona's charter schools, what is working in schools on Indian reservations, and promising practices with English language learners. The Center will interact with and inform all levels of the system: the RTTT Executive Board, Governor's Office, Legislature, ADE, SBE, the ASBCS and Regional Centers for Innovation and Reform. | $6,000,000 |
| | TOTAL | $6,000,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $6,000,000**

**10) Indirect Costs – N/A**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $6,000,000**

## Project #3: Regional Centers for Innovation and Reform

**Budget Part II: Project-Level Budget Table**

**Project Name:** Regional Centers for Innovation and Reform

**Associated with Criteria:** A(2), B(3), C(3), D(2), D(4), D(5), E(2)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $62,985 | $62,985 | $62,985 | $62,985 | $251,940 |
| 2. Fringe Benefits | $19,449 | $19,449 | $19,449 | $19,449 | $77,796 |
| 3. Travel | $3,456 | $3,456 | $3,456 | $3,456 | $13,824 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $2,862 | $2,862 | $2,862 | $2,862 | $11,448 |
| 6. Contractual | $4,411,248 | $4,411,248 | $3,911,248 | $2,411,248 | $15,144,992 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $4,500,000 | $4,500,000 | $4,000,000 | $2,500,000 | $15,500,000 |
| 10. Indirect Costs* | $8,094 | $8,094 | $8,094 | $8,094 | $32,376 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $4,508,094 | $4,508,094 | $4,008,094 | $2,508,094 | $15,532,376 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #3: Regional Centers for Innovation and Reform

**1) Personnel - $251,940 for all four years. Below is an annual breakdown.**

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | # of FTEs | Total |
|---|---|---|---|---|
| ADE Education Program Director: The ADE Education Program Director will serve as a liaison between the Regional Centers and the "Lenders on Loan" from the districts throughout Arizona and ensure that data collection, planning, implementation, local services delivery, report of results, and program evaluation occur in a uniform manner. | 100 % | $62,985 | X 1 | $62,985 |

**2) Fringe Benefits - $77,796 for all four years. Below is an annual breakdown.**

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $62,985 | $4,818 |
| Workers Compensation | 2.5% | $62,985 | $1,574 |
| Insurance | 11.23% | $62,985 | $7,073 |
| Retirement | 9.5% | $62,985 | $5,984 |
| | | TOTAL | $19,449 |

**3) Travel**

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| Various Training and Technical Assistance Meetings | In-State | Mileage Reimbursement | 7,680 miles x .45 per miles x 4 years | $13,824 |
| | | | TOTAL | $13,824 |

**4) Equipment – N/A**

**5) Supplies**

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $65.62/mo. x 12 mos x 4 years | $3,150 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| BB/Cell Phone Purchase | $150 x 1 employees | $150 |
| BB/Cell Phone Usage | $75 X 1 employees x 12 mos x 4 years | $3,600 |
| Laptop or Desktop Computer | $1,500 x 1 employees | $1,500 |
| Printer | $300 | $300 |
| Proxima Projector | $900 | $900 |
| | TOTAL | $22,896.00 |

## 6) Contractual

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract for a minimum of six Regional Centers for Innovation and Reform. The centers will implement the following strategies:<br>1. Align curriculum to Common Core Standards.<br>2. Build educator capacity by developing a system of support including professional development and technical assistance.<br>3. Identify and develop instructional resources.<br>4. Ensure successful implementation and sustainability. | $10,000,000 |
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this | The RTTT Executive Board or their designee will enter into Intergovernmental Agreements (IGAs) with local educational agencies (LEAs) that employ, while on loan to Regional Centers for Innovation and Reform, distinguished educators who will deliver Professional Development, Teacher Training, and Technical Assistance to districts and | $5,144,992 |

| Name(s) | Purpose | Cost |
|---|---|---|
| contract. | schools participating in Arizona's Race to the Top initiative. | |
| | TOTAL | $15,144,992 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $900,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $32,376.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $15,532,376**

## Project #4: Grants Management System

| Budget Part II: Project-Level Budget Table<br>Project Name: Grants Management System<br>Associated with Criteria: A(2)<br>(Evidence for selection criterion (A)(2)(i)(d)) | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $72,500 | $72,500 | $72,500 | $72,500 | $290,000 |
| 2. Fringe Benefits | $22,388 | $22,388 | $22,388 | $22,388 | $89,552 |
| 3. Travel | $2,250 | $2,250 | $2,250 | $2,250 | $9,000 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $2,862 | $2,862 | $2,862 | $2,862 | $11,448 |
| 6. Contractual | $0 | $0 | $0 | $0 | $0 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $100,000 | $100,000 | $100,000 | $100,000 | $400,000 |
| 10. Indirect Costs* | $9,120 | $9,120 | $9,120 | $9,120 | $36,480 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $109,120 | $109,120 | $109,120 | $109,120 | $436,480 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #4: Grants Management System

### 1) Personnel

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | Total |
|---|---|---|---|
| Grant Administrator: Matthew Hanson, GPC as the grant administrator will ensure day to day compliance with the terms and requirements of this grant award. The grant administrator will be responsible for ensuring that all ARRA related certifications and assurances are complied with and for all programmatic reporting including ARRA Section 1512. | 80% | $90,000 | $72,500 |

### 2) Fringe Benefits - $89,522 for all four years. Below is an annual breakdown.

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $72,500 | $5,546.25 |
| Workers Compensation | 2.5% | $72,500 | $1,812.50 |
| Insurance | 11.23% | $72,500 | $8,141.75 |
| Retirement | 9.5% | $72,500 | $6,887.50 |
| | | TOTAL | $22,388 |

### 3) Travel

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| Various Subrecipient Monitoring and Training and Technical Assistance Meetings | In-State | Mileage Reimbursement | 5,000 miles x .45 per miles x 4 years | $9,000 |
| | | | TOTAL | $9,000 |

### 4) Equipment – N/A

### 5) Supplies

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $150/mo. x 12 mos x 4 years | $7,200 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| BB/Cell Phone Usage | $50 X 1 employees x 12 mos x 4 years | $2,400 |
| | TOTAL | $11,448 |

**6) Contractual – N/A**

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $400,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $36,480.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $436,480**

## Project #5: Standards and Assessments

**Budget Part II: Project-Level Budget Table**

**Project Name:** Standards and Assessments

**Associated with Criteria:** B(3), C(3), D(2), D(4), D(5)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $125,970 | $125,970 | $125,970 | $125,970 | $503,880 |
| 2. Fringe Benefits | $38,899 | $38,899 | $38,899 | $38,899 | $155,596 |
| 3. Travel | $6,912 | $6,912 | $6,912 | $6,912 | $27,648 |
| 4. Equipment | $0 | | | | |
| 5. Supplies | $15,906 | $15,906 | $15,906 | $15,906 | $63,624 |
| 6. Contractual | $1,612,313 | $612,313 | $562,313 | $212,313 | $2,999,252 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,800,000 | $800,000 | $750,000 | $400,000 | $3,750,000 |
| 10. Indirect Costs* | $17,117 | $17,117 | $17,117 | $17,117 | $68,468 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,817,117 | $817,117 | $767,117 | $417,117 | $3,818,468 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #5: Standards and Assessments

**1) Personnel - $503,880 for all four years. Below is an annual breakdown.**

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | Total |
|---|---|---|---|
| Education Specialist (2): The Education Specialist will oversee the implementation of the Common Core State Standards once adopted by the State Board. Additionally they will oversee the expansion of the IDEAL system to include Critical support documents such as crosswalks or comparison tables, gap analysis summaries, explanations and examples of learning expectations, connections to other academic standards, sample lessons, and formative assessments. | 100% | $68,985 | $125,970 |
| Total: | | | $125,970 |

**2) Fringe Benefits - $155,596 for all four years. Below is an annual breakdown.**

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $125,970 | $9,636 |
| Workers Compensation | 2.5% | $125,970 | $3,149 |
| Insurance | 11.23% | $125,970 | $14,146 |
| Retirement | 9.5% | $125,970 | $11,968 |
| | | TOTAL | $38,899 |

**3) Travel - $27,648 for all four years. Below is an annual breakdown.**

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| To work with Field Centers | In-State | Mileage Reimbursement | 7,680 miles x .45 per mile x 2 FTE | $6,912 |
| | | | TOTAL | $6,912 |

**4) Equipment – N/A**

**5) Supplies - $63,624 for all four years.**

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $150/mo. x 12 mos x 4 years | $7,200 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| Printing, Reproduction, and Publication | $46,660 (will include the publication of various instructional materials) | $46,660 |
| BB/Cell Phone Usage | $50 X 2 employees x 12 mos x 4 years | $4,800 |
| Laptop Computer of Desktop | $1,500 x 2 employees | $3,000 |
| BB/Cell Phone Purchase | $100 x 2 employees | $200 |
| BB/Cell Phone Usage | $50 x 2 employees x 12 mos x 4 years | $4,800 |
| Printer | $300 | $300 |
| Projector | $900 | $900 |
| | TOTAL | $63,624 |

**6) Contractual**

| | | |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board or their designee will contract to support the Standards and Assessments portion of Arizona's RTTT strategy. IDEAL will be expanded to include Critical support documents such as crosswalks or comparison tables, gap analysis summaries, explanations and examples of learning expectations, connections to other academic standards, sample lessons, and formative assessments. | $2,999,252 |
| | TOTAL | $2,999,252 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $3,750,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $68,468.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $3,818,468**

## Project #6: Dashboards

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Dashboards<br>**Associated with Criteria:** B(3), C(3), D(2), D(4), D()<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $0 | $1,500,000 | $1,500,000 | $0 | $3,000,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $0 | $1,500,000 | $1,500,000 | $0 | $3,000,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $0 | $1,500,000 | $1,500,000 | $0 | $3,000,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #6: Dashboards

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual –**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | During years 2 and 3, a contractor will be selected to develop role-based access to the Arizona Department of Education Data Warehouse stakeholders by developing dashboards. | $3,000,000 |
| | TOTAL | $3,000,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $3,000,000**

**10) Indirect Costs – N/A**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $3,000,000**

## Project #7: Research and Policy - Seminars

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Research and Policy - Seminars<br>**Associated with Criteria:** B(3), C(3), D(2), D(4), D(5)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $0 | $200,000 | $100,000 | $100,000 | $400,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $0 | $200,000 | $100,000 | $100,000 | $400,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | | | | | |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #7: Research and Policy - Seminars

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual – N/A**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | During years 2, 3, and 4 a contractor(s) will be selected to assist the RTTT Executive Board or their designee in planning and holding high-quality professional learning opportunities. These Research and Policy Seminars will allow for data dialogues between AEDW stakeholders and decision makers and allow for continuous improvement of the system and process. | $400,000 |
| | TOTAL | $400,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $400,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $400,000**

## Project #8: SLDS System Enhancements

**Budget Part II: Project-Level Budget Table**

**Project Name:** SLDS System Enhancements

**Associated with Criteria:** B(3), C(3), D(2), D(4), D(5)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $3,500,000 | $4,000,000 | $4,000,000 | $3,000,000 | $14,500,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $3,500,000 | $4,000,000 | $4,000,000 | $3,000,000 | $14,500,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $3,500,000 | $4,000,000 | $4,000,000 | $3,000,000 | $14,500,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #8: SLDS System Enhancements

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | In furtherance of Arizona's efforts to enhance its educational data system in accordance with the provisions of HB 2733, a request for proposals (RFP) shall be issued for the purpose of defining the scope and estimated cost for making such changes. Depending on the outcome of that process, Arizona anticipates using up to $9 million of funding from the RTTT award, financial support from the Arizona Department of Education, funds from private foundations, and other financial resources available to the State which may be necessary to enhance existing data systems to make all data readily available to educators, policy makers, parents, and the general public. | $14,500,000 |
| | TOTAL | $14,500,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $14,500,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $14,500,000

## Project #9: Rural Infrastructure

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Rural Infrastructure<br>**Associated with Criteria:** B(3), C(3), D(2), D(4), D(5)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $0 | $200,000 | $200,000 | $0 | $400,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $0 | $200,000 | $200,000 | $0 | $400,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $0 | $200,000 | $200,000 | $0 | $400,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #9: Rural Infrastructure

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract with a middle mile/last mile service provider in order to establish broadband connectivity and distance learning capabilities at 10 strategically located rural high schools. The rural high schools, along with the regional centers, will serve as anchor educational institutions and provide services and capacity to other LEAs in the immediate vicinity. Funding will also be used to secure necessary equipment, supplies, and other learning materials needed to implement this initiative. | $400,000 |
| | TOTAL | $400,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $400,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $400,000**

Project #10: Mentor Districts

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Mentor Districts<br>**Associated with Criteria:** B(3), C(3), D(2), D(4), D(5)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $0 | $0 | $0 | $0 | $0 |
| 7. Training Stipends | $0 | $150,000 | $150,000 | $150,000 | $450,000 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $0 | $150,000 | $150,000 | $150,000 | $450,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $0 | $150,000 | $150,000 | $150,000 | $450,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #10: Mentor Districts

**1) Personnel – N/A**

**2) Fringe Benefits – N/A**

**3) Travel – N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual – N/A**

**7) Training Stipends - $450,000 over the four year life of the RTTT grant.**

- Year 2: $5,000 training stipends for 30 mentor school districts to assist new IIS adopters ($150,000 total.)
- Year 3: $5,000 training stipends for 30 mentor school districts to assist new IIS adopters ($150,000.)
- Year 4: $5,000 training stipends for 30 mentor school districts to assist new IIS adopters ($150,000.)

**8) Other – N/A**

**9) Total Direct Costs – $450,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $450,000**

## Project #11: Growth Model

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Growth Model<br>**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $62,985 | $62,985 | $62,985 | $62,985 | $251,940 |
| 2. Fringe Benefits | $19,449 | $19,449 | $19,449 | $19,449 | $77,796 |
| 3. Travel | $3,456 | $3,456 | $3,456 | $3,456 | $13,824 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $2,862 | $2,862 | $2,862 | $2,862 | $11,448 |
| 6. Contractual | $1,611,248 | $411,248 | $411,248 | $211,248 | $2,644,992 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,700,000 | $500,000 | $500,000 | $300,000 | $3,000,000 |
| 10. Indirect Costs* | $8,094 | $8,094 | $8,094 | $8,094 | $32,376 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,708,094 | $508,094 | $508,094 | $308,094 | $3,032,376 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #11: Growth Model

**1) Personnel - $251,940 for all four years. Below is an annual breakdown.**

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | Total |
|---|---|---|---|
| Growth Model Coordinator: The ADE will hire a full time Growth Model Coordinator who will continue the piloting based on the Colorado Growth Model through a partnership with the Rodel Foundation and Arizona Charter School Association and then oversee the implementation statewide. | 100% | $62,985 | $62,985 |

**2) Fringe Benefits - $77,796 for all four years. Below is an annual breakdown.**

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $62,985 | $4,818 |
| Workers Compensation | 2.5% | $62,985 | $1,574 |
| Insurance | 11.23% | $62,985 | $7,073 |
| Retirement | 9.5% | $62,985 | $5,984 |
| | | TOTAL | $19,449 |

**3) Travel**

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| Various Subrecipient Monitoring and Training and Technical Assistance Meetings | In-State | Mileage Reimbursement | 7,680 miles x .45 per miles x 4 years | $13,824 |
| | | | TOTAL | $13,824 |

**4) Equipment – N/A**

**5) Supplies**

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $150/mo. x 12 mos x 4 years | $7,200 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| BB/Cell Phone Usage | $50 X 1 employees x 12 mos x 4 years | $2,400 |
| | TOTAL | $11,448 |

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract in order to fully adopt a statewide student growth model. The State has already been piloting the Arizona Growth Model based on the Colorado Growth Model through a partnership with the Rodel Foundation and Arizona Charter School Association. | $2,644,992 |
| | TOTAL | $2,644,992 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $3,000,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $32,376.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $3,032,376**

## Project #12: Evaluation – Educator Effectiveness Unit

**Budget Part II: Project-Level Budget Table**

**Project Name:** Evaluation – Educator Effectiveness Unit

**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $485,000 | $485,000 | $485,000 | $485,000 | $1,940,000 |
| 2. Fringe Benefits | $149,767 | $149,767 | $149,767 | $149,767 | $599,068 |
| 3. Travel | $76,250 | $38,126 | $19,062 | $19,062 | $152,500 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $100,000 | $27,500 | $13,750 | $13,750 | $155,000 |
| 6. Contractual | $1,250,000 | $750,000 | $750,000 | $250,000 | $3,000,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $2,061,017 | $1,450,393 | $1,417,579 | $917,579 | $5,846,568 |
| 10. Indirect Costs* | $73,964 | $63,875 | $60,883 | $60,883 | $259,605 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $2,134,981 | $1,514,268 | $1,478,462 | $978,462 | $6,106,173 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #12: Evaluation – Educator Effectiveness Unit

### 1) Personnel - $1,940,000 for all four years. Below is an annual breakdown.

| Personnel: The following requested personnel will all be hired as employees of the project. | # of FTEs | Base Salary | Total |
|---|---|---|---|
| Director of Principal Effectiveness: Will be responsible for supervising the work on the principal evaluation system. | 1.0 | $75,000 | $75,000 |
| Education Program Specialists for Principal Effectiveness: To be hired, Each of these program specialists will be assigned two regional centers for reform & innovation. They will coordinate and assist in providing evaluation training for reliability and validity of evaluations; and assisting LEAs in using these results to plan appropriate leadership development, to impact compensation, and to promote, retain, or remove principals. | 2.0 | $60,000 | $120,000 |
| Director of Teacher Effectiveness: To be hired, will be responsible for supervising the work on the teacher evaluation system. | 1.0 | $75,000 | $75,000 |
| Education Program Specialists for Teacher Effectiveness: To be hired, Each of these program specialists will be assigned two regional centers for reform & innovation. They will coordinate and assist in providing evaluation training for reliability and validity of evaluations; and assisting LEAs in using these results to plan appropriate leadership development, to impact compensation, and to promote, retain, or remove teacher. | 2.0 | $60,000 | $120,000 |
| Data Analyst: To be hired, The analyst will be responsible to serving as the liaison between ADE's IT department and the Regional Centers for Reform & Innovation, and the LEAs. This person will provide technical assistance on the data entry components of data collection, produce reports as required or requested by the federal, state, or local education agency. This person will assist the director and program specialists as they provide technical assistance on the LEAs educator evaluation systems. | 1.0 | $60,000 | $60,000 |
| Administrative Assistants: To be hired, Each of the assistants will be responsible for providing administrative support to the entire Educator Effectiveness unit. | 1.0 | $35,000 | $35,000 |
| TOTAL | | | $485,000 |

### 2) Fringe Benefits - $599,068 for all four years. Below is an annual breakdown.

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $485,000 | $37,102 |
| Workers Compensation | 2.5% | $485,000 | $12,125 |
| Insurance | 11.23% | $485,000 | $54,465 |
| Retirement | 9.5% | $485,000 | $46,075 |

| Component | Rate | Wage | Cost |
|---|---|---|---|
| | | TOTAL | $149,767 |

**3) Travel**

| Travel: Travel expenses include the average mile reimbursements of $100 each, in addition to an amount of per diem of $50. | # Trips | $ per Trip | Total |
|---|---|---|---|
| Travel—Assisting Regional Centers for Reform & Innovation to provide technical assistance to LEAs on the development of the statewide framework. | 25x8 people (2 Project Dir. & 6 staff per district.) | $500 | $12,500 |
| Travel—Assisting Regional Centers for Reform & Innovation to assist LEAs in developing, implementing, validating local evaluation instruments based on the state model | 350x6 people (6 specialists) | $400 | $140,000 |
| Total | | | $152,500 |

**4) Equipment – N/A**

**5) Supplies**

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $150/mo. x 12 mos x 4 years | $7,200 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| Printing and Publication costs | TBD | $73,002 |
| BB/Cell Phone Usage | $50 X 11 employees x 12 mos x 4 years | $26,400 |
| BB/Cell Phone Purchase (7): BB or cell phones will need to be purchased to supply the needs of the 7 new employees. | $150 x 7 | $1,050 |
| Desktop Computers (7): Desktop or laptop computers will be needed to supply the needs of 7 new employees. | $1,500 | $10,500 |
| Office Furniture: (7 cubicles) Desk modules, dividers, chairs, and miscellaneous equipment to furnish the new Educator Effectiveness Unit | $5,000 | $35,000 |
| | TOTAL | $155,000 |

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | Facilitation of Statewide Model for Teacher & Principal Evaluation | $500,000 |
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | Facilitation of development of LEA evaluation systems, validity & reliability studies | $2,500,000 |
| | TOTAL | $3,000,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $5,846,568**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $259,605.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $6,106,173**

## Project #13: Teacher Working Conditions Survey

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Growth Model<br>**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $100,000 | $100,000 | $100,000 | $100,000 | $400,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $100,000 | $100,000 | $100,000 | $100,000 | $400,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $100,000 | $100,000 | $100,000 | $100,000 | $400,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #13: Teacher Working Conditions Survey

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The state will contract with a provider to administer, tabulate, analyze, and report on the working conditions of each LEA in the state. The survey used must be valid and reliable. It must also have documented statistical correlation to the working conditions surveyed and student achievement. The contractor will provide all technical assistance and training required to implement the survey with fidelity. | $400,000 |
| | TOTAL | $400,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $400,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $400,000**

## Project #14: Teacher/Principal Prep Evaluation System

**Budget Part II: Project-Level Budget Table**

**Project Name:** Teacher/Principal Prep Evaluation System

**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $200,000 | $200,000 | $200,000 | $300,000 | $900,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $200,000 | $200,000 | $200,000 | $300,000 | $900,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $200,000 | $200,000 | $200,000 | $300,000 | $900,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #14: Teacher/Principal Prep Evaluation System

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract with a provider to hold an advisory council to develop a new evaluation system based on T-Prep that would also include principals, and would connect with the growth model and (eventually) evaluation results. The contract would be inclusive of convening the advisory council, develop system parameters, and ultimately implement the new evaluation system. | $900,000 |
| | TOTAL | $900,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $900,000**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $900,000**

**Project #15: Replication Fund for High-Performing Teacher and Principal Preparation Programs**

| **Budget Part II: Project-Level Budget Table**<br>**Project Name:** Replication Fund for High-Performing Teacher and Principal Preparation Programs<br>**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $2,250,000 | $1,250,000 | $800,000 | $750,000 | $5,050,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $2,250,000 | $1,250,000 | $800,000 | $750,000 | $5,050,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $2,250,000 | $1,250,000 | $800,000 | $750,000 | $5,050,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

**Project #15: Replication Fund for High-Performing Teacher and Principal Preparation Programs**

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | This will be structured as a competitive fund for preparation program providers to access funding to replicate promising models and practices. | $4,050,000 |
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. If awarded, Arizona would seek sole source approval before moving forward on this procurement action. | Arizona will contract with the NAU K-12 Center to expand their model program coaching and mentoring of National Board Certification candidates. | $1,000,000 |
| | TOTAL | $5,050,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $5,050,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $5,050,000

**Project #16: Recruitment Fund for LEAs for District-Based High-Performing Teacher and Principal Preparation Programs**

**Budget Part II: Project-Level Budget Table**

**Project Name:** Recruitment Fund for LEAs for District-Based High-Performing Teacher and Principal Preparation Programs

**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $2,000,000 | $2,000,000 | $1,500,000 | $1,000,000 | $6,500,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $2,000,000 | $2,000,000 | $1,500,000 | $1,000,000 | $6,500,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $2,000,000 | $2,000,000 | $1,500,000 | $1,000,000 | $6,500,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

**Project #16: Recruitment Fund for LEAs for District-Based High-Performing Teacher and Principal Preparation Programs**

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | This would be a competitive fund for high-need LEAs to access in order to provide district match funds to recruit high performing, district-based programs for teachers and principals. | $6,500,000 |
| | TOTAL | $6,500,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $6,500,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $6,500,000

## Project #17: Rodel Exemplary Teacher Initiative

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Rodel Exemplary Teacher Initiative<br>**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $1,210,000 | $1,225,300 | $1,241,100 | $1,257,300 | $4,933,700 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,210,000 | $1,225,300 | $1,241,100 | $1,257,300 | $4,933,700 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,210,000 | $1,225,300 | $1,241,100 | $1,257,300 | $4,933,700 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #17: Rodel Exemplary Teacher Initiative

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. If awarded, Arizona would seek sole source approval before moving forward on this procurement action. | Arizona would contract with The Rodel Charitable Foundation AZ in order to continue to support the Teacher Initiative to increase its current level of operation by more than 50%. In each year 20 Rodel Exemplary Teachers would be named. Each Exemplary Teacher would mentor six (6) Rodel Promising Student Teachers. This would create 40 Rodel Graduates each year for a total of 120 Rodel Graduates mentored by Exemplary Teachers. Note that although economy of scale would lead one to anticipate the per-participant rate to decrease over time, as the Teacher Initiative moves into more remote areas, the average operating costs may increase due to required travel for mandatory professional development, thereby causing the per-participant cost to remain constant. | $4,933,700 |
| | TOTAL | $4,933,700 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $4,933,700

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $4,933,700

## Project #18: Rodel Exemplary Principal Initiative

**Budget Part II: Project-Level Budget Table**

**Project Name:** Rodel Exemplary Principal Initiative

**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $333,400 | $341,200 | $349,100 | $357,400 | $1,381,100 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $333,400 | $341,200 | $349,100 | $357,400 | $1,381,100 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $333,400 | $341,200 | $349,100 | $357,400 | $1,381,100 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #18: Rodel Exemplary Principal Initiative

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. If awarded, Arizona would seek sole source approval before moving forward on this procurement action. | Arizona would contract with The Rodel Charitable Foundation AZ in order to continue to support the expansion of the Rodel Exemplary Principal Initiative from its current level of operation. In each year 10 Rodel Exemplary Principals would be named. Each Exemplary Principal would mentor three (3) Rodel Aspiring Principals. This would create 30 Rodel Aspiring Principals each year mentored by Exemplary Principals. Note that although economy of scale would lead one to anticipate the per-participant rate to decrease over time, as the Principal Initiative moves into more remote areas, the average operating costs may increase due to required travel for mandatory professional development, thereby causing the per-participant cost to remain constant. | $1,381,100 |
| | TOTAL | $1,381,100 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $1,381,100

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $1,381,100

## Project #19: Teacher Induction Program and AZ LEADS Executive Coaches

**Budget Part II: Project-Level Budget Table**

**Project Name:** Teacher Induction Program and AZ LEADS Executive Coaches

**Associated with Criteria:** D(2), D(3), D(4), D(5), C(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $3,068,000 | $3,068,000 | $3,068,000 | $0 | $9,204,000 |
| 2. Fringe Benefits | $947,398 | $947,398 | $947,398 | $0 | $2,842,194 |
| 3. Travel | $146,500 | $146,500 | $146,500 | $10,000 | $449,500 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $173,000 | $160,000 | $160,000 | $60,000 | $553,000 |
| 6. Contractual | $125,000 | $125,000 | $125,000 | $125,000 | $500,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $4,459,898 | $4,446,898 | $4,446,898 | $195,000 | $13,548,694 |
| 10. Indirect Costs* | $395,342 | $394,157 | $394,157 | $6,384 | $1,190,040 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $4,855,240 | $4,841,055 | $4,841,055 | $201,384 | $14,738,734 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #19: Teacher Induction Program and AZ LEADS Executive Coaches

### 1) Personnel - $9,204,000 for all three years. Below is an annual breakdown.

| Personnel: The following requested personnel will all be hired as employees of the project. | # of FTEs | Base Salary | Total |
|---|---|---|---|
| Education Program Specialists (1): to be added to the Professional Development Subunit within the Highly Qualified Professionals Unit. These specialists (yet to be hired) would be under the Supervision of the Director of Professional Development. One program specialist would coordinate the statewide induction program by assisting the regional centers for reform and innovation to identify mentor/master teachers, provide training and support for the mentors, and implement the accountability & data collection models adopted by the LEAs. One program specialist would coordinate the statewide principal coaching program by assisting the regional centers for reform and innovation to identify highly effective principals to serve as coaches, provide training and support for the coaches, and implement the accountability & data collection models adopted by the LEAs. These program specialists will collaborate closely with the program specialist in the Educator Effectiveness subunit. Both units are under the supervision of the Deputy Associate Superintendent for the Highly Qualified Professionals Unit. These positions will be phased out by year 4. | 1.0 | $68,000 | $68,000 |
| Mentors coaches for statewide educator support model: Ten per regional center for reform and innovation. These positions will be phased out in Year 4, once the LEAs have developed capacity to continue the mentoring & coaching programs. NOTE: Some districts, through individual LEA grants and career ladder funding, have funds to support their mentoring and coaching programs. Additionally, institutes of higher education and county educational services agencies, through grant awards, and charitable foundations, such as Rodel, are able to provide mentoring and coaching services to targeted LEAs. | 60.0 | $50,000 | $3,000,000 |
| TOTAL | | | $3,068,000 |

### 2) Fringe Benefits - $2,842,194 for all three years. Below is an annual breakdown.

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $3,068,000 | $239,904 |
| Workers Compensation | 2.5% | $3,068,000 | $78,400 |
| Insurance | 11.23% | $3,068,000 | $352,172 |
| Retirement | 9.5% | $3,068,000 | $297,920 |
| | | TOTAL | $947,398 |

### 3) Travel - $449,500 for all four years. Below is an annual breakdown.

| | | | |
|---|---|---|---|
| Travel: Travel expenses include the average mile reimbursements of $100 each, in addition to an amount of per diem of $50. | # Trips | $ per Trip | Total |
| Travel—Education Program Specialists assisting Regional Centers for Reform & Innovation in the implementation of a statewide mentoring program and principal coaching program | 350x2 people<br>350 nights hotel for 2 people@ state per diem ($95 average) | $200<br>$95 | $60,000<br>$66,500 |
| Travel—20 mentors & coaches | $100/month for 10 months—no per diem | $2,000 | $20,000 |
| Total | | | $146,500 |

**4) Equipment – N/A**

**5) Supplies**

| **Item(s)** | **Rate** | **Cost** |
|---|---|---|
| General office supplies | $150/mo. x 12 mos x 4 years | $7,200 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| Printing and Publication costs | TBD | $78,852 |
| BB/Cell Phone Usage | $50 X 2 employees x 12 mos x 4 years | $4,800 |
| BB/Cell Phone Purchase: BB or cell phones will need to be purchased to supply the needs of the 7 new employees. | $150 | $150 |
| Desktop Computers: Desktop or laptop computers will be needed to supply the needs of 7 new employees. | $1,500 | $1,500 |
| Office Furniture: Desk modules, dividers, chairs, and miscellaneous equipment to furnish the new Educator Effectiveness Unit | $5,000 | $5,000 |
| Supplies & materials for Mentor & Coach Training. This will include notebooks, resource materials, and office supplies. | $100,000/ year | $400,000 |
| Miscellaneous supplies | $6,662.50/year | $26,650 |
| | TOTAL | $553,000 |

**6) Contractual – N/A**

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $13,548,694**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $1,190,040.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $14,738,734**

## Project #20: TFA Training and Leadership, Native American Initiative

| Budget Part II: Project-Level Budget Table<br>**Project Name:** TFA Training and Leadership, Native American Initiative<br>**Associated with Criteria:** E(2), D(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $2,000,000 | $1,500,000 | $1,500,000 | $700,000 | $5,700,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $2,000,000 | $1,500,000 | $1,500,000 | $700,000 | $5,700,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $2,000,000 | $1,500,000 | $1,500,000 | $700,000 | $5,700,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #20: TFA Training and Leadership, Native American Initiative

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. If awarded, Arizona would seek sole source approval before moving forward on this procurement action. | The State will enter into a contract with TFA to expand TFA to three Indian reservations to address the need for teachers trained in meeting the achievement needs of underserved populations and high-need schools.<br><br>Nationally, TFA has just launched its Native Achievement Initiative, through which TFA aims to dramatically scale its commitment to bring more teachers and leaders to Native communities. As Arizona has a significant population of Native students, the success that has been seen in other TFA regions (New Mexico, South Dakota and Hawai'i) could be replicated on Arizona reservations. TFA's initiative goals align and support those of Arizona:<br><br>*recruit more Native Americans into the TFA corps;<br><br>*identify and select new regions to impact more Native students;<br><br>*build broad partnerships with Native groups to support the initiative;<br><br>*secure federal, State, corporate, foundation and private partners; and<br><br>*modify training to accommodate the unique needs of Native communities.<br><br>Funding from the RTTT grant would significantly expedite the process of recruiting, selecting, training and supporting 50 new teachers a year in Native American communities. Those 50 | $5,700,000 |

| Name(s) | Purpose | Cost |
|---|---|---|
| | teachers each year (100 total at the midpoint of their two-year commitment) would reach about 10% of the Native American students in Arizona. In order to establish a stable new site anywhere in the country, TFA must raise full funding for the first three years of that site before launching. RTTT money can contribute to the initial funds for this expansion, helping TFA leverage additional funding from other private and public sources to secure the site's launch. Then, during the four-year period of RTTT funding, TFA would work to secure the necessary philanthropic support and State funding to sustain this expansion after RTTT funds are exhausted. | |
| | TOTAL | $5,700,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $5,700,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $5,700,000

## Project #21: Turnaround Office

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Turnaround Office<br>**Associated with Criteria:** E(2), D(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $136,000 | $136,000 | $136,000 | $136,000 | $544,000 |
| 2. Fringe Benefits | $41,996 | $41,996 | $41,996 | $41,996 | $167,984 |
| 3. Travel | $4,500 | $4,500 | $4,500 | $4,500 | $18,000 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $5,724 | $5,724 | $5,724 | $5,724 | $22,896 |
| 6. Contractual | $900,778 | $400,778 | $400,778 | $100,778 | $1,803,112 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,088,998 | $588,998 | $588,998 | $288,998 | $2,555,992 |
| 10. Indirect Costs* | $17,165 | $17,165 | $17,165 | $17,165 | $68,660 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,106,163 | $606,163 | $606,163 | $306,163 | $2,624,652 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #21: Turnaround Office

**Personnel - $544,000 for all four years. Below is an annual breakdown.**

| Personnel: The following requested personnel will all be hired as employees of the project. | % FTE | Base Salary | # of FTEs | Total |
|---|---|---|---|---|
| ADE Turnaround Office Director: The ADE Turnaround Office Director will establish the Turnaround Office that will build a pipeline of specialists trained to do turnaround work. This Office will enhance the supply of effective teachers and leaders of persistently lowest-achieving (PLA) schools. | 100 % | $68,000 | X 1 | $68,000 |
| Arizona State Board for Charter Schools Turnaround Specialist: This specialist will work with the persistently lowest-achieving (PLA) charter schools and support the missions of both the Turnaround Office and the Arizona State Board for Charter Schools. | 100% | $68,000 | X1 | $68,000 |
| Total | | | | $136,000 |

**2) Fringe Benefits - $167,984 for all four years. Below is an annual breakdown.**

| Component | Rate | Wage | Cost |
|---|---|---|---|
| FICA | 7.65% | $136,000 | $10,404 |
| Workers Compensation | 2.5% | $136,000 | $3,400 |
| Insurance | 11.23% | $136,000 | $15,272 |
| Retirement | 9.5% | $136,000 | $12,920 |
| | | TOTAL | $41,996 |

**3) Travel**

| Purpose of Travel | Location | Item | Rate | Cost |
|---|---|---|---|---|
| Various Training and Technical Assistance Visits to PLA Schools | In-State | Mileage Reimbursement | 10,000 miles x .45 per miles x 4 years | $18,000 |
| | | | TOTAL | $18,000 |

**4) Equipment – N/A**

**5) Supplies**

| Item(s) | Rate | Cost |
|---|---|---|
| General office supplies | $194,.75/mo. x 12 mos x 4 years | $9,348 |
| Postage | $38.50/mo. x 12 mos x 4 years | $1,848 |
| BB/Cell Phone Purchase | $150 x 2 employees | $300 |
| BB/Cell Phone Usage | $75 X 2 employees x 12 mos x 4 years | $7,200 |
| Laptop or Desktop Computer | $1,500 x 2 employees | $3,000 |
| Printer | $300 | $300 |
| Proxima Projector | $900 | $900 |
| | TOTAL | $22,896.00 |

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will contract on an as needed basis to provide contractual support to further the mission of the Turnaround Office. This could include experts in rural and tribal schools and/or turnaround experts who are geographically located to Arizona's primarily rural PLA schools. | $1,803,112 |
| | TOTAL | $1,803,112 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs – $2,555,992**

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The total charged to this project is $68,660.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs - $2,624,652**

## Project #22: Turnaround Leader Pipeline

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Turnaround Leader Pipeline<br>**Associated with Criteria:** E(2), D(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $1,000,000 | $700,000 | $700,000 | $400,000 | $2,800,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,000,000 | $700,000 | $700,000 | $400,000 | $2,800,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,000,000 | $700,000 | $700,000 | $400,000 | $2,800,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #22: Turnaround Leader Pipeline

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | ADE will release an RFP funded by RTTT for the training, coaching and mentoring of Turnaround Leaders who are selected for the Academy program. This consortium will provide the opportunity for above-referenced southwestern states to collaborate, share ideas and leverage their resources, contracting with one provider to address a common need [Appendix (E)(2)-4 for a description of this consortium].<br><br>Upon completion of the Academy program, candidates will have the opportunity to be "certified" as "turnaround specialists" and become members of the State Cadre. From this Cadre, the State can place a specialist team, consisting of a principal and teacher leaders who will serve as instructional coaches in a turnaround school, or the LEA can use this pool of specialists to fill positions in their schools. Candidates who have completed the program will receive incentive stipends in addition to their salaries as well as recognition as a "Distinguished Educator" by the Governor. Arizona has drafted a plan for this program with or without the establishment of a consortium. | $2,800,000 |
| | TOTAL | $2,800,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $2,800,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $2,800,000

## Project #23: Arizona Dropout Research Center

**Budget Part II: Project-Level Budget Table**

**Project Name:** Arizona Dropout Research Center

**Associated with Criteria:** E(2), D(3)

**(Evidence for selection criterion (A)(2)(i)(d))**

| Budget Categories | Project Year 1 (a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Total (e) |
|---|---|---|---|---|---|
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $250,000 | $250,000 | $250,000 | $250,000 | $1,000,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $250,000 | $250,000 | $250,000 | $250,000 | $1,000,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $250,000 | $250,000 | $250,000 | $250,000 | $1,000,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #23: Arizona Dropout Research Center

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The State will establish the Arizona Center for Dropout Prevention, which will work closely with the University Research Center for Innovation and Reform to serve as a clearinghouse of information about the prevention, re-enrollment efforts and programs in Arizona that have been shown to be effective. In addition, ADE will train Struggling Schools Specialists in the Regional Centers to use the available resources and tools developed in partnership with the National Dropout Prevention Center and currently available on the ADE website [Appendix (E)(2)-6]. | $1,000,000 |
| | TOTAL | $1,000,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $1,000,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $1,000,000

## Project #24: Communities in Schools

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Communities in Schools<br>**Associated with Criteria:** E(2), D(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $600,000 | $500,000 | $250,000 | $250,000 | $1,600,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $600,000 | $500,000 | $250,000 | $250,000 | $1,600,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $600,000 | $500,000 | $250,000 | $250,000 | $1,600,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #24: Communities in Schools

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will enter into an agreement with an external provider to provide comprehensive school-based, integrated student support services that support young people in jeopardy of dropping out. Identify and mobilize existing community resources and foster cooperative partnerships for the benefits of students and families. | $1,600,000 |
| | TOTAL | $1,600,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $1,600,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $1,600,000

## Project #25: Teacher Industry Internship Program

| Budget Part II: Project-Level Budget Table<br>**Project Name:** Teacher Industry Internship Program<br>**Associated with Criteria:** B(3), C(3), D(5), E(2)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $700,000 | $700,000 | $300,000 | $300,000 | $2,000,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $700,000 | $700,000 | $300,000 | $300,000 | $2,000,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $700,000 | $700,000 | $300,000 | $300,000 | $2,000,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #25: STEM Teacher Pathway Programs

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | The RTTT Executive Board will make these funds available through a competitive process for Arizona's most promising teacher pathway programs such as the Teacher Industry Internship Program (TIIP), Beyond Bridging and NAU's NAUTeach. The competitive process will strive to support these important initiatives, as well as, other yet identified programs. | $2,000,000 |
| | TOTAL | $2,000,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $2,000,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $2,000,000

## Project #26: APIP – AP Incentive Program

| Budget Part II: Project-Level Budget Table<br>**Project Name:** APIP – AP Incentive Program<br>**Associated with Criteria:** E(2), D(3)<br>**(Evidence for selection criterion (A)(2)(i)(d))** | | | | | |
|---|---|---|---|---|---|
| **Budget Categories** | **Project Year 1 (a)** | **Project Year 2 (b)** | **Project Year 3 (c)** | **Project Year 4 (d)** | **Total (e)** |
| 1. Personnel | $0 | $0 | $0 | $0 | $0 |
| 2. Fringe Benefits | $0 | $0 | $0 | $0 | $0 |
| 3. Travel | $0 | $0 | $0 | $0 | $0 |
| 4. Equipment | $0 | $0 | $0 | $0 | $0 |
| 5. Supplies | $0 | $0 | $0 | $0 | $0 |
| 6. Contractual | $1,000,000 | $1,000,000 | $700,000 | $500,000 | $3,200,000 |
| 7. Training Stipends | $0 | $0 | $0 | $0 | $0 |
| 8. Other | $0 | $0 | $0 | $0 | $0 |
| 9. Total Direct Costs (lines 1-8) | $1,000,000 | $1,000,000 | $700,000 | $500,000 | $3,200,000 |
| 10. Indirect Costs* | $0 | $0 | $0 | $0 | $0 |
| 11.Funding for Involved LEAs | $0 | $0 | $0 | $0 | $0 |
| 12. Supplemental Funding for Participating LEAs | $0 | $0 | $0 | $0 | $0 |
| 13. Total Costs (lines 9-12) | $1,000,000 | $1,000,000 | $700,000 | $500,000 | $3,200,000 |

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
*If you plan to request reimbursement for indirect costs, complete the Indirect Cost Information form at the end of this Budget section. Note that indirect costs are not allocated to lines 11-12.

## Project #26: APIP – AP Incentive Program

**1) Personnel – N/A**

**2) Fringe Benefits - N/A**

**3) Travel - N/A**

**4) Equipment – N/A**

**5) Supplies – N/A**

**6) Contractual**

| Name(s) | Purpose | Cost |
|---|---|---|
| TBD – Arizona will comply with all applicable federal and state procurement regulations in competitively sourcing this contract. | Data show that students who participate in an AP STEM course are more likely than other students to choose a college major in a STEM discipline. The ADE recently completed a three-year statewide AP Incentive Program (APIP) grant involving 13 rural and low-income high schools and 14 feeder schools [(IP2)(STEM)-1]. This AP expansion included longitudinal teacher supports utilizing the Advancement Via Individualized Determination (AVID) approach with teachers from feeder middle schools.<br><br>Results were very positive, with seven of the 13 participating high schools incorporating AP calculus into their curriculum, increasing enrollment of rural and low-income students in AP calculus by 143%. RTTT funds will support a four-fold increase of this successful model, bringing AP calculus to some of Arizona's most underserved communities and impacting over 50 high schools and 75 to 100 middle schools. | $3,200,000 |
| | TOTAL | $3,200,000 |

**7) Training Stipends – N/A**

**8) Other – N/A**

**9) Total Direct Costs –** $3,200,000

**10) Indirect Costs**

- Arizona's approved indirect cost rate is 9.12% as approved by the U.S. Department of Justice, Office of Justice programs. The rate does not apply to contracts or subawards over $25,000.

**11) Funding for Involved LEAs – N/A**

**12) Supplemental Funding for Participating LEAs – N/A**

**13) Total Costs -** $3,200,000

**Budget: Indirect Cost Information**

To request reimbursement for indirect costs, please answer the following questions:

Does the State have an Indirect Cost Rate Agreement approved by the Federal government?

YES ●
NO ○

If yes to question 1, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement (mm/dd/yyyy):

From: _07_/_01_/_2010_ To: _06_/_30_/_2010_

Approving Federal agency: ___ED _X_ Other

*(Please specify agency)*: US DOJ/Office of Justice Programs

Directions for this form:

1. Indicate whether or not the State has an Indirect Cost Rate Agreement that was approved by the Federal government.

2. If "No" is checked, ED generally will authorize grantees to use a temporary rate of 10 percent of budgeted salaries and wages subject to the following limitations:
(a) The grantee must submit an indirect cost proposal to its cognizant agency within 90 days after ED issues a grant award notification; and
(b) If after the 90-day period, the grantee has not submitted an indirect cost proposal to its cognizant agency, the grantee may not charge its grant for indirect costs until it has negotiated an indirect cost rate agreement with its cognizant agency.

3. If "Yes" is checked, indicate the beginning and ending dates covered by the Indirect Cost Rate Agreement. In addition, indicate whether ED, another Federal agency (Other) issued the approved agreement. If "Other" was checked, specify the name of the agency that issued the approved agreement.

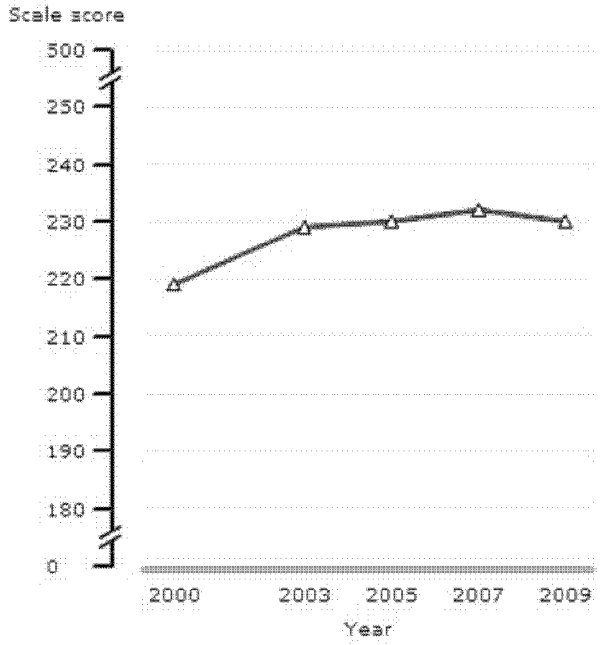
## AIMS Data Tables

| ELEMENTARY-MATH | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 52.9% | 50.8% | 70.0% | 70.9% | 71.7% | 71.8% | 73.0% |
| Migrant | 31.7% | 27.8% | 47.9% | 50.0% | 55.5% | 55.6% | 52.3% |
| Economically Disadvantaged | | 37.0% | 58.0% | 59.7% | 60.5% | 61.2% | 63.5% |
| Limited English Proficient | 26.2% | 23.9% | 41.9% | 37.4% | 37.8% | 40.7% | 40.2% |
| Special Education | 34.2% | 28.5% | 40.9% | 39.4% | 39.6% | 38.5% | 39.3% |
| Asian-Pacific Islander | 71.5% | 70.9% | 87.3% | 87.0% | 87.6% | 86.7% | 87.0% |
| African-American | 40.6% | 37.0% | 57.7% | 58.7% | 60.2% | 60.5% | 61.2% |
| Hispanic | 39.0% | 35.9% | 58.0% | 60.4% | 61.8% | 62.7% | 64.9% |
| Native American | 26.4% | 27.0% | 50.1% | 52.3% | 53.7% | 53.5% | 53.5% |
| White | 68.5% | 66.7% | 83.3% | 83.3% | 83.9% | 83.4% | 84.1% |
| MIDDLE SCHOOL- MATH | | | | | | | |
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 19.6% | 24.6% | 63.1% | 63.2% | 65.1% | 66.7% | 68.2% |
| Migrant | 7.0% | 8.2% | 42.0% | 41.1% | 43.8% | 49.3% | 48.5% |
| Economically Disadv. | | 12.4% | 48.3% | 49.3% | 51.4% | 54.2% | 57.2% |
| Limited English Proficient | 3.1% | 4.9% | 27.7% | 21.1% | 20.4% | 23.2% | 22.8% |
| Special Education | 7.9% | 4.1% | 23.4% | 22.2% | 23.1% | 23.3% | 24.0% |
| Asian-Pacific Islander | 39.1% | 46.5% | 83.6% | 83.7% | 85.0% | 85.4% | 84.8% |
| African-American | 8.3% | 13.2% | 49.9% | 50.3% | 52.5% | 54.3% | 55.9% |
| Hispanic | 8.6% | 11.9% | 48.7% | 50.1% | 52.9% | 56.0% | 58.7% |
| Native American | 6.1% | 8.3% | 40.9% | 42.8% | 46.3% | 47.5% | 48.4% |
| White | 28.9% | 35.7% | 77.9% | 77.5% | 78.6% | 79.0% | 79.5% |
| HIGH SCHOOL -MATH | | | | | | | |
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 35.5% | 38.8% | 63.7% | 64.4% | 66.2% | 67.3% | 68.9% |
| Migrant | 11.1% | 13.4% | 41.9% | 44.0% | 46.5% | 55.2% | 40.0% |
| Economically Disadv. | | 30.0% | 19.8% | 47.5% | 47.5% | 49.8% | 52.0% |
| Limited English Proficient | 6.6% | 9.8% | 27.6% | 19.8% | 19.8% | 21.3% | 19.2% |
| Special Education | 9.6% | 8.0% | 20.9% | 17.2% | 19.7% | 19.7% | 19.3% |
| Asian-Pacific Islander | 60.8% | 64.0% | 81.8% | 83.4% | 86.2% | 84.7% | 86.0% |
| African-American | 20.5% | 23.2% | 53.0% | 50.1% | 53.1% | 55.1% | 56.7% |
| Hispanic | 18.0% | 20.4% | 48.6% | 49.5% | 52.4% | 55.3% | 58.1% |
| Native American | 14.0% | 16.5% | 43.4% | 41.0% | 43.5% | 44.8% | 45.4% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| White | 48.8% | 53.1% | 77.4% | 78.5% | 79.7% | 80.1% | 81.2% |
| ELEMENTARY -READING | | | | | | | |
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 60.3% | 56.2% | 65.5% | 66.4% | 67.7% | 68.8% | 72.3% |
| Migrant | 30.0% | 25.9% | 35.1% | 39.6% | 47.1% | 45.6% | 50.0% |
| Economically Disadvantaged | | 41.7% | 50.9% | 52.8% | 54.5% | 56.7% | 62.0% |
| Limited English Proficient | 26.9% | 24.4% | 28.4% | 23.3% | 24.7% | 28.5% | 31.8% |
| Special Education | 42.4% | 32.0% | 36.4% | 33.6% | 33.4% | 32.2% | 34.6% |
| Asian-Pacific Islander | 75.5% | 73.0% | 81.8% | 82.4% | 82.9% | 82.6% | 85.1% |
| African-American | 53.4% | 46.7% | 57.3% | 57.7% | 59.5% | 61.3% | 64.0% |
| Hispanic | 44.3% | 40.3% | 50.0% | 52.5% | 55.2% | 57.4% | 62.6% |
| Native American | 36.8% | 34.2% | 44.9% | 47.9% | 50.3% | 50.5% | 54.1% |
| White | 76.7% | 72.3% | 81.6% | 81.4% | 82.1% | 82.5% | 84.3% |
| MIDDLE SCHOOL-READING | | | | | | | |
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 50.9% | 46.1% | 64.8% | 64.3% | 65.6% | 68.6% | 70.7% |
| Migrant | 21.6% | 17.5% | 38.1% | 37.6% | 37.4% | 48.3% | 45.3% |
| Economically Disadvantaged | | 29.0% | 49.4% | 49.3% | 50.6% | 55.3% | 59.0% |
| Limited English Proficient | 12.3% | 11.7% | 22.8% | 13.8% | 12.3% | 15.9% | 15.9% |
| Special Education | 24.4% | 11.7% | 25.2% | 23.2% | 23.8% | 25.0% | 26.0% |
| Asian-Pacific Islander | 69.0% | 62.7% | 80.9% | 81.1% | 82.3% | 83.2% | 83.6% |
| African-American | 37.6% | 35.5% | 56.9% | 56.0% | 57.2% | 61.0% | 63.0% |
| Hispanic | 32.0% | 28.5% | 49.3% | 49.2% | 51.5% | 56.4% | 59.8% |
| Native American | 26.5% | 21.4% | 44.6% | 44.5% | 46.0% | 49.8% | 52.0% |
| White | 66.8% | 61.8% | 79.9% | 79.8% | 80.6% | 81.9% | 82.8% |
| HIGH SCHOOL-READING | | | | | | | |
| | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
| All Students | 58.0% | 58.5% | 71.5% | 70.9% | 71.4% | 73.0% | 73.7% |
| Migrant | 23.3% | 17.5% | 36.4% | 38.2% | 46.7% | 55.0% | 33.3% |
| Economically Disadvantaged | | 36.5% | 53.5% | 53.2% | 54.5% | 57.6% | 57.1% |
| Limited English Proficient | 12.9% | 11.9% | 21.0% | 11.7% | 13.2% | 14.7% | 15.5% |
| Special Education | 24.8% | 18.6% | 29.1% | 26.2% | 27.0% | 28.4% | 26.9% |
| Asian-Pacific Islander | 71.7% | 71.9% | 83.2% | 82.1% | 84.5% | 85.2% | 84.3% |
| African-American | 43.6% | 48.3% | 64.1% | 62.2% | 63.5% | 66.7% | 65.1% |
| Hispanic | 37.8% | 37.2% | 54.8% | 55.5% | 56.8% | 59.8% | 62.6% |
| Native American | 34.1% | 31.0% | 49.0% | 46.7% | 49.9% | 51.3% | 50.4% |
| White | 73.3% | 75.8% | 85.4% | 85.4% | 85.3% | 86.4% | 86.2% |

Grade 4 Mathematics, All Students

Average scale scores for mathematics, grade 4, by All students [TOTAL] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona

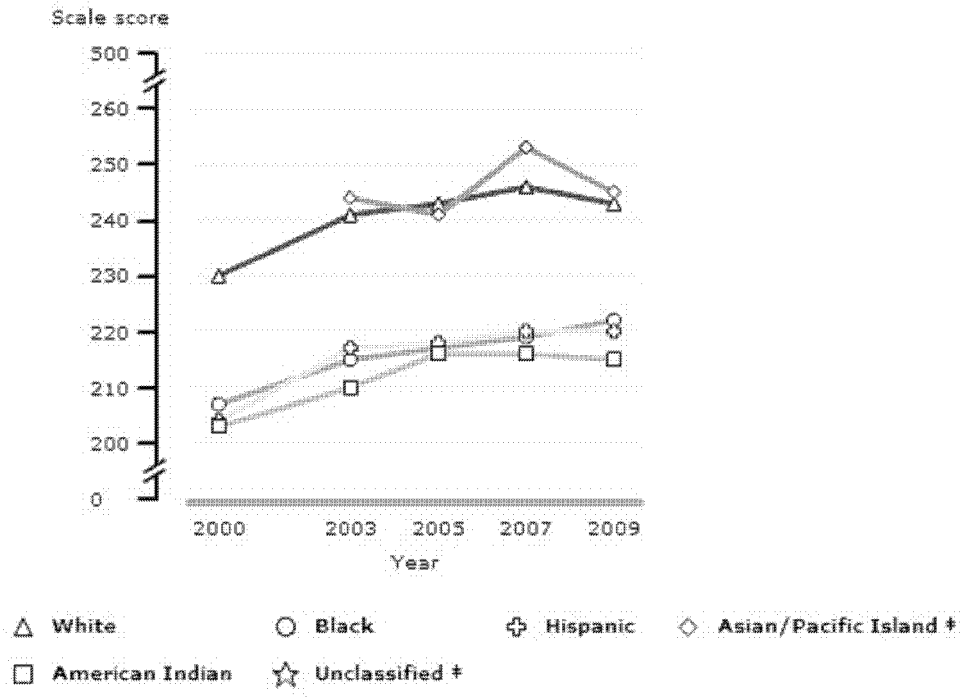



△ All students

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 4 Mathematics, Race/Ethnicity

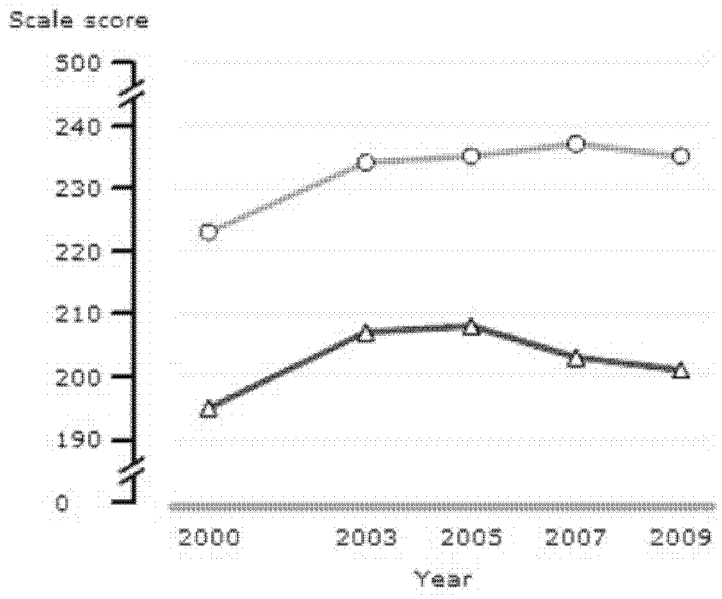
Average scale scores for mathematics, grade 4, by Race/ethnicity (from school records) [SDRACE] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




‡ Reporting standards not met.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 4 Mathematics, ELL Status

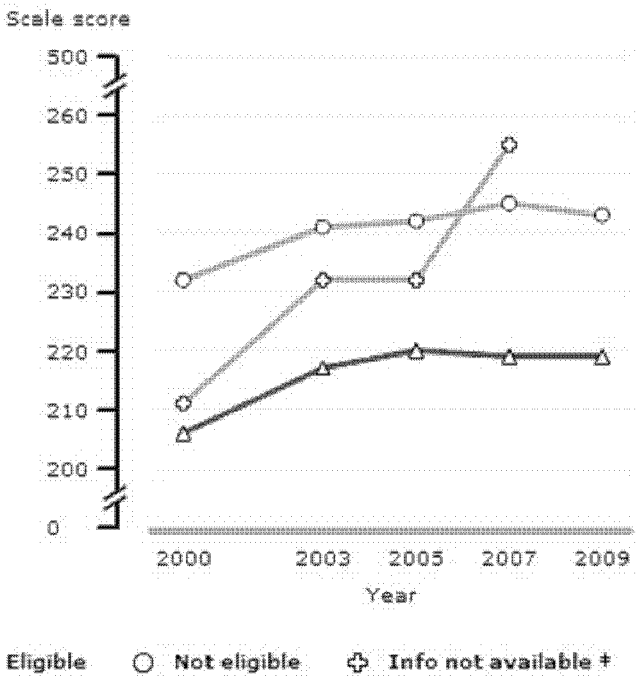
Average scale scores for mathematics, grade 4, by Status as English Language Learner (2 categories) [LEP] for jurisdiction: 2000, 2003, 2005, 2007, and 2009 Arizona




NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 4 Mathematics, NSLP Status

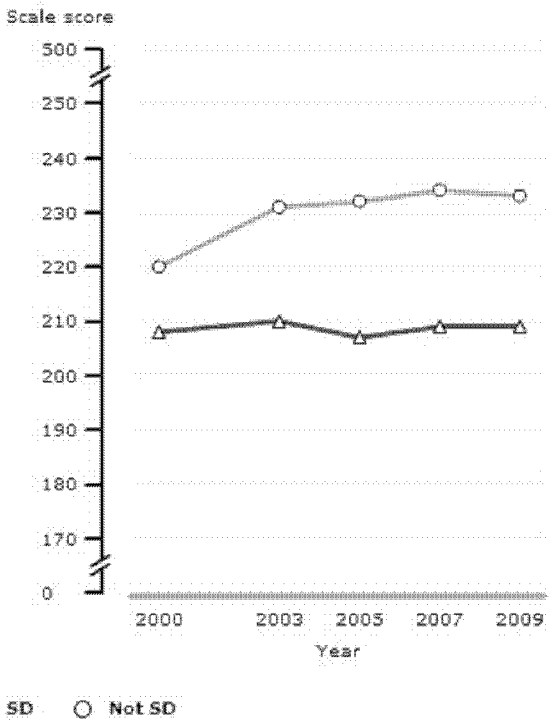
Average scale scores for mathematics, grade 4, by Natl School Lunch Prog eligibility (3 categories) [SLUNCH3] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




‡ Reporting standards not met.
NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 4 Mathematics, Disability Status

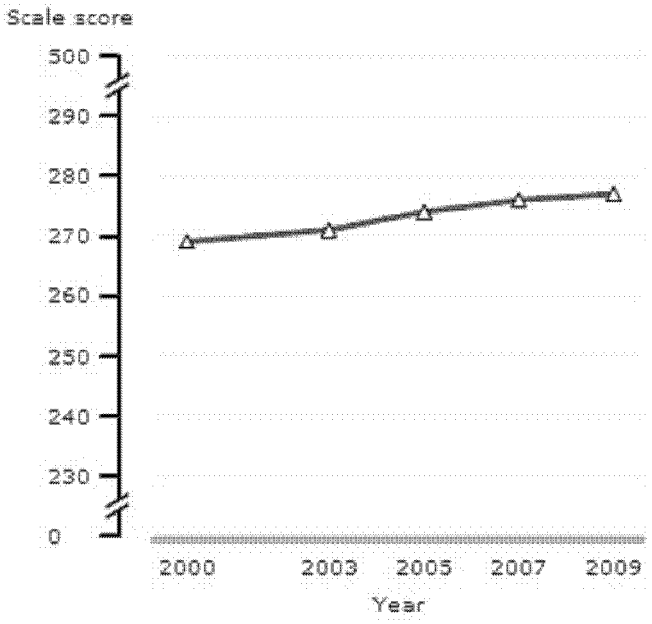
Average scale scores for mathematics, grade 4, by Disability status of student, including 504 [IEP] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 8 Mathematics, All Students

Average scale scores for mathematics, grade 8, by All students [TOTAL] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona

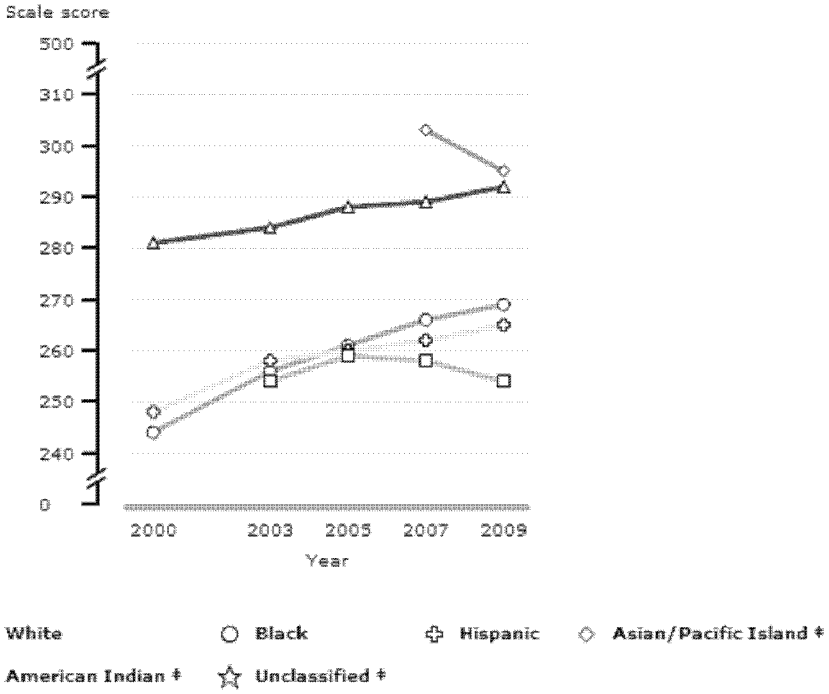



△ All students

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 8 Mathematics, Race/Ethnicity

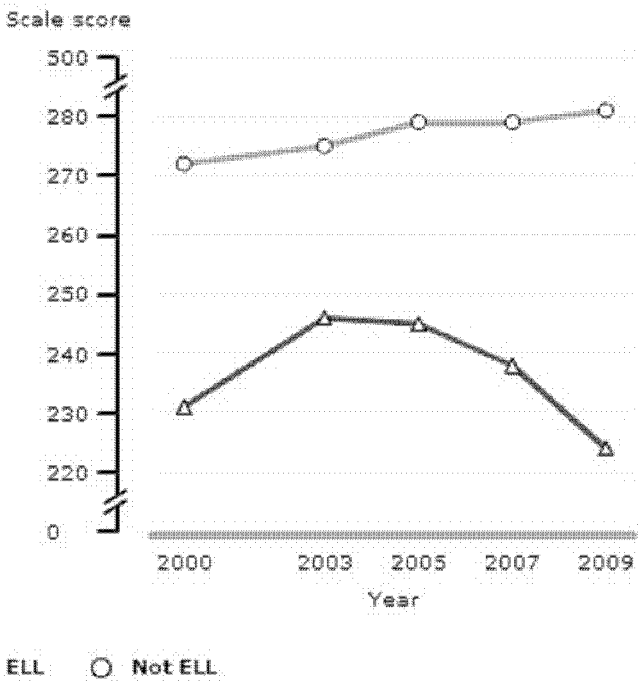
Average scale scores for mathematics, grade 8, by Race/ethnicity (from school records) [SDRACE] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




‡ Reporting standards not met.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 8 Mathematics, ELL Status

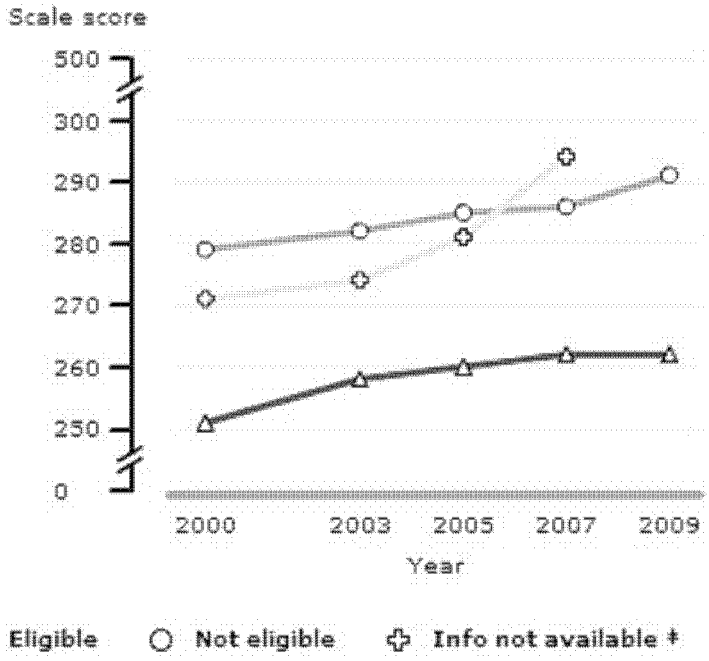
Average scale scores for mathematics, grade 8, by Status as English Language Learner (2 categories) [LEP] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 8 Mathematics, NSLP Status

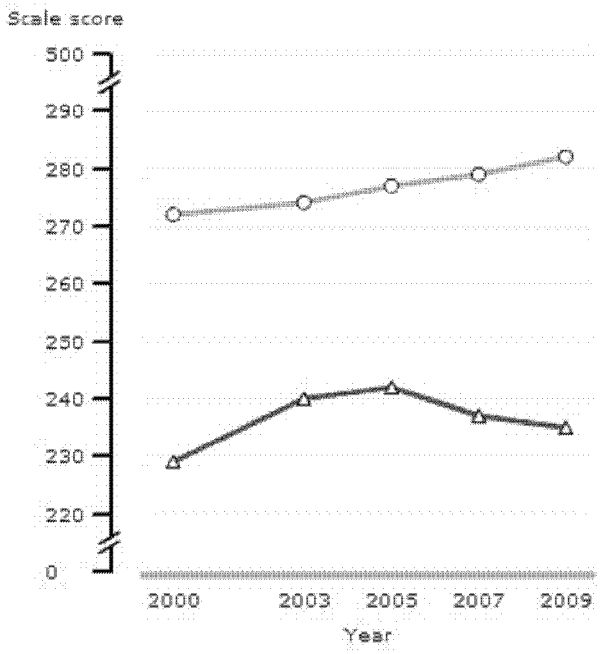
Average scale scores for mathematics, grade 8, by Natl School Lunch Prog eligibility (3 categories) [SLUNCH3] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




‡ Reporting standards not met.
NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 8 Mathematics, Disability Status

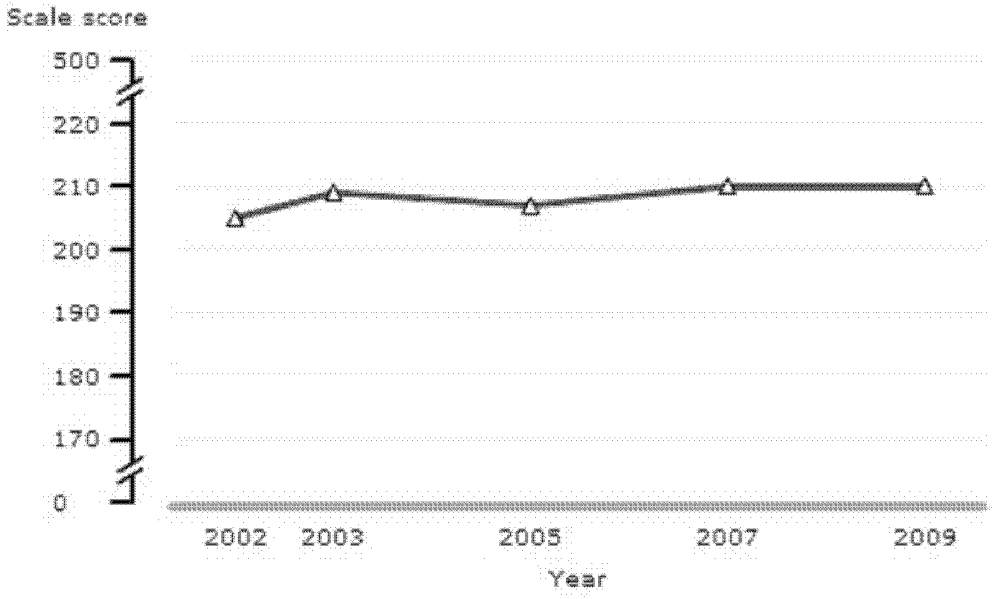
Average scale scores for mathematics, grade 8, by Disability status of student, including 504 [IEP] for jurisdiction: 2000, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000, 2003, 2005, 2007, and 2009 Mathematics Assessments.

Grade 4 Reading, All Students

Average scale scores for reading, grade 4, by All students [TOTAL] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona

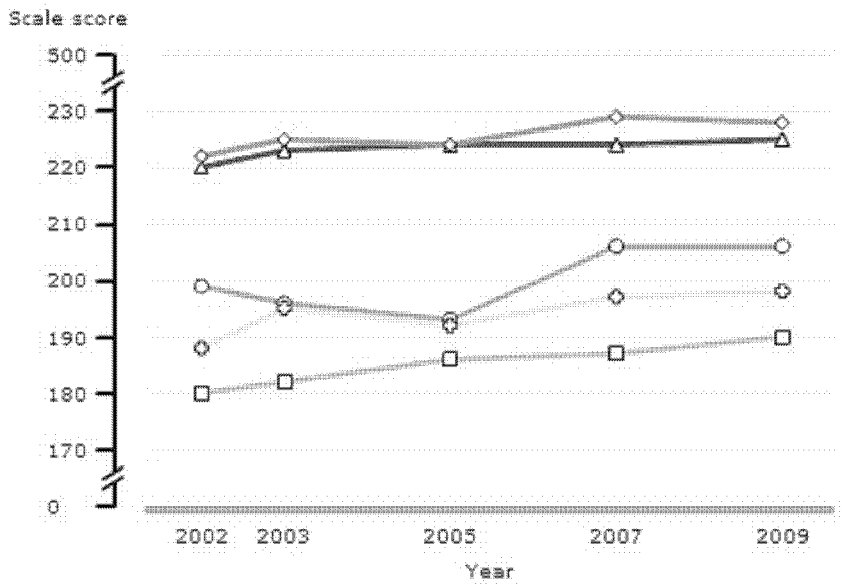



△ All students

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 4 Reading, Race/Ethnicity

Average scale scores for reading, grade 4, by Race/ethnicity (from school records) [SDRACE] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona



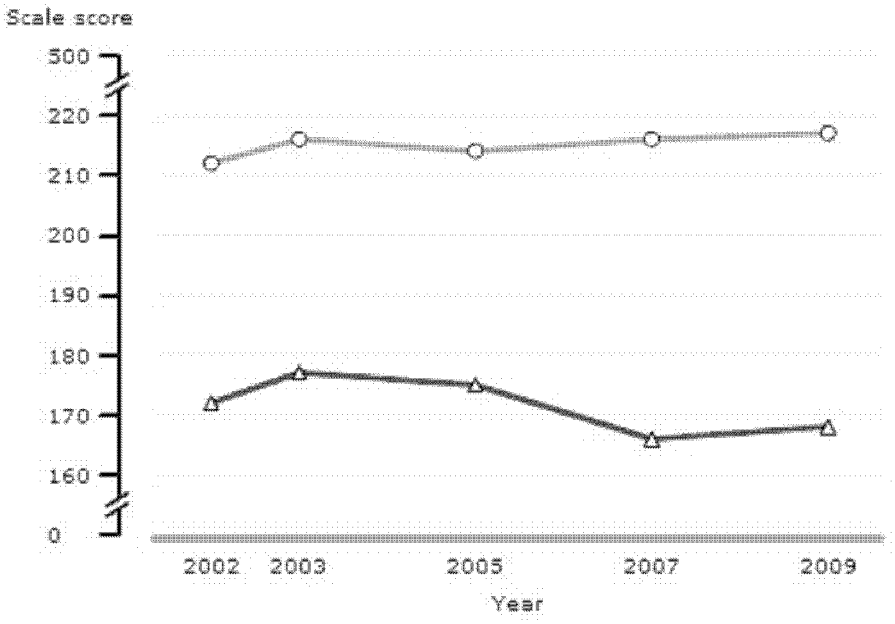

△ White ○ Black ✣ Hispanic ◇ Asian/Pacific Island □ American Indian

☆ Unclassified ǂ

* Reporting standards not met.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 4 Reading, ELL Status

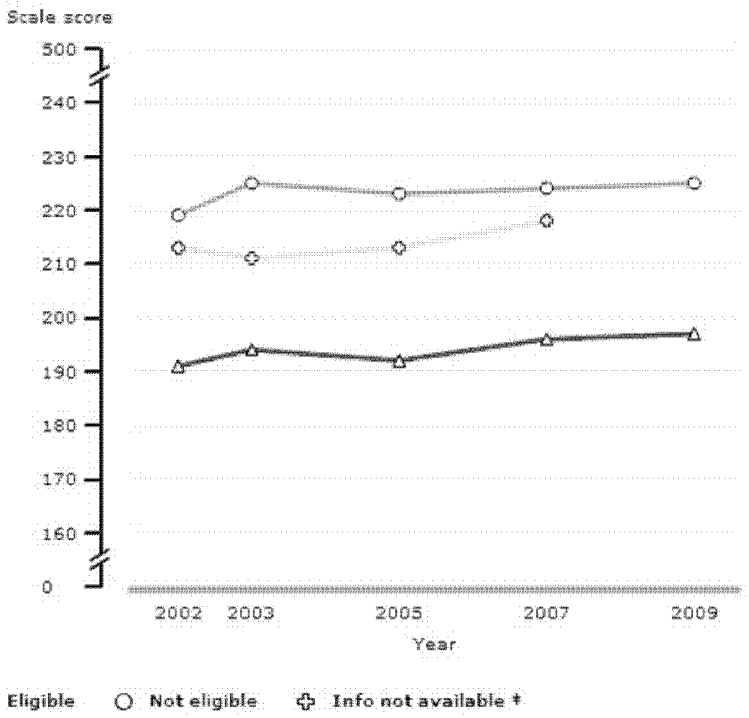
Average scale scores for reading, grade 4, by Status as English Language Learner (2 categories) [LEP] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 4 Reading, NSLP Status

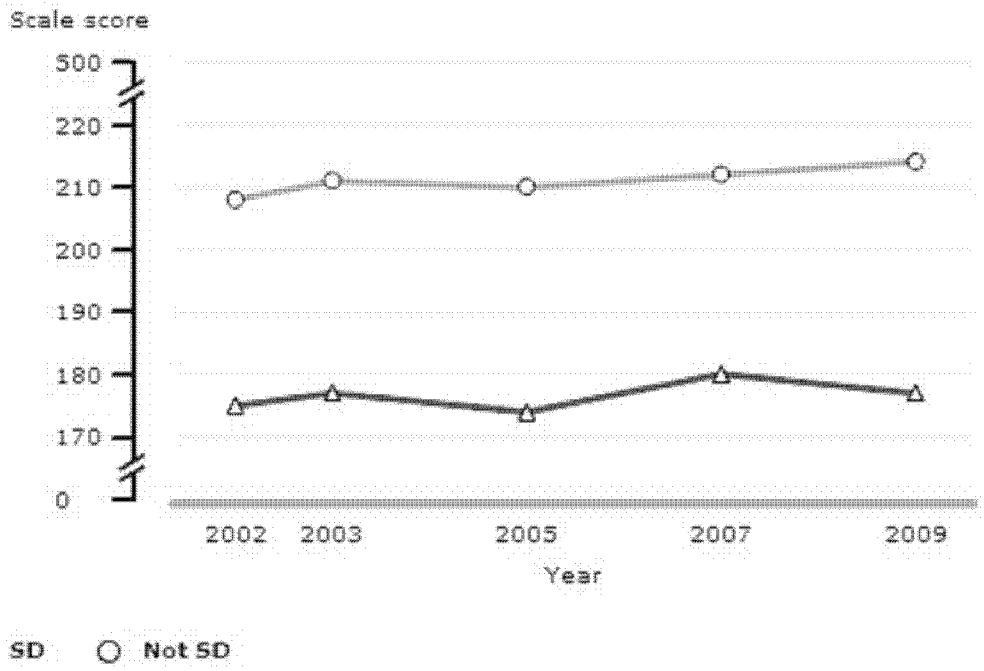
Average scale scores for reading, grade 4, by Natl School Lunch Prog eligibility (3 categories) [SLUNCH3] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




* Reporting standards not met.
NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 4 Reading, Disability Status

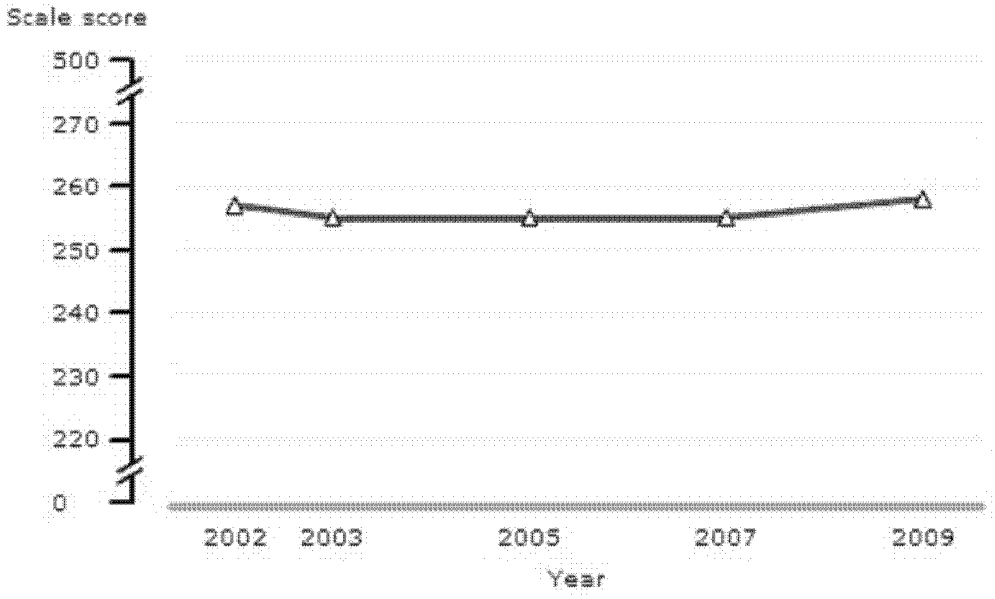
Average scale scores for reading, grade 4, by Disability status of student, including 504 [IEP] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 8 Reading, All Students

Average scale scores for reading, grade 8, by All students [TOTAL] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona

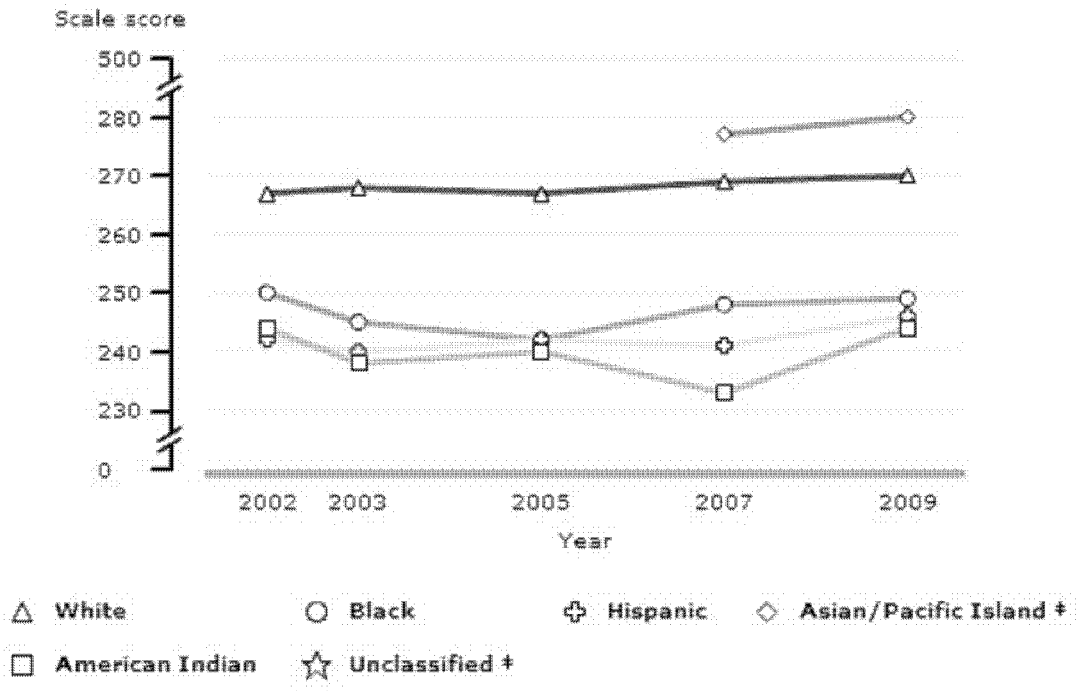



△ All students

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 8 Reading, Race/Ethnicity

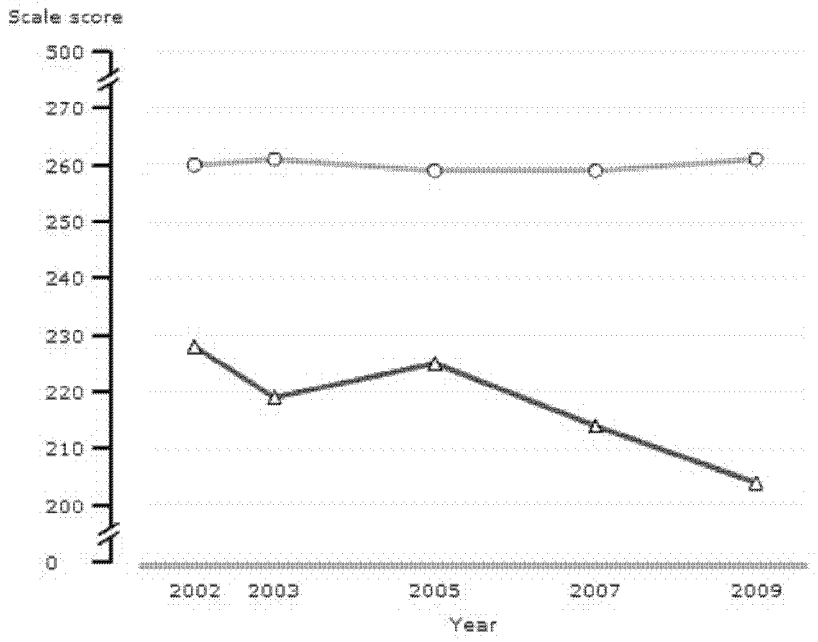
Average scale scores for reading, grade 8, by Race/ethnicity (from school records) [SDRACE] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




‡ Reporting standards not met.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 8 Reading, ELL Status

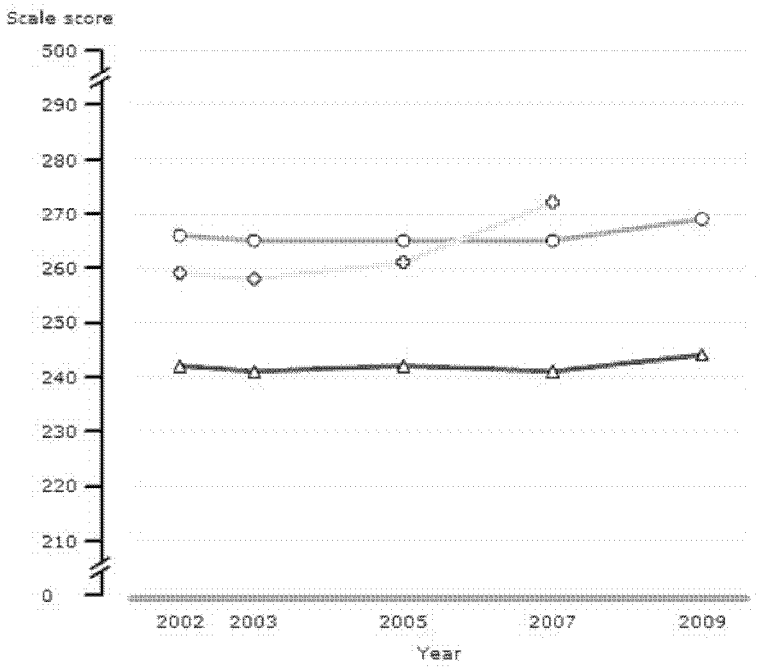
Average scale scores for reading, grade 8, by Status as English Language Learner (2 categories) [LEP] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 8 Reading, NSLP Status

Average scale scores for reading, grade 8, by Natl School Lunch Prog eligibility (3 categories) [SLUNCH3] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona

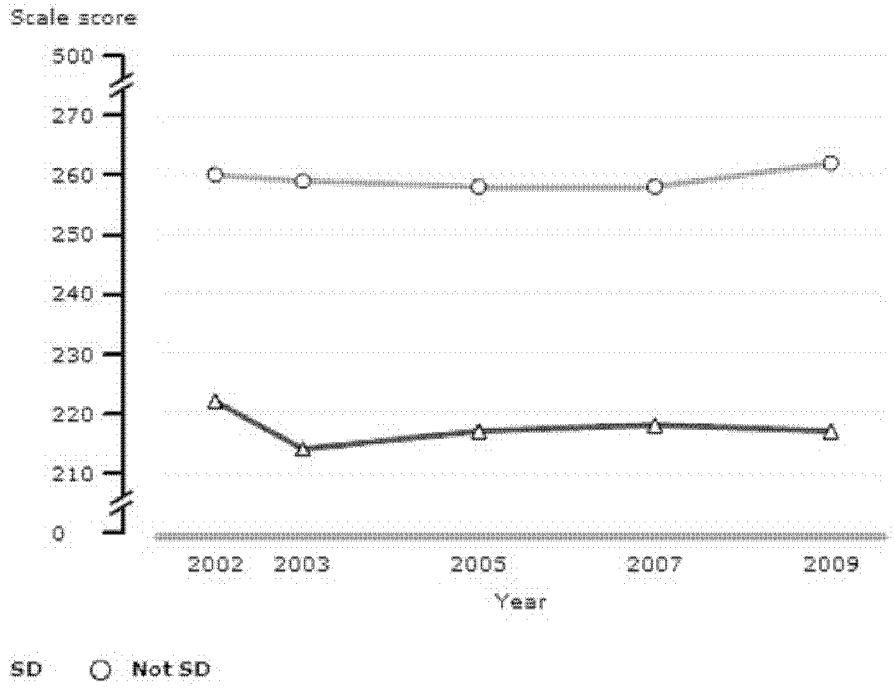



△ Eligible ○ Not eligible ✣ Info not available ‡

‡ Reporting standards not met.
NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

Grade 8 Reading, Disability Status

Average scale scores for reading, grade 8, by Disability status of student, including 504 [IEP] for jurisdiction: 2002, 2003, 2005, 2007, and 2009
Arizona




NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002, 2003, 2005, 2007, and 2009 Reading Assessments.

**Arizona 4-Year Graduation Rate**
*Note: decline in graduation rate 2004-2006 due to change in calculation methodology to cohort definition*

| | |
|---|---|
| 2001 | 71 |
| 2002 | 73 |
| 2003 | 74 |
| 2004 | 77 |
| 2005 | 75 |
| 2006 | 70 |
| 2007 | 73 |
| 2008 | 75 |

**The Council of Chief State School Officers and**
**The National Governors Association Center for Best Practices**

**Common Core Standards**
**Memorandum of Agreement**

**Purpose.** This document commits states to a state-led process that will draw on evidence and lead to development and adoption of a common core of state standards (common core) in English language arts and mathematics for grades K-12. These standards will be aligned with college and work expectations, include rigorous content and skills, and be internationally benchmarked. The intent is that these standards will be aligned to state assessment and classroom practice. The second phase of this initiative will be the development of common assessments aligned to the core standards developed through this process.

**Background.** Our state education leaders are committed to ensuring all students graduate from high school ready for college, work, and success in the global economy and society. State standards provide a key foundation to drive this reform. Today, however, state standards differ significantly in terms of the incremental content and skills expected of students.

Over the last several years, many individual states have made great strides in developing high-quality standards and assessments. These efforts provide a strong foundation for further action. For example, a majority of states (35) have joined the American Diploma Project (ADP) and have worked individually to align their state standards with college and work expectations. Of the 15 states that have completed this work, studies show significant similarities in core standards across the states. States also have made progress through initiatives to upgrade standards and assessments, for example, the New England Common Assessment Program.

**Benefits to States.** The time is right for a state-led, nation-wide effort to establish a common core of standards that raises the bar for all students. This initiative presents a significant opportunity to accelerate and drive education reform toward the goal of ensuring that all children graduate from high school ready for college, work, and competing in the global economy and society. With the adoption of this common core, participating states will be able to:

- Articulate to parents, teachers, and the general public expectations for students;
- Align textbooks, digital media, and curricula to the internationally benchmarked standards;
- Ensure professional development to educators is based on identified need and best practices;
- Develop and implement an assessment system to measure student performance against the common core; and
- Evaluate policy changes needed to help students and educators meet the common core standards and "end-of-high-school" expectations.

An important tenet of this work will be to increase the rigor and relevance of state standards across all participating states; therefore, no state will see a decrease in the level of student expectations that exist in their current state standards.

**Process and Structure**

- **Common Core State-Based Leadership.** The Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) shall assume responsibility for coordinating the process that will lead to state adoption of a common core of standards (see attached timeline). These organizations represent governors and state commissioners of education who are charged with defining K-12 expectations at the state level.

As such, these organizations will facilitate a state-led process to develop common core standards in English language arts and mathematics that are:

- Fewer, clearer, and higher, to best drive effective policy and practice;
- Aligned with college and work expectations, so that all students are prepared for success upon graduating from high school;
- Inclusive of rigorous content and application of knowledge through high-order skills, so that all students are prepared for the 21st century;
- Internationally benchmarked, so that all students are prepared for succeeding in our global economy and society; and
- Research and evidence-based.

- **National Validation Committee.** CCSSO and the NGA Center will create an expert validation group that will serve a several purposes, including validating end-of-course expectations, providing leadership for the development of K-12 standards, and certifying state adoption of the common core standards. The group will be comprised of national and international experts on standards. Participating states will have the opportunity to nominate individuals to the group. The national validation committee shall provide an independent review of the common core standards. The national validation committee will review the common core as it is developed and offer comments, suggestions, and validation of the process and products developed by the standards development group. The group will use evidence as the driving factor in validating the common core standards.

- **Develop End-of-High-School Expectations.** CCSSO and the NGA Center will convene Achieve, ACT and the College Board in an open, inclusive, and efficient process to develop a set of end-of-high-school expectations in English language arts and mathematics based on evidence. We will ask all participating states to review and provide input on these expectations. This work will be completed by July 2009.

- **Develop K-12 Standards in English Language Arts and Math.** CCSSO and the NGA Center will convene Achieve, ACT, and the College Board in an open, inclusive, and efficient process to develop K-12 standards that are grounded in empirical research and draw on best practices in standards development. We will ask participating states to provide input into the drafting of the common core and work as partners in the common core standards development process. This work will be completed by December 2009.

- **Adoption.** The goal of this effort is to develop a true common core of state standards that are internationally benchmarked. Each state adopting the common core standards either directly or by fully aligning its state standards may do so in accordance with current state timelines for standards adoption not to exceed three (3) years.

  This effort is voluntary for states, and it is fully intended that states adopting the common core standards may choose to include additional state standards beyond the common core standards. States that choose to align their standards to the common core standards agree to ensure that the common core represents at least 85 percent of the state's standards in English language arts and mathematics.

  Further, the goal is to establish an ongoing development process that can support continuous improvement of this first version of the common core standards based on research and evidence-based learning and can support the development of assessments that are aligned to the common core standards across the states, for accountability and other appropriate purposes.

- **National Policy Forum.** CCSSO and the NGA Center will convene a National Policy Forum (Forum) comprised of signatory national organizations (e.g., the Alliance for Excellent Education, Business Roundtable, National School Boards Association, Council of Great City Schools, Hunt Institute, National Association of State Boards of Education, National Education Association, and others) to share ideas, gather input, and inform the common core standards initiative. The forum is intended as a place for refining our shared understanding of the scope and elements of a common core; sharing and coordinating the various forms of implementation of a common core; providing a means to develop common messaging between and among participating organizations; and building public will and support.

- **Federal Role.** The parties support a state-led effort and not a federal effort to develop a common core of state standards; there is, however, an appropriate federal role in supporting this state-led effort. In particular, the federal government can provide key financial support for this effort in developing a common core of state standards and in moving toward common assessments, such as through the Race to the Top Fund authorized in the American Recovery and Reinvestment Act of 2009. Further, the federal government can incentivize this effort through a range of tiered incentives, such as providing states with greater flexibility in the use of existing federal funds, supporting a revised state accountability structure, and offering financial support for states to effectively implement the standards. Additionally, the federal government can provide additional long-term financial support for the development of common assessments, teacher and principal professional development, other related common core standards supports, and a research agenda that can help continually improve the common core standards over time. Finally, the federal government can revise and align existing federal education laws with the lessons learned from states' international benchmarking efforts and from federal research.

**Agreement.** The undersigned state leaders agree to the process and structure as described above and attest accordingly by our signature(s) below.

| Signatures |
| --- |
| Governor: |
| Chief State School Officer: |

# COMMON CORE STATE STANDARDS FOR

# English Language Arts and Literacy in History/Social Studies & Science

# Table of Contents

# Introduction

The *Common Core State Standards for English Language Arts and Literacy in History/Social Studies and Science* are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards that help ensure that all students are college and career ready in literacy by no later than the end of high school. The *Standards* set requirements for English language arts (ELA) but also for reading, writing, speaking, listening, and language in the social and natural sciences. Just as students must learn to communicate effectively in a variety of content areas, so too must the *Standards* specify the literacy skills and understandings required for eventual college and career readiness in history, social studies, and science as well as ELA. By their structure, the *Standards* encourage curriculum makers to take a comprehensive approach that coordinates ELA courses with courses in other subject areas in order to help students acquire a wide range of ever more sophisticated knowledge and skills through reading, writing, speaking, and listening.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards, including their work on the American Diploma Project with Achieve. The *Standards* also draw on the most important international models as well as research and input from numerous sources, including scholars, assessment developers, professional organizations, and educators from kindergarten through college. In their design and content, the *Standards* represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As specified by CCSSO and NGA, the *Standards* are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for students to be college and career ready in a twenty-first-century, globally competitive society. As new and better evidence emerges, the *Standards* will be revised accordingly.

The *Standards* are an extension of a prior initiative led by CCSSO and NGA to develop College and Career Readiness (CCR) standards in reading, writing, speaking, listening, and language as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, serve, in revised form, as the backbone of the present document. Consistent across grades and disciplines, the CCR Standards create an essential unity within the document and a consistent point of reference for educators. Whether guiding third graders through a science unit or high school sophomores through a classic work of literature, teachers can look to the same CCR Standards—included in each section of this document—to help judge whether students are on course for being college and career ready. Grade-specific K–12 standards in reading, writing, speaking, listening, and language translate the broad (and, for the earliest grades, seemingly distant) aims of the CCR Standards into age- and attainment-appropriate terms.

While college and career readiness is the end point of the *Standards*—an ambitious goal in its own right—some students will reach that point before the end of high school. For those students who do complete the *Standards*' requirements before graduation, advanced work in such areas as literature, composition, language, and journalism should be available. It is beyond the scope of the *Standards* to describe what such advanced work should consist of, but it should provide the next logical step up from the college and career readiness baseline established here.

As a natural outgrowth of meeting the charge to define college and career readiness, the *Standards* also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the *Standards* readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and online. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who master the *Standards* develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.

*March 2010*

## Key Design Considerations

### *A focus on results rather than means*

By focusing on required achievements, the *Standards* leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed. Thus, the *Standards* do not mandate such things as a particular writing process or specify the full range of metacognitive strategies that students may need to use to monitor and direct their thinking and learning. Teachers are thus free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the *Standards*.

### *An integrated model of literacy*

Although the *Standards* are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarity, the processes of communication are closely connected, as reflected throughout this document. For example, Writing Standard #9 requires that students be able to write about what they read. Likewise, Speaking and Listening Standard #4 sets the expectation that students will share findings from their research.

Language conventions and vocabulary are treated in detail in a separate strand not because those skills should be taught in isolation from other communication activities but because their importance extends beyond writing and reading, where standards documents often place such skills. Many of the conventions must be observed in standard spoken as well as written English, and students, particularly the youngest ones, encounter and acquire new words through conversations as well as through texts. To signal the link between the Language skills and the rest of the standards even more strongly, some skills associated with language use are also found in other strands when appropriate. Reading Standard #4, for example, concerns determining word meanings, and Writing Standard #5 includes editing among the skills students must be able to use to strengthen writing.

### *Research and media skills integrated into the* Standards *as a whole*

To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, report on, and create a high volume and extensive range of print and nonprint texts in media forms old and new. The need to research and to consume and produce media is embedded into every element of today's curriculum; in like fashion, the associated skills and understandings are embedded throughout the *Standards* rather than treated in a separate section.

### *Shared responsibility for students' literacy development*

The *Standards* establish that instruction in reading, writing, speaking, listening, and language is a shared responsibility. The *Standards* present reading instruction in K–5 as fully integrative, including a rich blend of stories, drama, and poetry as well as informational texts from a range of content areas. ELA-specific standards for grade 6 and above include fiction, poetry, and drama but also literary nonfiction (e.g., speeches, essays, and historical documents with significant cultural importance and literary merit). Literacy standards specific to history/social studies and science for grade 6 and above are predicated on teachers in these areas using their unique disciplinary expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields.

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the *Standards* is extensive research establishing the need for college- and career-ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding.

The *Standards* are not alone in calling for a special emphasis on informational text. The 2009 reading framework of the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessment as students advance through the grades.

**Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework**

| Grade | Literary | Informational |
|---|---|---|
| 4 | 50% | 50% |
| 8 | 45% | 55% |
| 12 | 30% | 70% |

The *Standards* aim to align instruction with this framework so that many more students can meet the demands of college and career readiness. In K–5, the *Standards* balance the teaching of literature with informational text, including texts in history/social studies and science. Fulfilling the standards for 6–12 ELA requires much greater attention to literary nonfiction than has been traditional. The NAEP framework also makes clear that significant reading of informational texts should take place outside of the ELA classroom in order for students to be ready for college and careers. The NAEP framework applies the sum of all the reading students do in a grade, not just their reading in the ELA context. The percentages do not imply, for example, that high school ELA teachers must teach 70 percent informational text; they demand instead that a great deal of reading should occur in other disciplines. To measure students' growth toward college and career readiness, assessments aligned with the *Standards* should adhere to the distribution of texts across grades cited in the NAEP framework.

### *A progression of writing toward college and career readiness*

NAEP likewise outlines a distribution across the grades of the core purposes and types of student writing. Similar to the *Standards,* the NAEP framework cultivates the development of three mutually reinforcing writing capacities: writing to persuade, to explain, and to convey real or imagined experience. Evidence concerning the demands of college and career readiness gathered during development of the *Standards* concurs with NAEP's shifting emphases: in grades 9–12 in the *Standards*, students continue writing in all three forms but focus overwhelmingly on writing to argue and to inform or explain.

**Distribution of Communicative Purposes by Grade in the 2011 NAEP Writing Framework**

| Grade | To Persuade | To Explain | To Convey Experience |
|---|---|---|---|
| 4 | 30% | 35% | 35% |
| 8 | 35% | 35% | 30% |
| 12 | 40% | 40% | 20% |

It follows that writing assessments aligned with the *Standards* should adhere to the distribution of writing purposes across grades outlined by NAEP.

### *Grade levels for K–8; grade bands for 9–10 and 11–12*

The *Standards* use individual grade levels in kindergarten through grade 8 to provide useful specificity; the *Standards* use two-year bands in grades 9–12 to allow schools, districts, and states flexibility in high school course design.

### *What is* not *covered by the* Standards

The *Standards* should be recognized for what they are *not* as well as what they are. Three of the most important intentional design limitations are as follows:

1) The *Standards* define what all students are expected to know and be able to do but not *how* teachers should teach. The *Standards* must be complemented by a well-developed, content-rich curriculum consistent with the expectations laid out in this document.

2) While the *Standards* do attempt to focus on what is most essential, they do not describe all that *can* or *should* be taught. A great deal is left to the discretion of teachers and curriculum developers. The aim of the *Standards* is to articulate the fundamentals, not to set out an exhaustive list nor a set of restrictions that limits what can be taught beyond what is specified herein.

3) The *Standards* set grade-level standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. No set of grade-level standards can fully reflect the great variety in achievement levels of students in any given classroom. However, the *Standards* do provide clear signposts along the way to the goal of college and career readiness for all students.

## The Student Who is College and Career Ready in Reading, Writing, Speaking, Listening, and Language

The descriptions that follow are not standards themselves, but instead offer a portrait of students who meet the standards set out in this document. As students advance through the grades and master the standards in reading, writing, speaking, listening, and language, they are able to exhibit with increasing fullness and regularity these capacities of the literate individual.

- **They demonstrate independence.**

Students can, without significant scaffolding or support, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and clearly convey intricate or multifaceted information. Likewise, students are independently able to discern a speaker's key points and request clarification if something is not understood. They ask relevant questions, build on others' ideas, articulate their own ideas, and ask for confirmation that they have been understood. Without prompting, they observe language conventions, determine word meanings, attend to the connotations of words, and acquire new vocabulary.

- **They build strong content knowledge.**

Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

- **They respond to the varying demands of audience, task, purpose, and discipline.**

Students consider their communication in relation to audience, task, purpose, and discipline. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in the sciences).

- **They comprehend as well as critique.**

Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and assess the veracity of claims.

- **They value evidence.**

Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

- **They use technology and digital media strategically and capably.**

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.

- **They come to understand other perspectives and cultures.**

Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

## How to Read This Document

### Overall Document Organization and Main Features

The *Standards* comprise three main sections: a comprehensive K–5 section and two content area–specific sections for grades 6–12, one in English language arts and one in history/social studies and science.

Each section is divided into Reading, Writing, Speaking and Listening, and Language *strands*. Each strand is headed by a set of *College and Career Readiness (CCR) Standards* that is identical across all grades and content areas. The uniformity of the CCR Standards provides a consistent point of reference for educators, facilitating schoolwide goal setting and professional development.

### *CCR Standards: The basis for the K–12 Standards*

Standards for each grade within K–8 and for grades 9–10 and 11–12 follow the College and Career Readiness (CCR) Standards in each strand. Each *grade-specific standard* (as these standards will be collectively referred to) corresponds to a particular CCR Standard. Put another way, each CCR Standard has an accompanying grade-specific standard translating the broader CCR statement into grade-appropriate terms.

### *Who is responsible for which portion of the Standards*

A single K–5 section sets CCR and grade-specific standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students receive in these grades comes from one elementary school teacher. Grades 6–12 are covered in two content area–specific sections, the first for the English language arts teacher and the second for the history/social studies and the science teacher. Each of these sections uses the same CCR Standards but also includes discipline-specific standards tuned to the literacy requirements of these disciplines. It is important to note that the literacy standards in history/social studies and science are meant to complement rather than supplant content standards in those disciplines.

## Key Features of the Strands

### *Reading: Text complexity and the growth of comprehension*

To foster students' ability to comprehend literary and informational texts of steadily increasing complexity, the *Standards* (starting formally in grade 2) define what proportion of the texts students read each year should come from a particular text complexity grade band (2–3, 4–5, 6–8, 9–10, or 11–12). Whatever they are reading, students must also show a steadily increasing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

### *Writing: Text types, responding to sources, and research*

The *Standards* acknowledge the fact that whereas some writing skills, such as the ability to reflect purpose, task, and audience, are important for many types of writing, others are more properly part of writing narratives, informative and explanatory texts, or arguments. Beginning at grade 4, the *Standards* specify the sorts of writing over extended and shorter time frames that students in each grade are to produce in response to sources. Because of the centrality of writing to most forms of inquiry, research standards are primarily included in this strand.

### *Speaking and Listening: Flexible communication and interpersonal skills*

Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to sift through and evaluate multiple points of view, listen thoughtfully in order to build on and constructively question the ideas of others while contributing their own ideas, and, where appropriate, reach agreement and common goals through teamwork.

### *Language: Conventions and vocabulary*

The Conventions standards in the Language strand include the essential "rules" of formal written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The Vocabulary standards focus on both understanding words and their nuances and acquiring new words through conversation, reading, and being taught them directly.

### *Appendices*

Appendix A contains supplementary material on reading text complexity, writing, speaking and listening, language conventions, and vocabulary. Appendix B consists of text exemplars illustrating the complexity, quality, and range of reading appropriate for various grade levels. Appendix C includes annotated writing samples demonstrating at least adequate performance at various grade levels.

# Standards for English Language Arts and Literacy in History/Social Studies & Science

## K–5

## College and Career Readiness Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

### *Key Ideas and Details*

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

### *Craft and Structure*

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

### *Integration of Knowledge and Ideas*

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

### *Range and Level of Text Complexity*

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.
[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex texts in each grade as defined on page 14.

### Note on range and content of student reading

*To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.*

## Reading Standards for Literature K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades.

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** With prompting and support, ask and answer questions about details and events in a text. | **1.** Ask and answer questions about key details and events in a text. | **1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details and events in a text. |
| **2.** Retell familiar stories. | **2.** Retell stories, demonstrating understanding of the central message or lesson. | **2.** Paraphrase stories, fables, folktales, or myths from diverse cultures and determine their lessons or morals. |
| **3.** Identify characters, settings, and key events in a story. | **3.** Describe characters, settings, and key events in a story. | **3.** Describe how characters in a story respond to key events and conflicts. |
| *Craft and Structure* | | |
| **4.** Ask questions about unknown words in a text. | **4.** Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. | **4.** Identify words and phrases (e.g., regular beats, rhymes, and repeated lines) that supply rhythm and meaning in a story, poem, or song. |
| **5.** Recognize common types of texts (e.g., storybooks, poems). | **5.** Distinguish major categories of writing from each other (e.g., stories and poems), drawing on a wide reading of a range of text types. | **5.** Refer to core elements of stories, plays, and myths, including characters, settings, and plots, when writing or speaking about a specific text. |
| **6.** Name the author and illustrator of a text and define the role of each. | **6.** Identify who is speaking at various points in a story, myth, fable, or narrative poem. | **6.** Distinguish between characters by speaking in a different voice for each character when reading aloud. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Relate pictures and illustrations to the overall story in which they appear. | **7.** Use pictures, illustrations, and details in a story to describe characters, events, or settings. | **7.** Explain how images and illustrations contribute to and clarify a story. |
| **8.** (Not applicable to literature) | **8.** (Not applicable to literature) | **8.** (Not applicable to literature) |
| **9.** Compare and contrast the adventures of characters in familiar stories. | **9.** Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures. | **9.** Compare and contrast characters or events from different stories addressing similar themes. |
| *Range and Level of Text Complexity* | | |
| **10.** Read emergent-reader literature texts with purpose and understanding. | **10.** Read independently, proficiently, and fluently literature texts appropriately complex for grade 1. | **10.** Read literature independently, proficiently, and fluently within the grades 2–3 text complexity band; read texts at the high end of the range with scaffolding as needed. |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Ask and answer questions to demonstrate understanding of a text, explicitly using the text as the basis for the answers. | **1.** Draw on details and examples from a text to support statements about the text. | **1.** Quote from a text to support statements about the text. |
| **2.** Use key supporting details in stories, fables, folktales, or myths from diverse cultures to determine the lessons or morals. | **2.** Summarize a text and derive a theme of a story, drama, or poem from details in the text. | **2.** Determine a theme of a text, drawing on how characters in a story respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text. |
| **3.** Describe the main characters in a story (e.g., their traits, motivations, or feelings) and explain how they contribute to the sequence of events. | **3.** Describe in detail a character, event, or setting, drawing on specific details in the text (e.g., from a character's thoughts, words, deeds, or interactions with others). | **3.** Compare and contrast two or more characters, events, or settings in a text, drawing on specific details. |
| *Craft and Structure* | | |
| **4.** Interpret key words and phrases in a text, distinguishing literal from figurative language. | **4.** Understand words and phrases in a text that allude to significant characters found in mythology (e.g., *Herculean*), drawing on a wide reading of classic myths from a variety of cultures and periods. | **4.** Identify how metaphors and similes as well as rhymes and other repetitions of sounds (e.g., alliteration) supply meaning and rhythm in a specific verse or stanza of a poem. |
| **5.** Demonstrate understanding of common features of legends, myths, and folk- and fairytales (e.g., heroes and villains; quests or challenges) when writing or speaking about classic stories from around the world. | **5.** Explain major differences between poems and prose, and refer to the structural elements of poems (e.g., stanza, verse, rhythm, meter) when writing or speaking about specific poems. | **5.** Explain major differences between drama and prose stories, and refer to the structural elements of drama (e.g., casts of characters, setting descriptions, dialogue, stage directions, acts, scenes) when writing or speaking about specific works of dramatic literature. |
| **6.** Distinguish their own point of view from those of characters in a story. | **6.** Compare the point of view from which different stories are narrated, including the difference between first- and third-person narrations. | **6.** Identify how a narrator's perspective or point of view influences how events are described. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Use information from illustrations and other visual elements in a text with the words to develop an understanding of the setting, characters, and plot. | **7.** Integrate information from several illustrations and other visual elements in a text with the words to develop an understanding of how the setting and characters change and the plot develops. | **7.** Explain how images, sounds, and movements contribute to an animated or live-action adaptation of a story, comparing that version to what they "see" or "hear" from reading the text. |
| **8.** (Not applicable to literature) | **8.** (Not applicable to literature) | **8.** (Not applicable to literature) |
| **9.** Compare and contrast the plots, settings, and themes of stories written by the same author about the same or similar characters (e.g., in books from a series). | **9.** Compare and contrast thematically similar tales, myths, and accounts of events from various cultures. | **9.** Compare the treatment of similar ideas and themes (e.g., opposition of good and evil) as well as character types and patterns of events in myths and other traditional literature from different cultures. |
| *Range and Level of Text Complexity* | | |
| **10.** Read literature independently, proficiently, and fluently within the grades 2–3 text complexity band; read "stretch" texts in the grades 4–5 text complexity band with scaffolding as needed. | **10.** Read literature independently, proficiently, and fluently in the grades 4–5 text complexity band; read texts at the high end of the range with scaffolding as needed. | **10.** Read literature independently, proficiently, and fluently within the grades 4–5 text complexity band; read "stretch" texts in the grades 6–8 text complexity band with scaffolding as needed. |

## Reading Standards for Informational Text K–5

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** With prompting and support, ask and answer questions about information and events a text. | **1.** Ask and answer questions about key information and events in a text. | **1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key information and events in a text. |
| **2.** Identify the main topic and main ideas of a text. | **2.** Identify the main topic, main ideas, and key details of a text. | **2.** Identify the main focus of a multiparagraph text as well as that of specific paragraphs within the text. |
| **3.** With prompting and support, describe the connection between two events or ideas in a text. | **3.** Describe the connection between two key events or ideas in a text. | **3.** Describe the connection between two or more historical events or scientific concepts in a text. |
| *Craft and Structure* | | |
| **4.** Ask questions about unknown words in a text. | **4.** Learn and determine the meanings of words and phrases encountered in text relevant to a *grade 1 topic or subject area*. | **4.** Learn and determine the meanings of words and phrases encountered in text relevant to a *grade 2 topic or subject area*. |
| **5.** Locate basic information in a text. | **5.** Describe how a text groups information into general categories (e.g., cows, pigs, and horses are *farm animals*). | **5.** Know and use various text features (e.g., captions, headings, tables of contents, glossaries, indexes, electronic menus, icons) to locate key facts or information. |
| **6.** Name the author and illustrator of a text and define the role of each. | **6.** Distinguish between information provided by pictures or illustrations and that provided by the words in a text. | **6.** Identify the main purpose of a text, including what question the author aims to answer or what the author aims to explain or describe. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Relate pictures or illustrations to the overall text in which they appear. | **7.** Use pictures, illustrations, and details in a text to describe the key ideas. | **7.** Explain how images and illustrations contribute to and clarify a text. |
| **8.** With prompting and support, recognize cause-and-effect relationships in a text. | **8.** Identify cause-and-effect relationships in a text. | **8.** Describe how specific causes link key events or ideas together in a text. |
| **9.** With prompting and support, recognize basic similarities in and differences between two texts on the same topic (e.g., in illustrations or descriptions). | **9.** Identify similarities in and differences between two texts on the same topic (e.g., in illustrations or descriptions). | **9.** Describe similarities in and differences between two texts on the same topic. |
| *Range and Level of Text Complexity* | | |
| **10.** Read emergent-reader informational texts with purpose and understanding. | **10.** Read independently, proficiently, and fluently informational texts appropriately complex for grade 1. | **10.** Read informational texts independently, proficiently, and fluently within the grades 2–3 text complexity band; read texts at the high end of the range with scaffolding as needed. |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Ask and answer questions to demonstrate understanding of a text, explicitly using the text as the basis for the answers. | **1.** Draw on details and examples from a text to support statements about the text. | **1.** Quote from a text to support statements about the text. |
| **2.** Determine the main idea of a text and explain how it is supported by the key details. | **2.** Determine the main idea and supporting details of a text; summarize the text. | **2.** Determine two or more main ideas and how they are supported by details; summarize the text. |
| **3.** Describe the relationship between historical or scientific events or ideas in a text, using knowledge of connective devices that pertain to time, sequence, and cause and effect. | **3.** Describe the sequence of events in an historical or scientific account, including what happened and why, based on specific information in a text. | **3.** Explain the relationships between two or more historical events or scientific concepts by drawing on specific information from one or more texts. |
| *Craft and Structure* | | |
| **4.** Learn and determine the meanings of general academic language and domain-specific words and phrases encountered in a text relevant to a *grade 3 topic or subject area*. | **4.** Learn and determine the meanings of general academic language and domain-specific words or phrases encountered in a text relevant to a *grade 4 topic or subject area*. | **4.** Learn and determine the meanings of general academic language and domain-specific words and phrases encountered in a text relevant to a *grade 5 topic or subject area*. |
| **5.** Use text features (e.g., bold print, key words, topic sentences, hyperlinks, electronic menus, icons) to locate information quickly and efficiently. | **5.** Use text features and search tools to locate and process information relevant to a given topic. | **5.** Describe how events, ideas, or information are organized (e.g., chronology, comparison, cause and effect) in a whole text or in part of a text. |
| **6.** Compare what is presented in a text with relevant prior knowledge and beliefs, making explicit what is new or surprising. | **6.** Compare an eyewitness account to a secondhand account of the same event or topic. | **6.** Analyze two accounts of the same event or topic and describe important similarities and differences in the details they provide. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Integrate information from illustrations and other visual elements (e.g., maps, photographs) in print and digital texts as an aid to understanding where, when, why, and how key events occur. | **7.** Interpret factual information presented graphically or visually (e.g., in charts, diagrams, time lines, animations, and interactive elements) and explain how the information contributes to understanding a print or digital text. | **7.** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. |
| **8.** Describe the logical connection between paragraphs and between sentences in a text (e.g., comparison, sequence, example). | **8.** Explain how an author uses evidence to support his or her claims in a text. | **8.** Explain how an author uses evidence to support his or her claims in a text, identifying what evidence supports which claim(s). |
| **9.** Compare and contrast information drawn from two texts on the same subject. | **9.** Describe how two or more texts on the same subject build on one another; provide a coherent picture of the information they convey. | **9.** Integrate information from several texts on the same subject in order to write or speak about the subject knowledgeably. |
| *Range and Level of Text Complexity* | | |
| **10.** Read informational texts independently, proficiently, and fluently within the grades 2–3 text complexity band; read "stretch" texts in the grades 4–5 text complexity band with scaffolding as needed. | **10.** Read informational texts independently, proficiently, and fluently within the grades 4–5 text complexity band; read texts at the high end of the range with scaffolding as needed. | **10.** Read informational texts independently, proficiently, and fluently within the grades 4–5 text complexity band; read "stretch" texts in the grades 6–8 text complexity band with scaffolding as needed. |

## Reading Standards: Foundational Skills (K–3)

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These Foundational Skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

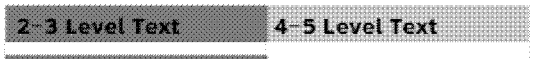
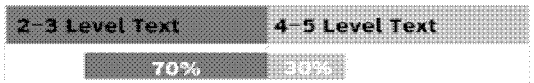
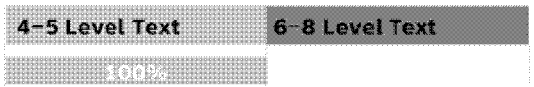
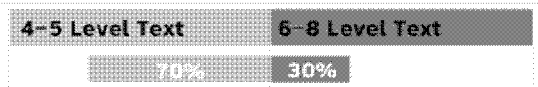
| Kindergartners: | Grade 1 students: |
|---|---|
| *Print Concepts* | |
| **1.** Demonstrate understanding of the organization and basic features of print.<br>a. Identify the front cover, back cover, and title page of a book.<br>b. Follow words from left to right, top to bottom, and page by page.<br>c. Understand that words are separated by spaces in print.<br>d. Recognize and name all upper- and lowercase letters of the alphabet. | **1.** (Not applicable) |
| *Phonological Awareness* | |
| **2.** Demonstrate understanding of spoken words, syllables, and phonemes.<br>a. Recite and produce rhyming words.<br>b. Count, pronounce, blend, and segment syllables in spoken words.<br>c. Count individual words in spoken phrases or simple sentences.<br>d. Blend and segment consonants and rimes of spoken words (*/g/ - /oat/*, */bl/ - /ack/*).<br>e. Demonstrate phonemic awareness by isolating and pronouncing the initial, medial vowel, and final phonemes (sounds) in three-phoneme (CVC) words (e.g., */save/*, */ham/*).[1] (This does not include CVCs ending with */l/*, */r/*, or */x/*.)<br>f. Add or substitute individual phonemes in simple, one-syllable words to make new words (e.g., */at/* → */sat/* → */mat/* → */map/*). | **2.** Demonstrate understanding of spoken words, syllables, and phonemes.<br>a. Aurally distinguish long from short vowel sounds in spoken single-syllable words (e.g., */tap/* vs. */tape/*, */sock/* vs. */soak/*, */sit/* vs. */sight/*).<br>b. Orally produce single-syllable words by blending phonemes, including consonant blends (e.g., */cats/*, */black/*, */blast/*).<br>c. Isolate and pronounce initial, medial vowel, and final phonemes (sounds) in spoken single-syllable words (e.g., *f**a**st*, *f**a**st*, *fas**t***).<br>d. Segment spoken single-syllable words into their complete sequence of individual phonemes (e.g., lap: /l/-/a/-/p/ → /f/-/l/-/a/-/p/). |

[1]Words, syllables, or phonemes written in /slashes/refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.

| Kindergartners: | Grade 1 students: | Grade 2 students: | Grade 3 students: |
|---|---|---|---|
| *Phonics and Word Recognition* | | | |
| **3.** Know and apply grade-level phonics and word analysis skills in decoding words.<br>a. Demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant.<br>b. Associate the long and short sounds with the graphemes for the five major vowels.<br>c. Read at least twenty-five very-high-frequency words by sight (e.g., *the*, *of*, *to*, *you*, *she*, *my*, *is*, *are*, *do*, *does*).<br>d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ (e.g., ***b**at* vs. ***s**at*, *ca**t*** vs. *ca**n***, *hi**t*** vs. *ho**t***). | **3.** Know and apply grade-level phonics and word analysis skills in decoding words.<br>a. Know the spelling-sound correspondences for common consonant digraphs (e.g., *-ll*, *-ck*, *wr-*, *sh*).<br>b. Decode regularly spelled one-syllable words (e.g., *lock*, *much*, *see*, *rain*, *slide*, *bake*, *bring*).<br>c. Know final *-e* (e.g., *take*, *side*) and common vowel team conventions (e.g., *rain*, *day*, *week*, *seat*, *road*, *show*) for representing long vowel sounds.<br>d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.<br>e. Decode two-syllable words following basic patterns (e.g., *rabbit*) by breaking the words into syllables.<br>f. Read words with inflectional endings (e.g., *-s*, *-es*, *-ed*, *-ing*, *-er*, *-est*).<br>g. Recognize and read grade-appropriate irregularly spelled words (e.g., *said*, *were*, *could*, *would*, *their*, *there*, *through*, *none*, *both*). | **3.** Know and apply grade-level phonics and word analysis skills in decoding words.<br>a. Distinguish long and short vowels when reading regularly spelled one-syllable words (e.g., *hop* vs. *hope*, *men* vs. *mean*, *fell* vs. *feel*, *bend* vs. *bead*).<br>b. Know spelling-sound correspondences for additional common vowel teams (e.g., *loud*, *cow*, *look*, *loop*, *boy*, *boil*).<br>c. Decode regularly spelled two-syllable words with long vowels (e.g., *surprise*, *remain*, *needle*, *baby*, *paper*).<br>d. Decode words with common prefixes and suffixes (e.g., *unhappy*, *carefully*, *goodness*, *unbutton*).<br>e. Identify words with inconsistent but common spelling-sound correspondences (e.g., *heat* vs. *head*, *roll* vs. *doll*, *hint* vs. *hind*).<br>f. Recognize and read grade-appropriate irregularly spelled words (e.g., *through*, *eyes*, *busy*, *ocean*, *island*, *people*). | **3.** Know and apply grade-level phonics and word analysis skills in decoding words.<br>a. Identify and know the meaning of the most common prefixes and derivational suffixes (e.g., *un-*, *re-*, *mis-*, *-ful*, *-less*, *-able*).<br>b. Decode words with common Latin suffixes (e.g., *-tion/-sion*, *-ture*, *-tive/-sive*, *-ify*, *-ity*, *-ment*).<br>c. Decode multisyllable words (e.g., *supper*, *chimpanzee*, *refrigerator*, *terrible*, *frightening*).<br>d. Read grade-appropriate irregularly spelled words (e.g., *although*, *science*, *stomach*, *machine*). |
| *Fluency* | | | |
| **4.** Read with sufficient accuracy and fluency to support comprehension.<br>a. Read emergent-reader texts with purpose and understanding. | **4.** Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. | **4.** Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. | **4.** Read with sufficient accuracy and fluency to support comprehension.<br>a. Read on-level text with purpose and understanding.<br>b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings<br>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary. |

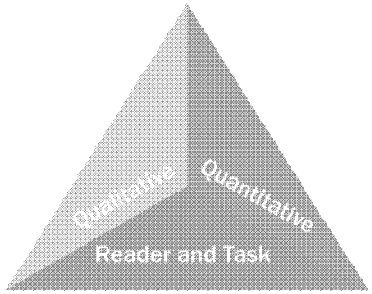
## Range and Level of Text Complexity for Student Reading by Grade (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

| | | |
|---|---|---|
| **K** | (See specific exemplars.) | |
| **1** | | |
| **2** |  | **In grade 2**, students focus on reading texts independently in the grades 2–3 text complexity band, with scaffolding likely required for texts at the high end of the range. |
| **3** |  | **In grade 3**, students focus on reading texts independently in the grades 2–3 text complexity band (70 percent) and are introduced to texts in the grades 4–5 text complexity band as "stretch" texts (30 percent), which will likely require scaffolding. |
| **4** |  | **In grade 4**, students focus on reading texts independently in the grades 4–5 text complexity band, with scaffolding likely required for texts at the high end of the range. |
| **5** |  | **In grade 5**, students focus on reading independently in the grades 4–5 text complexity band (70 percent) and are introduced to texts in the grades 6–8 text complexity band as "stretch" texts (30 percent), which will likely require scaffolding. |

**Note**: In any given classroom, the actual range of students' reading ability could be greater than the proposed range. Some students will require extra time and intense support and scaffolding to enable them to read grade-level material, whereas other students will be ready for—and should be encouraged to read—more advanced texts.

## Measuring Text Complexity: Three Factors




**Qualitative evaluation of the text:** Levels of meaning, structure, language conventionality and clarity, and knowledge demands

**Quantitative evaluation of the text:** Readability measures and other scores of text complexity

**Matching reader to text and task:** Reader knowledge, motivation, and interests as well as the complexity generated by the tasks to be assigned and the questions to be posed

**Note:** More detailed information on text complexity and how it is measured is contained in Appendix A.

## Range of Text Types for K–5

Students in K–5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | | Informational Text |
|---|---|---|---|
| **Stories** | **Drama** | **Poetry** | **Literary Nonfiction, History/Social Studies, and Science and Technical Texts** |
| Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth | Includes staged dialogue and brief familiar scenes | Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem | Includes biographies and autobiographies; books about history, social studies, science, and the arts; and digital media sources on a range of topics |

## College and Career Readiness Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

### *Text Types and Purposes*[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

### *Production and Distribution of Writing*

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

### *Research to Build Knowledge*

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

### *Range of Writing*

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[3]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See "Conventions" in Language, pages 22–26, for specific editing expectations.
[3]This standard is measured by the proficiency of student writing products.

### Note on range and content of student writing

*To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying thoughts, feelings, and real and imaginary experiences. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form, content, and style of their writing to accomplish a particular purpose and task. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.*

## Writing Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications. Growth in writing ability is characterized by an increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas. At the same time, the content and sources that students address in their writing grow in demand every year.

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Text Types and Purposes* | | |
| **1.** Use a combination of drawing, dictating, and writing to compose opinions in which they tell a reader the name of a book or the topic they are "writing" about and give an opinion about the topic (e.g., *My favorite book is . . .* ). | **1.** Write opinions in which they introduce the topic or the name of the book they are writing about, state an opinion, and provide a reason for their opinion. | **1.** Write opinions in which they introduce the topic or book(s) directly, state an opinion, provide reasons and details to support opinions, use words to link opinions and reason(s) (e.g., *because*, *and*, *also*), and provide a sense of closure. |
| **2.** Use a combination of drawing, dictating, and writing to compose informative and explanatory texts in which they name what they are "writing" about and share some information about it. | **2.** Write informative and explanatory texts in which they name a topic, supply some facts relevant to the topic, and provide some sense of closure. | **2.** Write informative and explanatory texts in which they introduce a topic, use facts and definitions to develop points, present similar information together using headers to signal groupings when appropriate, and provide a concluding sentence or section. |
| **3.** Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order that they occurred, and provide a reaction to what happened. | **3.** Write narratives in which they include at least two or more appropriately sequenced events, use time cue words to signal event order, and provide some details and a sense of closure. | **3.** Write narratives in which they recount a well-elaborated event or series of events, use temporal words and phrases to signal event order, include details to tell what the narrator did, thought, and felt, and provide closure. |
| *Production and Distribution of Writing* | | |
| **4.** (Begins in grade 3) | **4.** (Begins in grade 3) | **4.** (Begins in grade 3) |
| **5.** With guidance and support from adults, add details to strengthen writing as needed through revision. | **5.** With guidance and support from adults, add details to strengthen writing as needed through revision. | **5.** With guidance from adults, strengthen writing as needed by revising and editing. |
| **6.** (Begins in grade 2) | **6.** (Begins in grade 2) | **6.** With guidance from adults, use technology to produce writing. |
| *Research to Build Knowledge* | | |
| **7.** (Begins in grade 1) | **7.** Participate in shared research and writing projects (e.g., exploring a number of books on a given topic). | **7.** Participate in shared research and writing projects (e.g., exploring a number of books on a given topic). |
| **8.** Gather information from experiences or provided text sources to answer a specific question. | **8.** Gather information from experiences or provided text sources to answer a specific question. | **8.** Gather information from experiences or provided text sources to answer a specific question. |
| **9.** (Begins in grade 4) | **9.** (Begins in grade 4) | **9.** (Begins in grade 4) |
| *Range of Writing* | | |
| **10.** (Begins in grade 4) | **10.** (Begins in grade 4) | **10.** (Begins in grade 4) |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Text Types and Purposes* | | |
| **1.** Write opinions in which they:<br>a. Introduce the topic or book(s) directly, state an opinion relative to the topic, and create an organizing structure that lists reasons.<br>b. Provide reasons that support the opinion.<br>c. Use appropriate words to link opinions and reason(s) (e.g., *because*, *therefore*, *in order to*, *since*, *for example*).<br>d. Provide a sense of closure. | **1.** Write opinions in which they:<br>a. Introduce an opinion about a concrete issue or topic and create an organizing structure where related ideas are grouped to support the writer's purpose.<br>b. Provide reasons that are supported by facts and details.<br>c. Link reasons and details together using words and phrases (e.g., *so*, *then*, *for instance*, *in addition*).<br>d. Adopt an appropriate style for sharing and defending an opinion.<br>e. Provide a concluding statement or section. | **1.** Write opinions in which they:<br>a. Introduce an opinion about a concrete issue or topic and create an organizing structure where ideas are logically grouped to support the writer's purpose.<br>b. Provide logically ordered reasons that are supported by facts and details.<br>c. Link reasons and details together using words, phrases, and clauses (e.g., *consequently*, *generally*, *specifically*).<br>d. Adopt an appropriate style for sharing and defending an opinion.<br>e. Provide a concluding statement or section. |
| **2.** Write informative/explanatory pieces in which they:<br>a. Introduce a topic and create an organizational structure that presents similar information together.<br>b. Provide some details to develop points.<br>c. Use linking words (e.g., *also*, *another*, *and*, *more*) to connect ideas within categories of information.<br>d. Include a concluding sentence or section. | **2.** Write informative/explanatory pieces in which they:<br>a. State the topic clearly and group related information in paragraphs and sections.<br>b. Develop the topic using facts, concrete details, quotations, or other information and examples.<br>c. Use appropriate links to join ideas within categories of information.<br>d. Employ domain-specific vocabulary when appropriate.<br>e. Provide a conclusion related to the information or explanation offered. | **2.** Write informative/explanatory pieces in which they:<br>a. State the topic clearly, provide a general observation and focus, and group related information logically.<br>b. Develop the topic using relevant facts, concrete details, quotations, or other information and examples.<br>c. Use appropriate links to join ideas within and across categories of information.<br>d. Employ domain-specific vocabulary and some technical terms when appropriate.<br>e. Provide a conclusion related to the information or explanation offered. |
| **3.** Write narratives in which they:<br>a. Establish a situation, introduce a narrator and/or characters, and organize an event sequence that unfolds naturally.<br>b. Employ dialogue and descriptions of characters' actions, thoughts, and feelings.<br>c. Use temporal words and phrases to signal event sequence.<br>d. Provide a sense of closure. | **3.** Write narratives in which they:<br>a. Orient the reader by establishing a situation, introduce a narrator and/or characters, and organize an event sequence that unfolds naturally.<br>b. Use narrative techniques such as dialogue and description to develop events and show the characters' external behaviors and internal responses to events.<br>c. Use a variety of temporal words and phrases to manage the sequence of events.<br>d. Use concrete and sensory words and phrases to convey events and experiences precisely.<br>e. Provide a satisfying conclusion that follows from the narrative's events. | **3.** Write narratives in which they:<br>a. Engage and orient the reader by establishing a situation, introduce a narrator and/or characters, and create an organization that sequences events naturally and logically.<br>b. Use narrative techniques such as dialogue, pacing, and description to develop events and show characters' external behaviors and internal responses.<br>c. Use a variety of temporal words, phrases, and clauses to manage the sequence of events.<br>d. Use well-chosen words and phrases to convey events and experiences precisely.<br>e. Provide a satisfying conclusion that follows from the narrative's events. |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Production and Distribution of Writing* | | |
| **4.** (Begins in grade 4). | **4.** Produce coherent and clear writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) | **4.** Produce coherent and clear writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) |
| **5.** With guidance and support from peers and adults, strengthen writing as needed by revising and editing. | **5.** With guidance and support from peers and adults, strengthen writing as needed by planning, revising, and editing. | **5.** With guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. |
| **6.** With guidance and support from adults, use technology to produce and publish writing. | **6.** With guidance and support from adults, use technology to produce, publish, and interact with others about writing. | **6.** With guidance and support from adults, use technology, including the Internet, to produce, publish, and interact with others about writing. |
| *Research to Build Knowledge* | | |
| **7.** Perform short, focused research tasks that build knowledge about a topic. | **7.** Perform short, focused research tasks that build knowledge through investigation of different aspects of a single topic. | **7.** Perform short, focused research tasks that build knowledge through investigation of different aspects of a topic using several sources. |
| **8.** Gather information from experience as well as print and digital resources, take simple notes on sources, and sort evidence into provided categories. | **8.** Gather relevant information from experience as well as print and digital sources, take notes and categorize evidence, restate information in written text, and provide basic bibliographic information. | **8.** Gather relevant information from experience as well as print and digital sources; summarize or paraphrase information in notes and finished work, and provide basic bibliographic information. |
| **9.** (Begins in grade 4) | **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned:<br>a. Apply *grade 4 reading standards* to informational texts (e.g., "Explain how an author uses evidence to support his or her claims in a text").<br>b. Apply *grade 4 reading standards* to literature (e.g., "Describe in detail a character, event, or setting, drawing on specific details in the text (e.g., from a character's thoughts, words, deeds, and interactions with others"). | **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned:<br>a. Apply *grade 5 reading standards* to informational texts (e.g., "Explain how an author uses evidence to support his or her claims in a text, identifying what evidence supports which claim(s)").<br>b. Apply *grade 5 reading standards* to literature (e.g., "Compare and contrast two or more characters, events, or settings in a text, drawing on specific details"). |
| *Range of Writing* | | |
| **10.** (Begins in grade 4) | **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. |

## College and Career Readiness Standards for Speaking and Listening

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

*Comprehension and Collaboration*

1. Participate effectively in a range of interactions (one-on-one and in groups), exchanging information to advance a discussion and to build on the input of others.
2. Integrate and evaluate information from multiple oral, visual, or multimodal sources in order to answer questions, solve problems, or build knowledge.
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.

*Presentation of Knowledge and Ideas*

4. Present information, evidence, and reasoning in a clear and well-structured way appropriate to purpose and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate.

### Note on range and content of student speaking and listening

*To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations--whole class, small group, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.*

*New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.*

## Speaking and Listening Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Comprehension and Collaboration* | | |
| **1.** Participate in conversations with peers and adults about *kindergarten topics and texts* being studied in class.<br>a. Listen to others and take turns speaking.<br>b. Continue a conversation through several exchanges. | **1.** Initiate and participate in conversations with peers and adults about *grade 1 topics and texts* being studied in class.<br>a. Follow agreed-upon rules for discussions, such as listening to others, speaking one at a time, and gaining the floor in respectful ways.<br>b. Respond to the comments of others through multiple exchanges.<br>c. Ask questions to clear up confusion about a topic. | **1.** Engage in group discussions on *grade 2 topics and texts* being studied in class.<br>a. Follow agreed-upon rules for discussions, such as listening to others, speaking one at a time, and gaining the floor in respectful ways.<br>b. Stay on topic by linking their own additions to the conversation to the previous remarks of others.<br>c. Ask for clarification and further explanation as needed.<br>d. Extend their ideas and understanding in light of the discussions. |
| **2.** Confirm understanding of information presented orally or through media by asking and answering questions about key details. | **2.** Confirm understanding of information presented orally or through media by restating key elements and asking and answering questions about key details. | **2.** Retell key details or ideas presented orally or through media. |
| **3.** Ask questions to get information, seek help, or clarify something that is not understood. | **3.** Ask questions to get information, clarify something that is not understood, or gather additional information. | **3.** Ask and answer questions about information presented orally or visually in order to deepen their understanding or clarify comprehension. |
| *Presentation of Knowledge and Ideas* | | |
| **4.** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. | **4.** Describe familiar people, places, things, and events with relevant details, expressing ideas and feelings clearly. | **4.** Recount stories or experiences with appropriate facts and descriptive details. |
| **5.** (Begins in grade 4) | **5.** (Begins in grade 4) | **5.** (Begins in grade 4) |
| **6.** (Begins in grade 1) | **6.** Produce complete sentences when appropriate to task and situation, using correct verb tenses to convey a sense of past, present, and future. (See "Conventions" in Language, pages 22–26, for specific demands.) | **6.** Produce complete sentences when appropriate to task and situation to provide requested detail or clarification, ensuring subject-verb agreement and correct use of irregular plural nouns. (See "Conventions" in Language, pages 22–26, for specific demands.) |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Comprehension and Collaboration* | | |
| **1.** Initiate and engage in group discussions on *grade 3 topics and texts* being studied in class.<br>a. Follow agreed-upon rules for discussions and carry out assigned roles in small-group discussions.<br>b. Pose relevant questions and link their own additions to the conversation to the previous remarks of others.<br>c. Extend their ideas and understanding in light of the discussions. | **1.** Initiate and engage in group discussions on *grade 4 topics and texts* being studied in class.<br>a. Come to discussions prepared, having read required material; in discussions, explicitly draw on that material and other information known about the topic.<br>b. Pose and respond to questions as well as build on the ideas of previous speakers.<br>c. Acknowledge new information provided by others and incorporate it into their own thinking as appropriate. | **1.** Initiate and engage in group discussions on *grade 5 topics and texts* being studied in class.<br>a. Come to discussions prepared, having read the required material; in discussions, explicitly draw on that material and other information known about the topic.<br>b. Respond to questions with elaboration, make comments that contribute to the topic, and build on the ideas of previous speakers.<br>c. Ask questions to clarify or follow up on ideas or information presented orally or through media.<br>d. Draw conclusions based on the ideas of others and incorporate them into their own thinking as appropriate. |
| **2.** Identify the main ideas and supporting details of information presented graphically, visually, orally, or multimodally. | **2.** Paraphrase the key information or ideas presented graphically, visually, orally, or multimodally. | **2.** Summarize the key ideas and supporting details presented graphically, visually, orally, or multimodally. |
| **3.** Ask and answer questions about presentations, offering appropriate elaboration and detail. | **3.** Identify the claims and supporting evidence used by a speaker or a presenter. | **3.** Summarize the claims made by a speaker or presenter and explain how each claim is supported with evidence. |
| *Presentation of Knowledge and Ideas* | | |
| **4.** Report on a topic or recount stories or experiences with appropriate facts and descriptive details. | **4.** Report on events, topics, or texts in an organized manner, using appropriate, specific facts and descriptive details to support main ideas. | **4.** Report on events, topics, or texts in a focused, organized manner, sequencing ideas logically and using appropriate, specific facts, details, examples, or other information to develop main ideas. |
| **5.** (Begins in grade 4) | **5.** Incorporate visual displays and digital media into presentations when appropriate. | **5.** Incorporate visual displays and digital media into presentations when appropriate. |
| **6.** Speak coherently, employing a variety of tenses and ensuring subject-verb and pronoun-antecedent agreement. (See "Conventions" in Language, pages 22–26, for specific demands.) | **6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See "Conventions" in Language, pages 22–26, for specific demands.) | **6.** Adapt speech to a variety of contexts and communicative tasks, using formal English when appropriate to task and situation. (See "Conventions" in Language, pages 22–26, for specific demands.) |

## College and Career Readiness Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

### *Conventions in Writing and Speaking*

1. Demonstrate a command of the conventions of standard English grammar and usage.
2. Demonstrate a command of the conventions of capitalization, punctuation, and spelling.
3. Make effective choices about language, punctuation, and sentence structure for meaning and style.

### *Vocabulary Acquisition and Use*

4. Determine the meaning of words and phrases encountered through conversations, reading, and media use.
5. Understand the nuances of and relationships among words.
6. Use grade-appropriate general academic vocabulary and domain-specific words and phrases purposefully acquired as well as gained through conversation and reading and responding to texts.

### Note on range and content of student language use

*To build a foundation for college and career readiness in language, students must gain control over many conventions of writing and speaking as well as acquire new words and understand those that they encounter through listening, reading, and media use. They must be able to determine the meaning of grade-appropriate words, come to appreciate that words have shadings of meaning and relationships to other words, and expand their vocabulary through conversation and (especially in later grades) through reading and by being taught words directly in the course of studying subject matter. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are*

## Language Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Conventions in Writing and Speaking* | | |
| **1.** Observe conventions of grammar and usage.<br>a. Print most upper- and lowercase letters.<br>b. Write a letter or letters for most consonant and short-vowel sounds (phonemes).<br>c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog*, *dogs*; *wish*, *wishes*) when speaking.<br>d. Understand and use the most frequently occurring prepositions in English (e.g., *to/from*, *in/out*, *on/off*, *for*, *of*, *by*, *with*) when speaking.<br>e. Produce and expand complete sentences in shared language and writing activities.<br>f. Understand and use question words (e.g., *who*, *what*, *where*, *when*, *why*, *how*) in discussions. | **1.** Observe conventions of grammar and usage.<br>a. Print all upper- and lowercase letters.<br>b. Use singular and plural nouns with matching verbs in simple sentences (e.g., *He hops*; *We hop*).<br>c. Use subject, object, and possessive pronouns in speaking and writing (e.g., *I*, *me*, *my*; *they*, *them*, *their*).<br>d. Use verbs to convey a sense of past, present, and future in writing and speaking (e.g., *Yesterday I walked home*; *Today I walk home*; *Tomorrow I will walk home*).<br>e. Understand and use frequently occurring prepositions in English (e.g., *during*, *beyond*, *toward*).<br>f. Produce and expand complete declarative, interrogative, imperative, and exclamatory sentences in response to questions and prompts.<br>g. Understand that, minimally, every sentence must be about something (the subject) and tell something (the predicate) about its subject. | **1.** Observe conventions of grammar and usage.<br>a. Form common irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*).<br>b. Form the past tense of common irregular verbs (e.g., *sat*, *hid*, *told*).<br>c. Produce and expand complete declarative, interrogative, imperative, and exclamatory sentences.<br>d. Produce and expand complete sentences to provide requested detail or clarification. |
| **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Capitalize the first word in a sentence and the pronoun *I*.<br>b. Name and identify end punctuation, including periods, question marks, and exclamation points.<br>c. Spell simple words phonetically using knowledge of sound-letter relationships. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Capitalize names, places, and dates.<br>b. Use end punctuation for sentences, including periods, question marks, and exclamation points.<br>c. Use commas in dates and to separate single words in a series.<br>d. Use conventional spelling for words with common spelling patterns and for common irregular words.<br>e. Use phonetic spellings for untaught words, drawing on phonemic awareness and spelling conventions.<br>f. Form new words through addition, deletion, and substitution of sound and letters (e.g., *an* → *man* → *mat* → *mast* → *must* → *rust* → *crust*). | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Capitalize holidays, product names, geographic names, and important words in titles.<br>b. Use commas in greetings and closings of letters.<br>c. Use apostrophes to form contractions and common possessives.<br>d. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*; *paper* → *copper*).<br>e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings. |
| **3.** (Begins in grade 3) | **3.** (Begins in grade 3) | **3.** (Begins in grade 3) |

| Kindergartners: | Grade 1 students: | Grade 2 students: |
|---|---|---|
| *Vocabulary Acquisition and Use* | | |
| **4.** Determine word meanings (*based on kindergarten reading*).<br>a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.<br>b. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* as a bird and learning the verb *to duck*).<br>c. Use the most common affixes in English (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word. | **4.** Determine word meanings (*based on grade 1 reading*).<br>a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.<br>b. Use sentence-level context as a clue to the meaning of an unknown word.<br>c. Use common affixes in English as a clue to the meaning of an unknown word.<br>d. Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes).<br>e. Demonstrate understanding of the concept of multiple-meaning words (e.g., *match*, *kind*, *play*) by identifying meanings of some grade-appropriate examples of such words. | **4.** Determine word meanings (*based on grade 2 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as understanding how the word is used in a sentence; analyzing the word's sounds, spelling, and meaningful parts; and consulting glossaries or beginning dictionaries, both print and digital.<br>b. Explain the meaning of grade-appropriate compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*).<br>c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*).<br>d. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy / unhappy*, *tell / retell*). |
| **5.** Understand word relationships.<br>a. Build real-life connections between words and their use (e.g., note places at school that are *colorful*).<br>b. Distinguish shades of meaning among verbs describing the same general action (e.g., *walk*, *march*, *strut*, *prance*) by acting out the meanings.<br>c. Use common adjectives to distinguish objects (e.g., the *small blue* square; the *shy white* rabbit).<br>d. Demonstrate understanding of common verbs and adjectives by relating them to their opposites (antonyms). | **5.** Understand word relationships.<br>a. Build real-life connections between words and their use (e.g., note places at home that are *cozy*).<br>b. Distinguish shades of meaning among verbs differing in manner (e.g., *look*, *peek*, *glance*, *stare*, *glare*, *scowl*) and adjectives differing in intensity (e.g., *large*, *gigantic*) by defining, choosing, or acting out the meanings. | **5.** Understand word relationships.<br>a. Build real-life connections between words and their use (e.g., describe foods that are *spicy* or *juicy*).<br>b. Distinguish shades of meaning among related verbs (e.g., *toss*, *throw*, *hurl*) and related adjectives (e.g., *thin*, *slender*, *skinny*, *scrawny*). |
| **6.** Use newly learned words acquired through conversations, reading, and responding to texts. | **6.** Use newly learned words acquired through conversations, reading, and responding to texts. | **6.** Use newly learned words acquired through conversations, reading, and responding to texts. |

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Conventions in Writing and Speaking* | | |
| **1.** Observe conventions of grammar and usage.<br>a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in specific sentences.<br>b. Form and use the simple (e.g., *I walked*, *I walk*, *I will walk*) verb tenses.<br>c. Ensure subject-verb and pronoun-antecedent agreement.*<br>d. Produce simple, compound, and complex sentences. | **1.** Observe conventions of grammar and usage.<br>a. Form and use the progressive (e.g., *I was walking*, *I am walking*, *I will be walking*) verb aspects.<br>b. Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences.*<br>c. Produce complete sentences, avoiding rhetorically poor fragments and run-ons.*<br>d. Correctly use frequently confused words (e.g., *to*, *too*, *two*; *there*, *their*).* | **1.** Observe conventions of grammar and usage.<br>a. Form and use the perfect (e.g., *I had walked*, *I have walked*, *I will have walked*) verb aspects.<br>b. Recognize and correct inappropriate shifts in verb tense and aspect.* |
| **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use correct capitalization.<br>b. Use quotation marks in dialogue.<br>c. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*).<br>d. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.<br>e. Consult reference materials, including dictionaries, as needed to check and correct spellings. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use quotation marks to mark direct speech and quotations from a text.<br>b. Spell grade-appropriate words correctly, consulting references as needed. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use punctuation to separate items in a series.*<br>b. Use a comma to separate an introductory element from the rest of the sentence.<br>c. Use underlining, quotation marks, or italics to indicate titles of works.<br>d. Spell grade-appropriate words correctly, consulting references as needed. |
| **3.** Make effective language choices.<br>a. Use words for effect.* | **3.** Make effective language choices.<br>a. Use punctuation for effect.*<br>b. Maintain consistency in style and tone.*<br>c. Choose words and phrases to convey ideas precisely.* | **3.** Make effective language choices.<br>a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.* |

* Conventions standards noted with an asterisk (*) need to be revisited by students in subsequent grades as their writing and speaking grows in sophistication. See chart on page 27 for a complete listing.

| Grade 3 students: | Grade 4 students: | Grade 5 students: |
|---|---|---|
| *Vocabulary Acquisition and Use* | | |
| **4.** Determine word meanings (*based on grade 3 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as understanding how the word is used in a sentence; analyzing the word's sounds, spelling, and meaningful parts; and consulting glossaries or beginning dictionaries, both print and digital.<br>b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company*, *companion*).<br>c. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *heat/preheat*).<br>d. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*). | **4.** Determine word meanings (*based on grade 4 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., definitions, examples, or restatements in text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital.<br>b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *telegraph*, *photograph*, *autograph*).<br>c. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*).<br>d. Paraphrase common idioms, adages, and proverbs. | **4.** Determine word meanings (*based on grade 5 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., definitions, examples, or restatements in text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital.<br>b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *photograph*, *photosynthesis*).<br>c. Interpret figurative language, including similes and metaphors.<br>d. Explain the meaning of common idioms, adages, and proverbs. |
| **5.** Understand word relationships.<br>a. Build real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).<br>b. Distinguish among related words that describe states of mind or degrees of certainty (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*). | **5.** Understand word relationships.<br>a. Build real-life connections between words and their various uses and meanings.<br>b. Define relationships between words (e.g., how *ask* is like and unlike *demand*; what items are likely to be *enormous*).<br>c. Distinguish a word from other words with similar but not identical meanings (synonyms). | **5.** Understand word relationships.<br>a. Build real-life connections between words and their various uses and meanings.<br>b. Define relationships between words (e.g., how *smirk* is like and unlike *smile*; what items are likely to be *vast*).<br>c. Distinguish a word from other words with similar but not identical meanings (synonyms). |
| **6.** Use words that are in common, conversational vocabulary as well as grade-appropriate academic vocabulary and domain-specific words (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts. | **6.** Use grade-appropriate general academic vocabulary and domain-specific words and phrases (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts. | **6.** Use grade-appropriate general academic vocabulary and domain-specific words and phrases (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts. |

## English Language Arts Conventions Progressive Skills, By Standard

The following, marked with an asterisk (*) in the Conventions standards, are skills and understandings that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated writing and speaking.

| Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grades 9–10 |
|---|---|---|---|---|---|---|
| **1c.** Ensure subject-verb and pronoun-antecedent agreement.<br>**3a.** Choose words for effect. | | | | | | |
| | **1b.** Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences.<br>**1c.** Produce complete sentences, avoiding rhetorically poor fragments and run-ons.<br>**1d.** Correctly use frequently confused words (e.g., *effect/affect*, *to/too/two*).<br>**3a.** Use punctuation for effect.<br>**3b.** Maintain consistency in style and tone.<br>**3c.** Choose words and phrases to convey ideas precisely. | | | | | |
| | | **1b.** Recognize and correct inappropriate shifts in verb tense and aspect.<br>**2a.** Use punctuation to separate items in a series.<br>**3a.** Expand, combine, and reduce sentences for meaning, reader/listener interest, and style. | | | | |
| | | | **1b.** Recognize and correct inappropriate shifts in pronoun number and person.<br>**1c.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).<br>**2a.** Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.<br>**3a.** Vary sentence patterns for meaning, reader/listener interest, and style. | | | |
| | | | | **1c.** Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.<br>**3b.** Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy. | | |
| | | | | | **1c.** Recognize and correct inappropriate shifts in verb voice and mood. | |
| | | | | | | **1a.** Use parallel structure in writing. |

* Read-aloud
** Read-along

# Texts Illustrating the Complexity, Quality, and Range of Student Reading K–5

| | Literature: Stories, Drama, Poetry | Informational Texts: Literary Nonfiction, History/Social Studies, Science/Technical Texts |
|---|---|---|
| K | ▪ *Over in the Meadow* by John Langstaff (traditional) (c1800)*<br>▪ *A Boy, a Dog, and a Frog* by Mercer Mayer (1967)<br>▪ *Pancakes for Breakfast* by Tomie DePaola (1978)<br>▪ *A Story A Story* by Gail E. Haley (1970)*<br>▪ *Kitten's First Full Moon* by Kevin Henkes (2004)* | ▪ *My Five Senses* by Aliki (1962)*<br>▪ *Truck* by Donald Crews (1980)<br>▪ *I Read Signs* by Tana Hoban (1987)<br>▪ *What Do You Do With a Tail Like This?* by Steve Jenkins & Robin Page (2003)*<br>▪ *Amazing Whales!* by Sarah L. Thomson (2005)* |
| 1 | ▪ "Mix a Pancake" by Christina G. Rossetti (1893)**<br>▪ *Mr. Popper's Penguins* by Richard Atwater (1938)*<br>▪ *Little Bear* by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)**<br>▪ *Frog and Toad Together* by Arnold Lobel (1971)**<br>▪ *Hi! Fly Guy* by Tedd Arnold (2006) | ▪ *A Tree Is a Plant* by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)**<br>▪ *My Five Senses* by Aliki (1962)**<br>▪ *Follow the Water from Brook to Ocean* by Arthur Dorros (1991)**<br>▪ *From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)*<br>▪ *How People Learned to Fly* by Fran Hodgkins and True Kelley (2007)* |
| 2–3 | ▪ "Who Has Seen the Wind?" by Christina G. Rossetti (1893)<br>▪ *Charlotte's Web* by E. B. White (1952)*<br>▪ *Sarah, Plain and Tall* by Patricia MacLachlan (1985)<br>▪ *Tops and Bottoms* by Janet Stevens (1995)<br>▪ *Poppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001) | ▪ *A Medieval Feast* by Aliki (1983)<br>▪ *From Seed to Plant* by Gail Gibbons (1991)<br>▪ *The Story of Ruby Bridges* by Robert Coles (1995)*<br>▪ *A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997)<br>▪ *Moonshot: The Flight of Apollo 11* by Brian Floca (2009) |
| 4–5 | ▪ *Alice's Adventures in Wonderland* by Lewis Carroll (1865)<br>▪ "Casey at the Bat" by Ernest Lawrence Thayer (1888)<br>▪ *The Black Stallion* by Walter Farley (1941)<br>▪ "Zlateh the Goat" by Isaac Bashevis Singer (1984)<br>▪ *Bud, Not Buddy* by Christopher Paul Curtis (1999)<br>▪ *The Birchbark House* by Louise Erdrich (1999)<br>▪ *Where the Mountain Meets the Moon* by Grace Lin (2009) | ▪ *Discovering Mars* by Melvin Berger (1992)<br>▪ *Hurricanes: Earth's Mightiest Storms* by Patricia Lauber (1996)<br>▪ *A History of US* by Joy Hakim (2005)<br>▪ *Horses* by Seymour Simon (2006)<br>▪ *Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea* by Sy Montgomery (2006) |

**Note**: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K 5 text complexity.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study that topic in depth. On the next page is an example of progressions of texts building knowledge across grade levels.

[1]Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

## Staying on Topic Within a Grade and Across Grades: How to Build Knowledge Systematically in English Language Arts K–5

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K–2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, *orally* comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the *Standards*.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

| Exemplar Texts on a Topic Across Grades | K | 1 | 2–3 | 4–5 |
|---|---|---|---|---|
| **The Human Body**<br><br>Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade. | The five senses and associated body parts<br>▪ *My Five Senses* by Aliki (1989)<br>▪ *Hearing* by Maria Rius (1985)<br>▪ *Sight* by Maria Rius (1985)<br>▪ *Smell* by Maria Rius (1985)<br>▪ *Taste* by Maria Rius (1985)<br>▪ *Touch* by Maria Rius (1985)<br><br>Taking care of your body: Overview (hygiene, diet, exercise, rest)<br>▪ *My Amazing Body: A First Look at Health & Fitness* by Pat Thomas (2001)<br>▪ *Get Up and Go!* by Nancy Carlson (2008)<br>▪ *Go Wash Up* by Doering Tourville (2008)<br>▪ *Sleep* by Paul Showers (1997)<br>▪ *Fuel the Body* by Doering Tourville (2008) | Introduction to the systems of the human body and associated body parts<br>▪ *Under Your Skin: Your Amazing Body* by Mick Manning (2007)<br>▪ *Me and My Amazing Body* by Joan Sweeney (1999)<br>▪ *The Human Body* by Gallimard Jeunesse (2007)<br>▪ *The Busy Body Book* by Lizzy Rockwell (2008)<br>▪ *First Encyclopedia of the Human Body* by Fiona Chandler (2004)<br><br>Taking care of your body: Germs, diseases, and preventing illness<br>▪ *Germs Make Me Sick* by Marilyn Berger (1995)<br>▪ *Tiny Life on Your Body* by Christine Taylor-Butler (2005)<br>▪ *Germ Stories* by Arthur Kornberg (2007)<br>▪ *All About Scabs* by GenichiroYagu (1998) | Digestive and excretory systems<br>▪ *What Happens to a Hamburger* by Paul Showers (1985)<br>▪ *The Digestive System* by Christine Taylor-Butler (2008)<br>▪ *The Digestive System* by Rebecca L. Johnson (2006)<br>▪ *The Digestive System* by Kristin Petrie (2007)<br><br>Taking care of your body: healthy eating and nutrition<br>▪ *Good Enough to Eat* by Lizzy Rockwell (1999)<br>▪ *Showdown at the Food Pyramid* by Rex Barron (2004)<br><br>Muscular, skeletal, and nervous systems<br>▪ *The Mighty Muscular and Skeletal Systems* Crabtree Publishing (2009)<br>▪ *Muscles* by Seymour Simon (1998)<br>▪ *Bones* by Seymour Simon (1998)<br>▪ *The Astounding Nervous System* Crabtree Publishing (2009)<br>▪ *The Nervous System* by Joelle Riley (2004) | Circulatory system<br>▪ *The Heart* by Seymour Simon (2006)<br>▪ *The Heart and Circulation* by Carol Ballard (2005)<br>▪ *The Circulatory System* by Kristin Petrie (2007)<br>▪ *The Amazing Circulatory System* by John Burstein (2009)<br><br>Respiratory system<br>▪ *The Lungs* by Seymour Simon (2007)<br>▪ *The Respiratory System* by Susan Glass (2004)<br>▪ *The Respiratory System* by Kristin Petrie (2007)<br>▪ *The Remarkable Respiratory System* by John Burstein (2009)<br><br>Endocrine system<br>▪ *The Endocrine System* by Rebecca Olien (2006)<br>▪ *The Exciting Endocrine System* by John Burstein (2009) |

# Standards for English Language Arts

## 6–12

## College and Career Readiness Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

### *Key Ideas and Details*

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

### *Craft and Structure*

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

### *Integration of Knowledge and Ideas*

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

### *Range and Level of Text Complexity*

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.
[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex text in each grade as defined on page 36.

### Note on range and content of student reading

*To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among the founding U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.*

## Reading Standards for Literature 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades.

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text. |
| **2.** Analyze how a theme or central idea develops over the course of a text, drawing on key details. | **2.** Analyze how two or more themes or central ideas in a text relate to one another, drawing on key details. | **2.** Analyze how recurring images or events contribute to the development of a theme or central idea in a text. |
| **3.** Describe how a story's plot unfolds (in a series of episodes or as a problem to be solved) as well as how characters adapt or change as they move toward a resolution. | **3.** Analyze how particular lines of dialogue or specific incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision. | **3.** Analyze how elements of a story or drama interact (e.g., how plot and setting are integral to one another; how the setting affects characters). |
| *Craft and Structure* | | |
| **4.** Interpret the figurative and connotative meanings of words and phrases as they are used in a text. | **4.** Interpret the figurative and connotative meanings of words and phrases as they are used in a text and describe in detail a specific word choice and its impact on meaning and tone. | **4.** Explain the comparisons an author makes through metaphors, allusions, or analogies in a text and analyze how those comparisons contribute to meaning. |
| **5.** Explain the effect of such devices as flashbacks and foreshadowing on the development of the plot and meaning of a text. | **5.** Describe how any given sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the plot or themes. | **5.** Compare a poem with a conventional structure, such as a sonnet, to a poem without a proscribed structure, such as a free verse poem. |
| **6.** Describe how an author establishes the point of view of the speaker or a character in a poem, drama, or story. | **6.** Analyze how an author presents the points of view of different characters in a story or drama, including their different reactions to the same person or event(s). | **6.** Explain how a difference in the perspective or knowledge of characters and the audience (e.g., created through the device of dramatic irony) produces suspense or humor. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Analyze how illustrations, diagrams, multimedia elements, and words contribute to the meaning and tone of a print or digital text (e.g., graphic novel, multimedia presentation of fiction). | **7.** Compare and contrast a text to its filmed, staged, or multimedia version, including examining some techniques unique to each medium (e.g., lighting, sound, color, camera focus and angles). | **7.** Analyze to what degree a filmed or live production of a drama or story stays faithful to or departs from the script or text. |
| **8.** (Not applicable to literature) | **8.** (Not applicable to literature) | **8.** (Not applicable to literature) |
| **9.** Analyze stories in the same genre (e.g., mysteries, adventure stories), comparing and contrasting their approaches to similar themes and topics. | **9.** Analyze a specific case in which a modern work of fiction draws on patterns of events or character types found in traditional literature (e.g., the hero, the quest). | **9.** Compare a fictional portrayal of a time, place, or character to historical sources from the same period as a means of understanding how authors use or alter history. |
| *Range and Level of Text Complexity* | | |
| **10.** Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; read texts at the high end of the range with scaffolding as needed. | **10.** Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. | **10.** Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; engage in sustained practice with "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. |

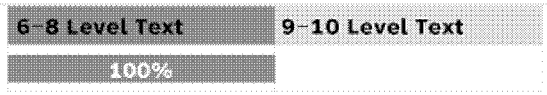
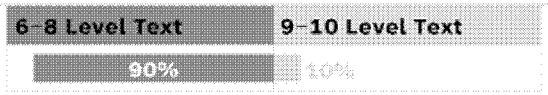
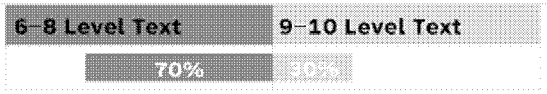
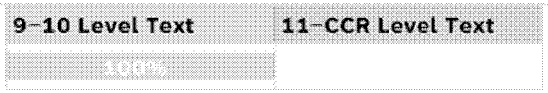
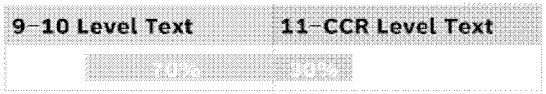
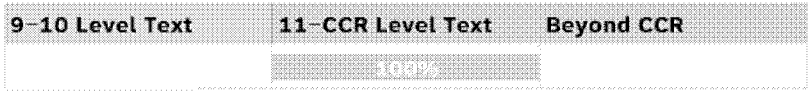
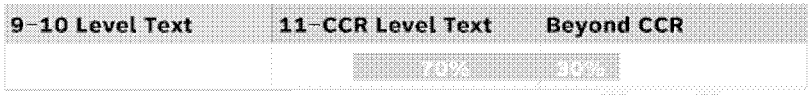
| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Key Ideas and Details* | |
| **1.** Cite the evidence in the text that most strongly supports a specific analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves things uncertain. |
| **2.** Analyze in detail the development and refinement of a theme or central idea in a text, including how it emerges and how it is shaped and refined by specific details. | **2.** Analyze how multiple themes or central ideas in a text interact, build on, and, in some cases, conflict with one another. |
| **3.** Analyze how complex characters, including those with conflicting motivations or divided loyalties, develop over the course of a text, interact with other characters, and advance the plot or develop the theme. | **3.** Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed). |
| *Craft and Structure* | |
| **4.** Evaluate how an author's use of language, including formality of diction, shapes meaning and tone in a text (e.g., how the language evokes a sense of time and place, how it sets a formal or informal tone). | **4.** Analyze in detail the condensed language of poems (or particularly rich language use in a narrative or drama), determining how specific word choices and multiple meanings shape the impact and tone. |
| **5.** Analyze how an author structures a text, orders events within it (e.g., parallel plots), and manipulates time (e.g., pacing) to create mystery, tension, or surprise. | **5.** Analyze how an author's choices concerning how to structure a text (e.g., electing at what point to begin or end a story) shape the meaning of the text. |
| **6.** Analyze a case in which the author's work takes a position or stance on a social issue or other topic and describe how the author carries out that purpose. | **6.** Analyze an author's use of satire, sarcasm, irony, understatement, or other means that requires a reader to understand various layers of meaning in a text. |
| *Integration of Knowledge and Ideas* | |
| **7.** Compare and contrast the representation of a subject or a key scene in two different artistic mediums (e.g., Auden's "Musée de Beaux Arts" and Breughel's *Landscape with the Fall of Icarus*). | **7.** Compare and contrast multiple interpretations of a drama or story (e.g., recorded or live productions), distinguishing how each version interprets the source text. (This includes at least one play by Shakespeare as well as one play by an American dramatist.) |
| **8.** (Not applicable to literature) | **8.** (Not applicable to literature) |
| **9.** Analyze a wide range of nineteenth- and early-twentieth-century foundational works of American literature, comparing and contrasting approaches to similar ideas or themes in two or more texts from the same period. | **9.** Analyze how an author draws on and transforms fictional source material in a specific work (e.g., how Shakespeare draws on a story from Ovid or how a later author draws on a play by Shakespeare). |
| *Range and Level of Text Complexity* | |
| **10.** **In grade 9**, read literature independently, proficiently, and fluently in the grades 9–10 text complexity band; read texts at the high end of the range with scaffolding as needed.<br>**In grade 10**, read literature independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts in the grades 11–CCR text complexity band with scaffolding as needed. | **10.** **In grade 11**, read literature independently, proficiently, and fluently in the grades 11–CCR text complexity band; read texts at the high end of the range with scaffolding as needed.<br>**In grade 12**, read literature independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts in the Beyond CCR text complexity band with scaffolding as needed. |

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text. |
| **2.** Analyze how a central idea develops over the course of a text, drawing on key details. | **2.** Analyze how two or more central ideas in a text relate to one another, drawing on key details. | **2.** Provide an objective summary of a text, accurately conveying an author's view and specific points. |
| **3.** Determine the causes or reasons that link different events, ideas, or information in a text, drawing on key details. | **3.** Describe in detail how an author introduces, illustrates, and elaborates a key idea in a text (e.g., through examples or anecdotes). | **3.** Analyze how an author introduces, illustrates, and elaborates two or more significant ideas in a text, including how the relationship between the ideas is expressed. |
| *Craft and Structure* | | |
| **4.** Interpret words and phrases as they are used in a text, including technical, figurative, and connotative meanings, and analyze how an author's choice of specific words in a text contributes to understanding the ideas or concepts. | **4.** Interpret words and phrases as they are used in a text, including technical, figurative, and connotative meanings, and describe in detail how an author's choice of specific words affects meaning and tone. | **4.** Explain the comparisons an author makes through metaphors, allusions, and analogies in a text and analyze how those comparisons contribute to meaning. |
| **5.** Describe the structure an author uses to organize a specific text, including how the major sections contribute to the whole. | **5.** Describe how any given sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas. | **5.** Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept. |
| **6.** Compare and contrast one author's point of view on events with that of another (e.g., a memoir written by and a biography on the same person). | **6.** Describe an author's point of view or purpose in a text and analyze how the author distinguishes his or her point of view from that of others. | **6.** Compare and contrast the points of view and purposes of two authors writing about the same topic. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Compare and contrast the accounts of a subject in different mediums (e.g., a person's life story told in print, video, or multimedia), analyzing which details are emphasized and how the account unfolds in each version. | **7.** Compare and contrast the impression conveyed by a printed text to that conveyed when listening to or viewing a video or multimedia presentation of it (e.g., analyzing how the delivery of a speech affects its impact). | **7.** Evaluate the advantages and disadvantages of using different mediums (e.g., text, video, multimedia) to present a particular topic or idea. |
| **8.** Distinguish among fact, opinion, and reasoned judgment presented in a text. | **8.** Identify the stated and unstated premises of an argument and explain how they contribute to the conclusions reached. | **8.** Evaluate an argument's claims and reasoning as well as the degree to which evidence supports each claim. |
| **9.** Assess the similarities and differences between two or more texts on the same subject and apply the knowledge gained to inform reading of additional texts. | **9.** Analyze where two or more texts provide conflicting information on the same subject and determine whether the texts disagree on matters of fact or on matters of interpretation. | **9.** Compare and contrast how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts. |
| *Range and Level of Text Complexity* | | |
| **10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read texts at the high end of the range with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; engage in sustained practice with "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed. |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Key Ideas and Details* | |
| **1.** Cite evidence in the text that most strongly supports a specific analysis of what the text says explicitly as well as inferences drawn from the text. | **1.** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves things uncertain. |
| **2.** Analyze in detail the development and refinement of a central idea in a text, including how it emerges and is shaped and refined by specific details. | **2.** Analyze how multiple ideas in a text interact, build on, and, in some cases, conflict with one another. |
| **3.** Analyze the interactions between and among ideas and events, including how ideas and events influence one another. | **3.** Analyze in detail an author's ideas by describing how the ideas are developed and refined by specific sentences, paragraphs, and larger portions of a text. |
| *Craft and Structure* | |
| **4.** Evaluate how an author's use of language, including formality and type of diction, shapes meaning and tone in a text (e.g., the formality of a court opinion or a newspaper). | **4.** Interpret how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in Federalist No. 10 and No. 51). |
| **5.** Evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging. | **5.** Analyze how an author's choices concerning how to structure a text (e.g., how reasons, evidence, and information are organized and emphasized) shape the meaning of the text. |
| **6.** Analyze documents of historical and literary significance, including foundational U.S. documents (e.g., the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights) for their premises, purposes, and structure. | **6.** Analyze how various authors express different points of view on similar events or issues, assessing the authors' assumptions, use of evidence, and reasoning, including analyzing seminal U.S. documents (e.g., *The Federalist*, landmark U.S. Supreme Court majority opinions and dissents). |
| *Integration of Knowledge and Ideas* | |
| **7.** Synthesize information presented in different formats (e.g., text, video, mutimedia) to generate a coherent understanding of an issue. | **7.** Synthesize and apply multiple sources of information presented in different formats in order to address a question or solve a problem, including resolving conflicting information. |
| **8.** Assess the truth of an argument's explicit and implicit premises by determining whether the evidence presented in the text justifies the conclusions. | **8.** Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing the relevance and sufficiency of evidence and identifying false statements or fallacious reasoning. |
| **9.** Analyze how authors argue with or otherwise respond to one another's ideas or accounts of key events, evaluating the strength of each author's interpretation. | **9.** Synthesize explanations and arguments from diverse sources to provide a coherent account of events or ideas, including resolving conflicting information. |
| *Range and Level of Text Complexity* | |
| **10.** **In grade 9**, read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read texts at the high end of the range with scaffolding as needed.<br>**In grade 10**, read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts in the grades 11–CCR text complexity band with scaffolding as needed. | **10.** **In grade 11**, read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read texts at the high end of the range with scaffolding as needed.<br>**In grade 12**, read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts in the Beyond CCR text complexity band with scaffolding as needed. |

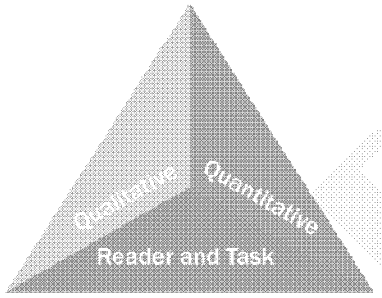
## Range and Level of Text Complexity for Student Reading by Grade (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

| | | |
|---|---|---|
| 6 |  | **In grade 6**, students focus on reading texts independently in the grades 6–8 text complexity band, with scaffolding likely required for texts at the high end of the range. |
| 7 |  | **In grade 7**, students focus on reading texts independently in the grades 6–8 text complexity band (90 percent) and are introduced to texts in the grades 9–10 text complexity band as "stretch" texts (10 percent), which will likely require scaffolding. |
| 8 |  | **In grade 8**, students focus on reading texts independently in the grades 6–8 text complexity band (70 percent) as well as sustained practice with texts in the grades 9–10 text complexity band as "stretch" texts (30 percent), which will likely require scaffolding. |
| 9 |  | **In grade 9**, students focus on reading texts independently in the grades 9–10 text complexity band, with scaffolding likely required for texts at the high end of the range. |
| 10 |  | **In grade 10**, students focus on reading texts independently in the grades 9–10 text complexity band (70 percent) and are introduced to texts in the grades 11–CCR text complexity band as "stretch" texts (30 percent), which will likely require scaffolding. |
| 11 |  | **In grade 11**, students focus on reading texts independently in the grades 11–CCR text complexity band, with scaffolding likely required for texts at the high end of the range. |
| 12 |  | **In grade 12**, students focus on reading texts independently in the grades 11–CCR text complexity band (70 percent) and are introduced to texts in the Beyond CCR text complexity band as "stretch" texts (30 percent), which will likely require scaffolding. |

**Note**: In any given classroom, the actual range of students' reading ability could be greater than the proposed range. Some students will require extra time and intense support and scaffolding to enable them to read grade-level material, whereas other students will be ready for—and should be encouraged to read—more advanced texts.

## Measuring Text Complexity: Three Factors




**Qualitative evaluation of the text:** Levels of meaning, structure, language conventionality and clarity, and knowledge demands

**Quantitative evaluation of the text:** Readability measures and other scores of text complexity

**Matching reader to text and task:** Reader knowledge, motivation, and interests as well as the complexity generated by the tasks to be assigned and the questions to be posed

**Note:** More detailed information on text complexity and how it is measured is contained in Appendix A.

## College and Career Readiness Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

### *Text Types and Purposes*[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

### *Production and Distribution of Writing*

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

### *Research to Build Knowledge*

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

### *Range of Writing*

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[3]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See "Conventions" in Language, pages 47–50, for specific editing expectations.
[3]This standard is measured by the proficiency of student writing products.

### Note on range and content of student writing

*For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.*

## Writing Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications. Growth in writing ability is characterized by an increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas. At the same time, the content and sources that students address in their writing grow in demand every year.

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Text Types and Purposes* | | |
| **1.** Write arguments in which they:<br>a. Introduce a claim about a topic or issue and organize the reasons and evidence to support the claim.<br>b. Support the claim with clear reasons and relevant evidence.<br>c. Use words, phrases, and clauses to convey the relationships among claims and reasons.<br>d. Sustain an objective style and tone.<br>e. Provide a concluding statement or section that follows from the argument. | **1.** Write arguments in which they:<br>a. Introduce a claim about a topic or issue, acknowledge alternate or opposing claims, and organize the reasons and evidence logically to support the claim.<br>b. Support the claim with logical reasoning and detailed, relevant evidence that demonstrate a comprehensive understanding of the topic.<br>c. Use words, phrases, and clauses to convey the relationships among the claims, reasons, and evidence.<br>d. Sustain an objective style and tone.<br>e. Provide a concluding statement or section that follows logically from the argument. | **1.** Write arguments in which they:<br>a. Introduce a claim about a topic or issue, distinguish it from alternate or opposing claims, and organize the reasons and evidence logically to support the claim.<br>b. Support the claim with logical reasoning and detailed and relevant evidence from credible sources to demonstrate a comprehensive understanding of the topic.<br>c. Use words, phrases, and clauses to make clear the relationships among claims, reasons, counterclaims, and evidence.<br>d. Sustain an objective style and tone.<br>e. Provide a concluding statement or section that follows logically from the argument. |
| **2.** Write informative/explanatory texts in which they:<br>a. Introduce a topic and organize information appropriate to the purpose, using strategies such as definition, classification, comparison/contrast, and cause/effect.<br>b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.<br>c. Use appropriate links and varied sentence structures to join and clarify ideas.<br>d. Use straightforward language to create an objective style appropriate for a reader seeking information.<br>e. Provide a conclusion that follows logically from the information or explanation presented. | **2.** Write informative/explanatory texts in which they:<br>a. Introduce and establish a topic that provides a sense of what is to follow and organize information appropriate to the purpose, using strategies such as definition, classification, comparison/contrast, and cause/effect.<br>b. Develop the topic with relevant and accurate facts, definitions, concrete details, quotations, or other information and examples.<br>c. Use appropriate links and varied sentence structures to create cohesion and clarify ideas.<br>d. Use precise language and sustain an objective style appropriate for a reader seeking information.<br>e. Provide a conclusion that follows logically from the information or explanation presented. | **2.** Write informative/explanatory texts in which they:<br>a. Introduce and establish a topic and organize information under broader concepts or categories.<br>b. Develop the topic with well-chosen, relevant, and accurate facts, concrete details, quotations, or other information and examples.<br>c. Use varied links and sentence structures to create cohesion and clarify information and ideas.<br>d. Use precise language and domain-specific and technical wording (when appropriate) and sustain a formal, objective style appropriate for a reader seeking information.<br>e. Provide a conclusion that follows logically from the information or explanation presented. |

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Text Types and Purposes (continued)* | | |
| **3.** Write narratives in which they:<br>a. Engage and orient the reader by establishing a context and point of view, and organize a sequence of events or experiences.<br>b. Develop narrative elements (e.g., setting, event sequence, characters) using relevant sensory details.<br>c. Use a variety of transition words, phrases, and clauses to convey sequence, shift from one time frame or setting to another, and/or show the relationships among events and experiences.<br>d. Choose words and phrases to develop the events, experiences, and ideas precisely.<br>e. Provide a satisfying conclusion that follows from the events, experiences, or ideas. | **3.** Write narratives in which they:<br>a. Engage and orient the reader by establishing a context and point of view, and purposefully organize a sequence of events or experiences.<br>b. Develop narrative elements (e.g., setting, conflict, complex characters) with relevant and specific sensory details.<br>c. Use a variety of techniques to convey sequence, shift from one time frame or setting to another, and/or show the relationships among events or experiences.<br>d. Choose words and phrases to develop the events, experiences, and ideas precisely and to create mood.<br>e. Provide a satisfying conclusion that follows from the events, experiences, or ideas. | **3.** Write narratives in which they:<br>a. Engage and orient the reader by establishing a context and point of view, and purposefully organize a progression of events or experiences.<br>b. Develop narrative elements (e.g., setting, plot, event sequence, complex characters) with well-chosen, relevant, and specific sensory details.<br>c. Use a variety of techniques to convey sequence in multiple storylines, shift from one time frame or setting to another, and/or show the relationships among events or experiences.<br>d. Choose words and phrases to effectively develop the events, experiences, and ideas precisely and to create mood.<br>e. Provide a satisfying conclusion that follows from the events, experiences, or ideas. |
| *Production and Distribution of Writing* | | |
| **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) | **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) | **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) |
| **5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. | **5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose have been addressed. | **5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose and context have been addressed. |
| **6.** Use technology, including the Internet, to produce, publish, and interact with others about writing, including linking to and citing online sources. | **6.** Use technology, including the Internet, to produce, publish, and interact with others about writing, including presenting and citing information in a digital format. | **6.** Use technology, including the Internet, to present and cite information effectively in a digital format, including when publishing and responding to writing. |

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Research to Build Knowledge* | | |
| **7.** Perform short, focused research projects in response to a question and refocus the inquiry in response to further research and investigation. | **7.** Perform short, focused research projects in response to a question and generate additional related and focused questions for further research and investigation. | **7.** Perform short, focused research projects in response to a question and generate additional related questions that allow for multiple avenues of exploration. |
| **8.** Gather relevant information from multiple print and digital sources, assess the credibility of each source, and quote or paraphrase the data and conclusions of others while avoiding plagiarism and documenting sources. | **8.** Gather relevant information from multiple print and digital sources using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others, avoiding plagiarism and following a standard format for citation. | **8.** Gather relevant information from multiple print and digital sources using advanced search features; assess the credibility and accuracy of each source; and quote or paraphrase the evidence, avoiding plagiarism and following a standard format for citation. |
| **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.<br>a. Apply *grade 6 reading standards* to literature (e.g., "Analyze stories in the same genre (e.g., mysteries, adventure stories), comparing and contrasting their approaches to similar themes and topics.").<br>b. Apply *grade 6 reading standards* to literary nonfiction (e.g., "Distinguish among fact, opinion, and reasoned judgment presented in a text"). | **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.<br>a. Apply *grade 7 reading standards* to literature (e.g., "Analyze a specific case in which a modern work of fiction draws on patterns of events or character types found in traditional literature (e.g., the hero, the quest).<br>b. Apply *grade 7 reading standards* to literary nonfiction (e.g., "Identify the stated and unstated premises of an argument and explain how they contribute to the conclusions reached"). | **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned:<br>a. Apply *grade 8 reading standards* to literature (e.g., "Compare a fictional portrayal of a time, place, or character to historical sources from the same period as a means of understanding how authors use or alter history").<br>b. Apply *grade 8 reading standards* to literary nonfiction (e.g., "Evaluate an argument's claims and reasoning as well as the degree to which evidence supports each claim"). |
| *Range of Writing* | | |
| **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Text Types and Purposes* | |
| **1.** Write arguments which they:<br>a. Introduce a precise claim, distinguish it from alternate or opposing claims, and provide an organization that establishes clear relationships among the claim, reasons, and evidence.<br>b. Develop a claim and counterclaim fairly, supplying evidence for each, while pointing out the strengths of their own claim and the weaknesses of the counterclaim.<br>c. Use precise words, phrases, and clauses to make clear the relationships between claims and reasons, between reasons and evidence, and between claims and counterclaims.<br>d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline as well as to the audience's knowledge of the issue.<br>e. Provide a concluding statement or section that follows logically from the argument and offers a reflection or recommendation. | **1.** Write arguments in which they:<br>a. Introduce a substantive claim, establish its significance, distinguish it from alternate or opposing claims, and create an organization so that claims, reasons, and evidence are purposefully and logically sequenced.<br>b. Develop a claim and counterclaim thoroughly and fairly, supplying the most relevant evidence, while pointing out the strengths of their own claim and the weaknesses of the counterclaim.<br>c. Use precise words, phrases, and complex syntax to make explicit the relationships between claims and reasons, between reasons and evidence, and between claims and counterclaims.<br>d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline as well as to the audience's knowledge, values, and possible biases.<br>e. Provide a concluding statement or section that follows logically from the argument and offers a reflection or recommendation. |
| **2.** Write informative/explanatory texts in which they:<br>a. Introduce a topic and organize information under broader concepts and categories to make clear the connections and distinctions between key ideas appropriate to the purpose; include formatting (e.g., headings) and graphics (e.g., figures, tables) when useful to clarify ideas.<br>b. Develop a complex topic through well-chosen, relevant, and sufficient facts, concrete details, quotations, extended definitions, or other information and examples.<br>c. Use varied transitions and sentence structures to create cohesion, clarify information and ideas, and link major sections in the text.<br>d. Use precise language and domain-specific and technical wording (when appropriate) to manage the complexity of the topic in a style that responds to the specific discipline and context as well as to the expertise of likely readers.<br>e. Provide a conclusion that follows logically from the information or explanation provided and articulates the implications or significance of the topic. | **2.** Write informative/explanatory texts in which they:<br>a. Introduce a complex topic and organize the information at multiple levels of the text so that each new piece of information builds on that which precedes it to create a unified whole; include formatting (e.g., headings) and graphics (e.g., figures, tables) when useful to clarify ideas.<br>b. Thoroughly develop aspects of a complex topic through the purposeful selection of the most significant and relevant facts, concrete details, quotations, extended definitions, or other information and examples.<br>c. Use varied transitional devices and sentence structures to create cohesion, clarify complex ideas, and link the major sections of the text.<br>d. Use precise language, domain-specific and technical wording (when appropriate), and techniques such as metaphor, simile, and analogy to manage the complexity of the topic in a style that responds to the specific discipline and context as well as to the expertise of likely readers.<br>e. Provide a well-developed conclusion that follows logically from the information or explanation provided and articulates the implications or significance of the topic. |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Text Types and Purposes (continued)* | |
| **3.** Write narratives in which they:<br>a. Engage the reader by establishing a problem, situation, or observation and purposefully organize a progression of events or experiences.<br>b. Develop narrative elements (e.g., setting, event sequence, complex characters) with well-chosen, revealing details.<br>c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.<br>d. Use precise language to develop a picture of how the events, experiences, and ideas emerge and unfold.<br>e. Provide a satisfying conclusion that follows from what is experienced, observed, or resolved over the course of the narrative. | **3.** Write narratives in which they:<br>a. Engage the reader by establishing the significance of a problem, situation, or observation and purposefully organize events or experiences.<br>b. Develop narrative elements (e.g., setting, stance, event sequence, complex characters) with purposefully selected details that call readers' attention to what is most distinctive or worth noticing.<br>c. Use a variety of techniques to build toward a particular impact (e.g., a sense of mystery, suspense, growth, or resolution).<br>d. Use precise language to develop the events, experiences, and ideas clearly and to reinforce the style.<br>e. Provide a satisfying conclusion that follows from what is experienced, observed, or resolved over the course of the narrative. |
| *Production and Distribution of Writing* | |
| **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for this standard are defined in Standards 1–3 above.) | **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for this standard are defined in Standards 1–3 above.) |
| **5.** Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific task and context. | **5.** Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| **6.** Use technology, including the Internet, to produce, publish, and collaborate on a shared writing product, incorporating diverse and sometimes conflicting feedback. | **6.** Demonstrate command of technology, including the Internet, to produce, publish, and update work in response to ongoing feedback, including fresh arguments or new information. |
| *Research to Build Knowledge* | |
| **7.** Perform short, focused research projects and more sustained research; synthesize multiple sources on a subject to answer a question or solve a problem. | **7.** Perform short, focused research projects and more sustained research; synthesize multiple authoritative sources on a subject to answer a question or solve a problem. |
| **8.** Assemble evidence gathered from authoritative print and digital sources; assess the credibility and accuracy of the information and its strengths and limitations in terms of answering the research question; and integrate selected information into the text, avoiding overreliance on any one source and following a standard format for citation. | **8.** Analyze evidence gathered from multiple authoritative print and digital sources; assess the credibility and accuracy of the information and its usefulness and relevance for the specific task, purpose, and audience; and integrate selected information into the text, following a standard format for citation. |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Research to Build Knowledge (continued)* | |
| **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.<br>a. Apply *grades 9–10 reading standards* to literature (e.g., "Analyze a wide range of nineteenth- and early-twentieth-century foundational works of American literature, comparing and contrasting approaches to similar ideas or themes in two or more texts from the same period.").<br>b. Apply *grades 9–10 reading standards* to literary nonfiction (e.g., "Assess the truth of an argument's explicit and implicit premises by determining whether the evidence presented in the text justifies the conclusions"). | **9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.<br>a. Apply *grades 11–12 reading standards* to literature (e.g., "Analyze how an author draws on and transforms fictional source material, such as how Shakespeare draws on a story from Ovid, or a later author draws on Shakespeare").<br>b. Apply *grades 11–12 reading standards* to literary nonfiction (e.g., "Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing the relevance and sufficiency of evidence and identifying false statements or fallacious reasoning"). |
| *Range of Writing* | |
| **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. |

## College and Career Readiness Standards for Speaking and Listening

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

### *Comprehension and Collaboration*

1. Participate effectively in a range of interactions (one-on-one and in groups), exchanging information to advance a discussion and to build on the input of others.
2. Integrate and evaluate information from multiple oral, visual, or multimodal sources in order to answer questions, solve problems, or build knowledge.
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.

### *Presentation of Knowledge and Ideas*

4. Present information, evidence, and reasoning in a clear and well-structured way appropriate to purpose and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate.

### Note on range and content of student speaking and listening

*To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—whole class, small group, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.*

*New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.*

## Speaking and Listening Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Comprehension and Collaboration* | | |
| **1.** Initiate and engage actively in group discussions on *grade 6 topics, texts, and issues* being studied in class.<br>a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions.<br>b. Cooperate with peers to set clear goals and deadlines.<br>c. Build on the ideas of others by asking relevant questions and contributing appropriate and essential information.<br>d. Review the key ideas expressed and extend their own thinking in light of new information learned. | **1.** Initiate and engage actively in group discussions on *grade 7 topics, texts, and issues* being studied in class.<br>a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions.<br>b. Cooperate with peers to set clear goals and deadlines.<br>c. Advance a discussion by asking questions, responding precisely, and sharing factual knowledge and observations.<br>d. Ensure a hearing for the range of positions on an issue.<br>e. Take the views of others into account and, when warranted, modify their own views in light of the evidence presented. | **1.** Initiate and engage actively in group discussions on *grade 8 topics, texts, and issues* being studied in class.<br>a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions.<br>b. Cooperate with peers to set clear goals and deadlines.<br>c. Advance a discussion by asking questions, responding precisely, and sharing factual knowledge and observations supported by credible evidence.<br>d. Ensure a hearing for the range of positions on an issue.<br>e. Qualify or justify, when warranted, their own thinking after listening to others' questions or accounts of the evidence. |
| **2.** Interpret information presented in visual or multimodal formats and explain how the information clarifies and contributes to a topic or issue under study. | **2.** Determine the main ideas and supporting elements presented in oral, visual, or multimodal formats and explain how the information clarifies and contributes to an understanding of a topic or issue under study. | **2.** Determine the purpose of and perspectives represented in oral, visual, or multimodal formats and evaluate whether the information is laden with social, commercial, or political motives. |
| **3.** Delineate the claims made by a speaker or presenter and detail what evidence supports which claims. | **3.** Evaluate a speaker's or presenter's reasoning and claims as well as the degree to which each claim is logically supported by the evidence provided. | **3.** Assess the truth of a speaker's or presenter's premises and the validity of his or her conclusions. |
| *Presentation of Knowledge and Ideas* | | |
| **4.** Present information, emphasizing salient points with pertinent descriptions and details and using appropriate eye contact, adequate volume, and clear pronunciation. | **4.** Present claims and findings with relevant and specific descriptions, facts, and examples, and use appropriate eye contact, adequate volume, and clear pronunciation. | **4.** Present claims and findings with relevant evidence that is accessible and verifiable to listeners, and use appropriate eye contact, adequate volume, and clear pronunciation. |
| **5.** Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation. | **5.** Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation. | **5.** Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation. |
| **6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, on pages 47–50, for specific demands.) | **6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.) | **6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.) |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Comprehension and Collaboration* | |
| **1.** Initiate and participate effectively in group discussions on *grades 9–10 topics, texts, and issues* being studied in class.<br>a. Prepare for discussions by reading and researching material under study and explicitly draw on that preparation in discussions.<br>b. Cooperate with peers to set clear goals and deadlines and to establish roles.<br>c. Build on essential information from others' input by asking questions and sharing comments that enrich discussions.<br>d. Acknowledge the ideas and contributions of others in the group, reach decisions about the information and ideas under discussion, and complete the task.<br>e. Evaluate whether the team has met its goals. | **1.** Initiate and participate effectively in group discussions on *grades 11–12 topics, texts, and issues* being studied in class.<br>a. Prepare for discussions by distilling the evidence or information about the material under study and explicitly draw on that preparation in discussions.<br>b. Cooperate with peers to set clear goals and deadlines, establish roles, and determine ground rules for decision making (e.g., informal consensus, taking votes on key issues, presentation of alternate views).<br>c. Propel conversations forward by asking questions that test the evidence and by sharing findings that clarify, verify, or challenge ideas and conclusions.<br>d. Summarize accurately the comments and claims made on all sides of an issue and determine what additional information, research, and tasks are required for the team to complete the task.<br>e. Evaluate whether the team has met its goals. |
| **2.** Synthesize information presented visually or multimodally with other information presented orally, noting any discrepancies between the data that emerge as a result. | **2.** Integrate multiple streams of data presented through various mediums, evaluating the reliability and credibility of each source of information in order to answer questions, solve problems, or build knowledge. |
| **3.** Determine a speaker's or presenter's position or point of view by assessing the evidence, word choice, points of emphasis, and tone used. | **3.** Evaluate the information conveyed and rhetoric used by a speaker or presenter, identifying logical errors in reasoning and exaggerated or distorted evidence. |
| *Presentation of Knowledge and Ideas* | |
| **4.** Plan and deliver relevant and sufficient evidence in support of findings and claims such that listeners can follow the reasoning, adjusting presentation to particular audiences and purposes. | **4.** Plan and deliver focused and coherent presentations that convey clear and distinct perspectives such that the line of reasoning and sources of support are clear and alternative perspectives are addressed, adjusting presentation to particular audiences and purposes. |
| **5.** Make strategic use of digital media elements and visual displays of data to enhance understanding. | **5.** Make strategic use of digital media elements and visual displays of data to enhance understanding. |
| **6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.) | **6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.) |

## College and Career Readiness Standards for Language

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

### *Conventions in Writing and Speaking*

1. Demonstrate a command of the conventions of standard English grammar and usage.
2. Demonstrate a command of the conventions of capitalization, punctuation, and spelling.
3. Make effective choices about language, punctuation, and sentence structure for meaning and style.

### *Vocabulary Acquisition and Use*

4. Determine the meaning of words and phrases encountered through conversations, reading, and media use.
5. Understand the nuances of and relationships among words.
6. Use grade-appropriate general academic vocabulary and domain-specific words and phrases purposefully acquired as well as gained through conversation and reading and responding to texts.

### Note on range and content of student language use

*To be college and career ready in language, students must have firm control over the conventions of writing and speaking and have extensive vocabularies built through reading and study. They must have a well-developed understanding of standard written and spoken English, demonstrating command of the conventions of grammar, usage, and mechanics. They also must come to appreciate that language is as much a matter of craft as of rules and be able to use punctuation, words, phrases, clauses, and sentences to achieve particular rhetorical effects and to convey ideas precisely and concisely. They need to become highly skilled in determining the meanings of words they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.*

## Language Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Conventions in Writing and Speaking* | | |
| **1.** Observe conventions of grammar and usage.<br>a. Ensure that pronouns are in the proper case (subjective, objective, possessive).<br>b. Recognize and correct inappropriate shifts in pronoun number and person.*<br>c. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).* | **1.** Observe conventions of grammar and usage.<br>a. Explain the function of phrases and clauses in general and their functions in specific sentences.<br>b. Chose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.<br>c. Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.* | **1.** Observe conventions of grammar and usage.<br>a. Form and use verbs in the active and passive voice.<br>b. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive moods.<br>c. Recognize and correct inappropriate shifts in verb voice and mood.* |
| **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.*<br>b. Spell correctly. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use a comma before a coordinating conjunction in a compound sentence.<br>b. Spell correctly. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*).<br>b. Use a comma, ellipses, or dash to indicate a pause or break.<br>c. Spell correctly. |
| **3.** Make effective language choices.<br>a. Vary sentence patterns for meaning, reader/listener interest, and style.* | **3.** Make effective language choices.<br>a. Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy.* | **3.** Make effective language choices.<br>a. Use verbs in the active and passive voice and in the conditional and subjunctive moods to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact). |

* Conventions standards noted with an asterisk need to be revisited by students in subsequent grades. See page 51 for a complete listing.

| Grade 6 students: | Grade 7 students: | Grade 8 students: |
|---|---|---|
| *Vocabulary Acquisition and Use* | | |
| **4.** Determine word meanings (*based on grade 6 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital.<br>b. Use a known root as a clue to the meaning of an unknown word (e.g., *audience*, *auditory*, *audible*).<br>c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary).<br>d. Interpret various figures of speech (e.g., personification) relevant to particular texts. | **4.** Determine word meanings (*based on grade 7 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital.<br>b. Use a known root as a clue to the meaning of an unknown word (e.g., *belligerent*, *bellicose*, *rebel*).<br>c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary).<br>d. Interpret various figures of speech (e.g., allegory) relevant to particular texts. | **4.** Determine word meanings (*based on grade 8 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital.<br>b. Use a known root as a clue to the meaning of an unknown word (e.g., *precede*, *recede*, *secede*).<br>c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary).<br>d. Interpret various figures of speech (e.g. verbal irony, puns) relevant to particular texts. |
| **5.** Understand word relationships.<br>a. Trace the network of uses and meanings that different words have and the interrelationships among those meanings and uses.<br>b. Distinguish a word from other words with similar denotations but different connotations. | **5.** Understand word relationships.<br>a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses.<br>b. Distinguish a word from other words with similar denotations but different connotations. | **5.** Understand word relationships.<br>a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses.<br>b. Distinguish a word from other words with similar denotations but different connotations. |
| **6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts. | **6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts. | **6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts. |

| Grades 9–10 students: | Grades 11–12 students: |
|---|---|
| *Conventions in Writing and Speaking* | |
| **1.** Observe conventions of grammar and usage.<br>a. Use parallel structure in writing.*<br>b. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to add variety and interest to writing or presentations. | **1.** Observe conventions of grammar and usage.<br>a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.<br>b. Resolve complex usage issues, particularly when the issue involves contested or changing usage; consult references (e.g., *Merriam-Webster's Dictionary of English Usage*) as needed for guidance. |
| **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.<br>b. Use a colon to introduce a list or quotation.<br>c. Spell correctly. | **2.** Observe conventions of capitalization, punctuation, and spelling.<br>a. Observe the conventions concerning using hyphens to join words.<br>b. Spell correctly. |
| **3.** Make effective language choices.<br>a. Write and edit work so that it conforms to the guidelines in a style manual. | **3.** Make effective language choices.<br>a. Write and edit work so that it conforms to the guidelines in a style manual. |
| *Vocabulary Acquisition and Use* | |
| **4.** Determine word meanings (*based on grades 9–10 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence, paragraph, and whole-text context; the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; understanding the word's etymology; and consulting reference materials, both print and digital.<br>b. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary).<br>c. Interpret various figures of speech (e.g., hyperbole, paradox) and analyze their role in a text. | **4.** Determine word meanings (*based on grades 11–12 reading*).<br>a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence, paragraph, and whole-text context; the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; understanding the word's etymology; and consulting reference materials, both print and digital.<br>b. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary).<br>c. Interpret various figures of speech (e.g., satire, sarcasm) and analyze their role in a text. |
| **5.** Understand word relationships.<br>a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses.<br>b. Distinguish a word from other words with similar denotations but different connotations. | **5.** Understand word relationships.<br>a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses.<br>b. Distinguish a word from other words with similar denotations but different connotations. |
| **6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts. | **6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts. |

* Conventions standards noted with an asterisk need to be revisited by students in subsequent grades as their writing and speak grow in sophistication. See page 51 for a complete listing.

## English Language Arts Conventions Progressive Skills, By Standard

The following, marked with an asterisk (*) in the Conventions standards, are skills and understandings that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated writing and speaking.

| Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grades 9–10 |
|---|---|---|---|---|---|---|
| **1c.** Ensure subject-verb and pronoun-antecedent agreement.<br>**3a.** Choose words for effect. | | | | | | |
| | **1b.** Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences.<br>**1c.** Produce complete sentences, avoiding rhetorically poor fragments and run-ons.<br>**1d.** Correctly use frequently confused words (e.g., *effect/affect*, *to/too/two*).<br>**3a.** Use punctuation for effect.<br>**3b.** Maintain consistency in style and tone.<br>**3c.** Choose words and phrases to convey ideas precisely. | | | | | |
| | | **1b.** Recognize and correct inappropriate shifts in verb tense and aspect.<br>**2a.** Use punctuation to separate items in a series.<br>**3a.** Expand, combine, and reduce sentences for meaning, reader/listener interest, and style. | | | | |
| | | | **1b.** Recognize and correct inappropriate shifts in pronoun number and person.<br>**1c.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).<br>**2a.** Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.<br>**3a.** Vary sentence patterns for meaning, reader/listener interest, and style. | | | |
| | | | | **1c.** Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.<br>**3b.** Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy. | | |
| | | | | | **1c.** Recognize and correct inappropriate shifts in verb voice and mood. | |
| | | | | | | **1a.** Use parallel structure in writing. |

## Range of Text Types for 6–12

Students in grades 6–12 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

| Literature | | | Informational Text |
|---|---|---|---|
| **Stories** | **Drama** | **Poetry** | **Literary Nonfiction** |
| Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels | Includes one-act and multiact plays, both in written form and on film | Includes the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics | Includes the subgenres of exposition and argument in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, or economic accounts (including digital media sources) written for a broad audience |

## Texts Illustrating the Complexity, Quality, and Range of Student Reading 6–12

| | Literature: Stories, Drama, Poetry | Informational Texts: Literary Nonfiction |
|---|---|---|
| 6–8 | ▪ *Little Women* by Louisa May Alcott (1869)<br>▪ *The Adventures of Tom Sawyer* by Mark Twain (1876)<br>▪ "The Road Not Taken" by Robert Frost (1915)<br>▪ *The Dark Is Rising* by Susan Cooper (1973)<br>▪ *Dragonwings* by Laurence Yep (1975)<br>▪ *Roll of Thunder, Hear My Cry* by Mildred Taylor (1976) | ▪ "Letter on Thomas Jefferson" by John Adams (1776)<br>▪ *Narrative of the Life of Frederick Douglass, an American Slave* by Frederick Douglass (1845)<br>▪ *Harriet Tubman: Conductor on the Underground Railroad* by Ann Petry (1955)<br>▪ *Travels with Charley: In Search of America* by John Steinbeck (1962)<br>▪ *The Great Fire* by Jim Murphy (1995)<br>▪ *This Land Was Made for You and Me: The Life and Songs of Woody Guthrie* by Elizabeth Partridge (2002) |
| 9–10 | ▪ *The Tragedy of Romeo and Juliet* by William Shakespeare (1592)<br>▪ "Ozymandias" by Percy Bysshe Shelley (1817)<br>▪ "The Raven" by Edgar Allen Poe (1845)<br>▪ "The Gift of the Magi" by O. Henry (1906)<br>▪ *The Grapes of Wrath* by John Steinbeck (1939)<br>▪ *Fahrenheit 451* by Ray Bradbury (1953)<br>▪ *The Killer Angels* by Michael Shaara (1975) | ▪ "Speech to the Second Virginia Convention" by Patrick Henry (1775)<br>▪ The Declaration of Independence by Thomas Jefferson (1776)<br>▪ "Second Inaugural Address" by Abraham Lincoln (1865)<br>▪ "State of the Union Address" by Franklin Delano Roosevelt (1941)<br>▪ *Cod: A Biography of the Fish That Changed the World* by Mark Kurlansky (1997)<br>▪ *The Race to Save Lord God Bird* by Phillip Hoose (2004) |
| 11–CCR | ▪ "Ode on a Grecian Urn" by John Keats (1820)<br>▪ *Jane Eyre* by Charlotte Brontë (1848)<br>▪ "Because I Could Not Stop for Death" by Emily Dickinson (1890)<br>▪ *The Great Gatsby* by F. Scott Fitzgerald (1925)<br>▪ *Their Eyes Were Watching God* by Zora Neale Hurston (1937)<br>▪ *A Raisin in the Sun* by Lorraine Hansberry (1959)<br>▪ *The Namesake* by Jhumpa Lahiri (2003) | ▪ *The Crisis* by Thomas Paine (1776)<br>▪ *Walden* by Henry David Thoreau (1854)<br>▪ "Society and Solitude" by Ralph Waldo Emerson (1857)<br>▪ "Gettysburg Address" by Abraham Lincoln (1863)<br>▪ "Letter from Birmingham Jail" by Martin Luther King, Jr. (1964)<br>▪ *Google Hacks: Tips & Tools for Smarter Searching* by Tara Calishain and Rael Dornfest (2004)<br>▪ *America's Constitution: A Biography* by Akhil Reed Amar (2005) |

**Note:** Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of grades 6–12 text complexity.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study topics in depth.

# Standards for Literacy in History/Social Studies & Science

## 6–12

## College and Career Readiness Standards for Reading

The grades 6–12 standards on the following pages define what students need to know and be able to do and build toward the ten College and Career Readiness Standards.

### *Key Ideas and Details*

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

### *Craft and Structure*

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

### *Integration of Knowledge and Ideas*

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

### *Range and Level of Text Complexity*

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing for additional standards relevant to gathering, assessing, and applying information from print and digital sources.

[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex text in each grade as defined in Appendix A.

### Note on range and content of student reading

*Reading is critical to building knowledge in history/social studies as well as in science and other technical fields. College- and career-ready reading in these fields requires an appreciation of the norms and conventions of each discipline, such as the kinds of evidence used in history and science; an understanding of domain-specific words and phrases; an attention to precise details; and the capacity to evaluate intricate arguments, synthesize complex information, and follow detailed descriptions of events and concepts. In history/social studies, for example, students need to be able to analyze, evaluate, and differentiate primary and secondary sources. When reading scientific and technical texts, students need to be able to gain knowledge from challenging texts that often make extensive use of elaborate diagrams and data to convey information and illustrate concepts. Students must be able to read complex informational text in these fields with independence and confidence because the vast majority of reading in college and workforce training programs will be sophisticated nonfiction. It is important to note that these Reading standards are meant to complement the specific content demands of the disciplines, not replace them.*

## Reading Standards for History/Social Studies 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 reading in history/social studies are integrated into the K–5 standards for reading informational text.

| Grades 6–8 students: | Grades 9–10 students: | Grades 11–12 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Cite specific textual evidence to support analysis of primary and secondary sources. | **1.** Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information. | **1.** Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole. |
| **2.** Determine the main ideas or information of a primary or secondary source; summarize the source, basing the summary on information in the text rather than on prior knowledge or opinions. | **2.** Determine the main ideas or information of a primary or secondary source; summarize how key events or ideas develop over the course of the text. | **2.** Determine the main ideas or information of a primary or secondary source; provide a summary that makes clear the relationships between the key details and ideas. |
| **3.** Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered). | **3.** Analyze in detail a series of events described in a text and the causes that link the events; distinguish whether earlier events caused later ones or simply preceded them. | **3.** Analyze how ideas and beliefs emerge, develop, and influence events, based on evidence in the text . |
| *Craft and Structure* | | |
| **4.** Determine the meaning of words and phrases in a text, including vocabulary specific to domains related to history/social studies. | **4.** Determine the meaning of words and phrases in a text, including the vocabulary describing political, economic, or social aspects of history. | **4.** Interpret the meaning of words and phrases in a text, including how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in Federalist No. 10 and No. 51). |
| **5.** Identify how a history/social studies text presents information (e.g., sequentially, comparatively, causally). | **5.** Explain how an author chooses to structure information or an explanation in a text to emphasize key points or advance a point of view. | **5.** Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole. |
| **6.** Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). | **6.** Compare the point of view of two or more authors by comparing how they treat the same or similar historical topics, including which details they include and emphasize in their respective accounts. | **6.** Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, evidence, and reasoning. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Integrate graphical information (e.g., pictures, videos, maps, time lines) with other information in a print or digital text. | **7.** Integrate quantitative or technical information presented in maps, time lines, and videos with other information in a print or digital text. | **7.** Synthesize ideas and data presented graphically and determine their relationship to the rest of a print or digital text, noting discrepancies between the graphics and other information in the text. |
| **8.** Distinguish among fact, opinion, and reasoned judgment in a historical account. | **8.** Assess the extent to which the evidence n a text supports the author's claims. | **8.** Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other sources of information. |
| **9.** Analyze the relationship between a primary and secondary source on the same topic. | **9.** Compare and contrast treatments of the same topic in several primary and secondary sources. | **9.** Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources. |
| *Range and Level of Text Complexity* | | |
| **10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 11–12 text complexity band; read "stretch" texts with scaffolding as needed. |

## Reading Standards for Science 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 reading in science are integrated into the K–5 standards for reading informational text.

| Grades 6–8 students: | Grades 9–10 students: | Grades 11–12 students: |
|---|---|---|
| *Key Ideas and Details* | | |
| **1.** Cite specific textual evidence to support analysis of scientific and technical texts. | **1.** Cite specific textual evidence to support analysis of scientific and technical text, including analysis of the precise details of explanations or descriptions. | **1.** Cite specific textual evidence to support analysis of scientific and technical texts, including analysis of important distinctions the author makes between ideas or pieces of information. |
| **2.** Summarize the broad ideas and specific conclusions made in a text, basing the summary on textual information rather than on prior knowledge or opinions. | **2.** Analyze the development of a text's explanation of a process or phenomenon, summarizing the central ideas and supporting details. | **2.** Summarize complex information or ideas presented in a text, paraphrasing it in simpler but still accurate terms. |
| **3.** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. | **3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. | **3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the causes of the specific results based on information from the text. |
| *Craft and Structure* | | |
| **4.** Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text. | **4.** Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text, noting relationships among terms pertaining to important ideas or processes (e.g., *force*, *friction*, *reaction force*, *energy*). | **4.** Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text, attending to the precise meaning of terms as they are used in particular scientific or technical contexts. |
| **5.** Analyze how each major part of a text contributes to an understanding of the topic discussed in the text. | **5.** Analyze the relationships among concepts in a text, including developing propositional concept maps to organize and illustrate the ideas. | **5.** Analyze the hierarchical or categorical relationships of concepts or information presented in a text. |
| **6.** Analyze the purpose of an experiment or explanation in a text, including defining the problem or question to be resolved. | **6.** Analyze the purpose of an experiment, including defining the possibilities ruled out by the experimental results. | **6.** Analyze the scope and purpose of an experiment or explanation and determine which related issues remain unresolved or uncertain. |
| *Integration of Knowledge and Ideas* | | |
| **7.** Integrate information provided by the words in a text with a version of that information expressed graphically (e.g., in a flowchart, diagram, model, graph, or table). | **7.** Integrate quantitative or technical information presented graphically (e.g., in a flowchart, diagram, model, graph, or table) with other information in a text. | **7.** Synthesize information in different formats by representing complex information in a text in graphical form (e.g., a table or chart) or translating a graphic or equation into words. |
| **8.** Distinguish facts or reasoned judgments based on research findings from opinions. | **8.** Assess the extent to which the evidence in a text supports a scientific claim or a recommendation for solving a technical problem. | **8.** Evaluate the hypotheses, data, and conclusions in a scientific text, corroborating or undercutting them with other sources of information. |
| **9.** Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. | **9.** Compare experimental findings presented in a text to information from other sources, noting when the findings support or contradict previous explanations or accounts. | **9.** Integrate information from diverse sources (e.g., video, multimedia sources, experiments, simulations) into a coherent understanding of a concept, process, or phenomenon, noting discrepancies among sources. |
| *Range and Level of Text Complexity* | | |
| **10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts with scaffolding as needed. | **10.** Read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts with scaffolding as needed. |

## College and Career Readiness Standards for Writing

The grades 6–12 standards on the following pages define what students need to know and be able to do and build toward these ten College and Career Readiness Standards.

### *Text Types and Purposes*[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

### *Production and Distribution of Writing*

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

### *Research to Build Knowledge*

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

### *Range of Writing*

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[2]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]This standard is measured by the proficiency of student writing products.

### Note on range and content of student writing

*For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.*

## Writing Standards for History/Social Studies and Science 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 writing in history/social studies and science are integrated into the K–5 standards for writing.

| Grades 6–8 students: | Grades 9–10 students: | Grades 11–12 students: |
|---|---|---|
| *Text Types and Purposes* | | |
| **1.** Write arguments focused on *discipline-specific content* in which they:<br>a. Introduce a claim about a topic or issue, distinguish it from alternate or opposing claims, and organize the reasons, data, and evidence logically to support the claim.<br>b. Support the claim with logical reasoning and detailed, accurate data and evidence (science) or information from credible primary, secondary, and tertiary sources (history).<br>c. Use words and phrases as well as domain-specific vocabulary to make clear the relationships among claims, reasons, data, and evidence.<br>d. Sustain an objective style and tone.<br>e. Provide a concluding statement or section that follows logically from the argument. | **1.** Write arguments focused on *discipline-specific content* in which they:<br>a. Introduce a precise claim, distinguish it from alternate or opposing claims, and provide an organization that establishes clear relationships among the claim, reasons, data, and evidence.<br>b. Develop a claim fairly with logical reasoning, supplying detailed, accurate data and evidence acquired in a scientifically acceptable form (science) or gathered from credible primary, secondary, and tertiary sources (history).<br>c. Use precise words and phrases as well as domain-specific vocabulary to make clear the relationships between claims and reasons and between reasons and the data and evidence.<br>d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline.<br>e. Provide a concluding statement or section that follows logically from the argument. | **1.** Write arguments focused on *discipline-specific content* in which they:<br>a. Introduce a substantive claim, establish its significance, distinguish it from alternate or opposing claims, and create an organization so that claims, reasons, data, and evidence are purposefully and logically sequenced.<br>b. Develop a claim thoroughly and fairly with logical reasoning, supplying the most relevant data and evidence acquired in a scientifically acceptable form (science) or gathered from credible primary, secondary, and tertiary sources (history).<br>c. Use precise words and phrases as well as domain-specific vocabulary to make clear the relationships between claims and reasons and between reasons and the data and evidence.<br>d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline.<br>e. Provide a concluding statement or section that follows logically from the argument. |

| Grades 6–8 students: | Grades 9–10 students: | Grades 11–12 students: |
|---|---|---|
| *Text Types and Purposes (continued)* | | |
| **2.** Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they:<br>a. Introduce and establish a topic and organize information under concepts or into categories.<br>b. Develop a topic that has historical or scientific significance using well-chosen, relevant facts, data, details, quotations, examples, or other information.<br>c. Use varied links and sentence structures to create cohesion and clarify information and ideas.<br>d. Use precise language and domain-specific vocabulary and sustain a formal, objective style appropriate for a reader seeking information.<br>e. Provide a conclusion that follows logically from the information or explanation presented. | **2.** Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they:<br>a. Introduce a topic and organize information under concepts and into categories, making clear the connections and distinctions between key ideas; use formatting and graphics (e.g., headings, figures, tables, graphs, illustrations) as useful to clarify ideas.<br>b. Develop a topic that has historical or scientific significance using well-chosen, relevant, and sufficient facts, data, details, quotations, examples, extended definitions, or other information.<br>c. Use varied transitions and sentence structures to create cohesion, clarify information and ideas, and link major sections in the text.<br>d. Use precise language and domain-specific vocabulary to convey a style appropriate to the specific discipline and context as well as to the expertise of likely readers.<br>e. Provide a conclusion that follows logically from the information or explanation provided and that articulates the implications or significance of the topic. | **2.** Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they:<br>a. Introduce a complex topic and organize the information so that each new piece of information builds on that which precedes it to create a unified whole; use formatting and graphics (e.g., headings, figures, tables, graphs, illustrations) as useful to clarify ideas.<br>b. Develop a complex topic that has historical and scientific significance using the most significant and relevant facts, data, details, quotations, examples, extended definitions, or other information.<br>c. Use varied transitional devices and sentence structures to create cohesion, clarify complex information and ideas, and link the major sections of the text.<br>d. Use precise language, domain-specific and technical wording, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the specific discipline and context as well as to the expertise of likely readers.<br>e. Provide a well-developed conclusion that follows logically from the information or explanation provided and that articulates the implications or significance of the topic. |
| **3.** Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results. | **3.** Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results. | **3.** Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results. |

| Grades 6–8 students: | Grades 9–10 students: | Grades 11–12 students: |
|---|---|---|
| *Production and Distribution of Writing* | | |
| **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. | **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. | **4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. |
| **5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose and context have been addressed. | **5.** Strengthen writing as needed by planning, revising, editing, or trying a new approach, focusing on addressing what is most significant for a specific task and context. | **5.** Strengthen writing as needed by planning, revising, editing, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. |
| **6.** Use technology, including the Internet, to present and cite information effectively in a digital format, including when publishing and responding to writing. | **6.** Use technology, including the Internet, to produce, publish, and collaborate on a shared writing product, incorporating diverse and sometimes conflicting feedback. | **6.** Demonstrate command of technology, including the Internet, to produce, publish, and update work in response to ongoing feedback, including fresh arguments or new information. |
| *Research to Build Knowledge* | | |
| **7.** Perform short, focused research projects in response to a question or problem and generate additional related questions that allow for multiple avenues of exploration. | **7.** Perform short, focused research projects and more sustained research; synthesize multiple sources on a subject to answer a question or solve a problem. | **7.** Perform short, focused research projects and more sustained research; synthesize multiple authoritative sources on a subject to answer a question or solve a problem. |
| **8.** Gather relevant information from multiple print and digital sources using effectively tailored searches; assess the credibility and accuracy of each source; and quote or paraphrase the evidence, avoiding plagiarism and following a standard format for citation. | **8.** Gather relevant information from multiple print and digital sources; assess the credibility, accuracy, and strengths and limitations of each source; and integrate selected information into the text, avoiding overreliance on any one source, avoiding plagiarism, and following a standard format for citation. | **8.** Gather relevant information from multiple print and digital sources; assess its credibility and accuracy and its usefulness in terms of purpose, task, and audience; and integrate selected information into the text, avoiding overreliance on any one source, avoiding plagiarism, and following a standard format for citation. |
| **9.** Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned. | **9.** Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned. | **9.** Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned. |
| *Range of Writing* | | |
| **10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. | **10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. |

# COMMON CORE STATE STANDARDS

## FOR Mathematics

# Contents

# Introduction
## Toward greater focus and coherence

*The composite standards [of Hong Kong, Korea and Singapore] have a number of features that can inform an international benchmarking process for the development of K–6 mathematics standards in the US. First, the composite standards concentrate the early learning of mathematics on the number, measurement, and geometry strands with less emphasis on data analysis and little exposure to algebra. The Hong Kong standards for grades 1–3 devote approximately half the targeted time to numbers and almost all the time remaining to geometry and measurement.*

Ginsburg, Leinwand and Decker, 2009

*Mathematics experiences in early childhood settings should concentrate on (1) number (which includes whole number, operations, and relations) and (2) geometry, spatial relations, and measurement, with more mathematics learning time devoted to number than to other topics. The mathematical process goals should be integrated in these content areas. Children should understand the concepts and learn the skills exemplified in the teaching-learning paths described in this report.*

National Research Council, 2009

*In general, the US textbooks do a much worse job than the Singapore textbooks in clarifying the mathematical concepts that students must learn. Because the mathematics concepts in these textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the US and found this conceptual weakness in both.*

Ginsburg et al., 2005

Notable in the research base for these standards are conclusions from TIMSS and other studies of high-performing countries that the traditional US mathematics curriculum must become substantially more coherent and more focused in order to improve student achievement in mathematics. To deliver on the promise of common standards, the standards must address the problem of a curriculum that is 'a mile wide and an inch deep.' The draft Common Core State Standards for Mathematics are a substantial answer to this challenge.

It is important to recognize that "fewer standards" are no substitute for *focused* standards. Achieving "fewer standards" would be easy to do by simply resorting to broad, general statements. Instead, the draft Common Core State Standards for Mathematics aim for clarity and specificity.

Assessing the coherence of a set of standards is more difficult than assessing their focus. William Schmidt and Richard Houang (2002) have said that content standards and curricula are coherent if they are:

> *articulated over time as a sequence of topics and performances that are logical and reflect, where appropriate, the sequential or hierarchical nature of the disciplinary content from which the subject matter derives. That is, what and how students are taught should reflect* not only the topics *that fall within a certain academic discipline,* but also the key ideas *that determine how knowledge is organized and generated within that discipline. This implies that "to be coherent," a set of content standards must evolve from particulars (e.g., the meaning and operations of whole numbers, including simple math facts and routine computational procedures associated with whole numbers and fractions) to deeper structures inherent in the discipline. This deeper structure then serves as a means for connecting the particulars (such as an understanding of the rational number system and its properties).* (emphasis added)

The draft Common Core State Standards for Mathematics endeavor to follow such a design, not only by stressing conceptual understanding of the key ideas, but also by continually returning to organizing principles such as place value or the laws of arithmetic to structure those ideas.

The standards in this draft document define what students should understand and be able to do. Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student's mathematical maturity, *why* a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between the student who can summon a mnemonic device such as "FOIL" to expand a product such as $(a + b)(x + y)$ and a student who can explain where that mnemonic comes from. Teachers often observe this difference firsthand, even if large-scale assessments in the year 2010 often do not. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding $(a + b + c)(x + y)$. Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The draft Common Core State Standards for Mathematics begin on the next page with eight Standards for Mathematical Practice. These are not a list of individual math topics, but rather a list of ways in which developing student-practitioners of mathematics increasingly ought to engage with those topics as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.

*Grateful acknowledgment is here made to Dr. Cathy Kessel for editing the draft standards.*

# Mathematics | Standards for Mathematical Practice

Proficient students of all ages expect mathematics to make sense. They take an active stance in solving mathematical problems. When faced with a non-routine problem, they have the courage to plunge in and try something, and they have the procedural and conceptual tools to continue. They are experimenters and inventors, and can adapt known strategies to new problems. They think strategically.

The practices described below are encouraged in apprentices by expert mathematical thinkers. Students who engage in these practices, individually and with their classmates, discover ideas and gain insights that spur them to pursue mathematics beyond the classroom walls. They learn that effort counts in mathematical achievement. Encouraging these practices in students of all ages should be as much a goal of the mathematics curriculum as the learning of specific content.

## 1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

## 2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of the quantities and their relationships in problem situations. Students bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

## 3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

## 4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a

student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, 2-by-2 tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

## 5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer algebra system, statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students interpret graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

## 6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

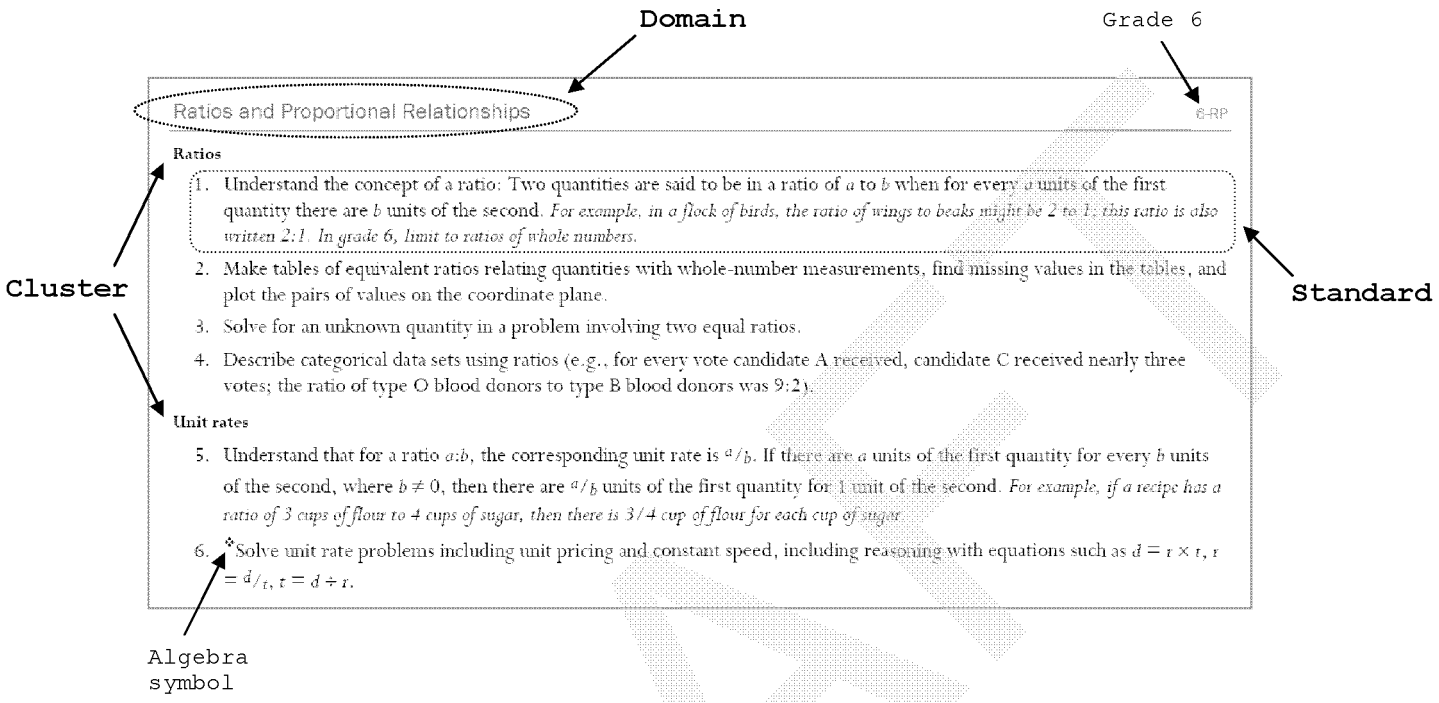
## 7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see $7 \times 8$ equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as $2 \times 7$ and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as composed of several objects. For example, they can see $5 - 3(x-y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers $x$ and $y$.

## 8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

# How to read the grade level standards




**Standards** define what students should understand and be able to do. **Clusters** are groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject. **Domains** are larger groups of related standards. For each grade level in Grades K–8, the standards are organized into four or five domains. Standards from different domains may sometimes be closely related.

**Algebra Symbol:** Key standards for the development of algebraic thinking in Grades K–5 are indicated by ❖.

**Dotted Underlines:** Dotted underlines, for example, decade words, indicate terms that are explained in the Glossary. In each grade, underlining is used for the first occurrence of a defined term, but not in subsequent occurrences.

**Note on Grade Placement of Topics.** What students can learn at any particular grade level depends upon what they have learned before. Ideally then, each standard in this document might have been phrased in the form, "Students who already know A should next come to learn B." But in the year 2010 this approach is unrealistic—not least because existing education research cannot specify all such learning pathways. Of necessity therefore, grade placements for specific topics have been made on the basis of state and international comparisons and the collective experience and collective professional judgment of educators, researchers and mathematicians. One promise of common state standards is that over time they will allow research on learning progressions to inform and improve the design of standards to a much greater extent than is possible today. Learning opportunities will continue to vary across schools and school systems, and educators should make every effort to meet the needs of individual students based on their current understanding.

**Note on Ordering of Topics within a Grade.** These standards do not dictate curriculum. In particular, just because topic A appears before topic B in the standards for a given grade, it does not necessarily mean that topic A must be taught before topic B. A teacher might prefer to teach topic B before topic A, or might choose to highlight connections by teaching topic A and topic B at the same time. Or, a teacher might prefer to teach a topic of his or her own choosing that leads, as a byproduct, to students reaching the standards for topics A and B.

# Overview of the Mathematics Standards
## Grades K–5

This table shows the domains and clusters in each grade K–5

| | *K* | *1* | *2* | *3* | *4* | *5* |
|---|---|---|---|---|---|---|
| Number—Counting and Cardinality | • Number names<br>• Counting to tell the number of objects<br>• Comparing and ordering numbers | | | | | |
| Number—Operations and the Problems They Solve | • Composing and decomposing numbers; addition and subtraction | • Addition and subtraction<br>• Describing situations and solving problems with addition and subtraction | • Addition and subtraction<br>• Describing situations and solving problems with addition and subtraction | • Multiplication and division<br>• Describing situations and solving problems with multiplication and division | • Multiplication and Division<br>• Problem solving with the four operations | |
| Number—Base Ten | • Two-digit numbers<br>• Composing and decomposing ten | • Numbers up to 100<br>• Adding and subtracting in base ten | • Numbers up to 1000<br>• Adding and subtracting in base ten | • Numbers up to 10,000<br>• Adding and subtracting in base ten<br>• Multiplying and dividing in base ten | • Numbers up to 100,000<br>• Multiplying and dividing in base ten | • Whole numbers in base ten<br>• Decimal concepts<br>• Operations on decimals |
| Number—Fractions | | | | • Fractions as representations of numbers<br>• Fractional quantities | • Operations on fractions<br>• Decimal concepts | • Fraction equivalence<br>• Operations on fractions |
| Measurement and Data | • Direct measurement<br>• Representing and interpreting data | • Length measurement<br>• Time measurement<br>• Representing and interpreting data | • Length measurement<br>• Time and money<br>• Representing and interpreting data | • The number line and units of measure<br>• Perimeter and area<br>• Representing and interpreting data | • The number line and units of measure<br>• Perimeter and area<br>• Angle measurement<br>• Representing and interpreting data | • Units of measure<br>• Volume<br>• Representing and interpreting data |
| Geometry | • Shapes, their attributes, and spatial reasoning | • Shapes, their attributes, and spatial reasoning | • Shapes, their attributes, and spatial reasoning | • Properties of 2-dimensional shapes<br>• Structuring rectangular shapes | • Lines and angles<br>• Line symmetry | • Coordinates<br>• Plane figures |

# Overview of the Mathematics Standards
## Grades 6–8

This table shows the domains and clusters in each grade 6–8.

| | Grade 6 | Grade 7 | Grade 8 |
|---|---|---|---|
| Ratios and Proportional Relationships | • Ratios<br>• Unit rates | • Analyzing proportional relationships<br>• Percent | |
| The Number System | • Operations<br>• The system of rational numbers | • The system of rational numbers<br>• The system of real numbers | • The system of real numbers |
| Expressions and Equations | • Expressions<br>• Quantitative relationships and the algebraic approach to problems | • Expressions<br>• Quantitative relationships and the algebraic approach to solving problems | • Slopes of lines in the coordinate plane<br>• Linear equations and systems |
| Functions | | | • Function concepts<br>• Functional relationships between quantities |
| Geometry | • Properties of area, surface area, and volume | • Congruence and similarity<br>• Angles | • Congruence and similarity<br>• The Pythagorean Theorem<br>• Plane and solid geometry |
| Statistics and Probability | • Variability and measures of center<br>• Summarizing and describing distributions | • Situations involving randomness<br>• Random sampling to draw inferences about a population<br>• Comparative inferences about two populations | • Patterns of association in bivariate data |

In Kindergarten, instructional time should focus on two critical areas: (1) representing, comparing and ordering whole numbers and joining and separating sets; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; creating a set with a given number of objects; comparing and ordering sets or numerals; and modeling simple joining and separating situations with objects. They choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic shapes, such as squares, triangles, circles, rectangles, (regular) hexagons, and (isosceles) trapezoids, presented in a variety of ways (e.g., with different sizes or orientations), as well as three-dimensional shapes such as spheres, cubes, and cylinders. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

**Number names**

1. Say the number name sequence to 100.
2. Know the decade words to ninety and recite them in order ("ten, twenty, thirty, …").
3. Say the number name sequence forward or backward beginning from a given number within the known sequence (instead of always beginning at 1).
4. Write numbers from 1 to 20 in base-ten notation.

**Counting to tell the number of objects**

5. Count to answer "how many?" questions about as many as 20 things. *Objects may be arranged in a line, a rectangular array, a circle, or a scattered configuration.*
6. Understand that when counting objects,
   a. The number names are said in the standard order.
   b. Each object is paired with one and only one number name.
   c. The last number name said tells the number of objects counted.
7. Understand that when counting forward, each successive number name refers to a quantity that is 1 larger.

**Comparing and ordering numbers**

8. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. *Include groups with up to ten objects.*
9. Compare and put in order numbers between 1 and 10 presented in written symbols: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

## Number—Operations and the Problems They Solve K-NOP

**Composing and decomposing numbers; addition and subtraction**

1. Understand addition as putting together—e.g., finding the number of objects in a group formed by putting two groups together. Understand subtraction as taking apart—e.g., finding the number of objects left when a one group is taken from another.
2. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *Note that drawings need not show details, but should show the mathematics in the problem. (This note also applies wherever drawings are mentioned in subsequent standards.)*
3. ❖Decompose numbers less than or equal to 10 into pairs in various ways, e.g., using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$). Compose numbers whose sum is less than or equal to 10, e.g., using objects or drawings, and record each composition by a drawing or equation (e.g., $3 + 1 = 4$).❖
4. Compose and decompose numbers less than or equal to 10 in two different ways, and record compositions and decompositions by drawings or equations. *For example, 7 might be composed or decomposed in two different ways by a drawing showing how a group of 2 and a group of 5 together make the same number as do a group of 3 and a group of 4.*
5. ❖Understand that addition and subtraction are related. *For example, when a group of 9 is decomposed into a group of 6 and a group of 3, this means not only $9 = 6 + 3$ but also $9 - 3 = 6$ and $9 - 6 = 3$.*
6. ❖Solve addition and subtraction word problems, and calculate additions and subtractions within 10, e.g., using objects or drawings to represent the problem.
7. Fluently add and subtract, for sums and minuends of 5 or less.

## Number—Base Ten K-NBT

**Two-digit numbers**

1. Understand that 10 can be thought of as a bundle of ones—a unit called a "ten."
2. Understand that a teen number is composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
3. Compose and decompose teen numbers into a ten and some ones, e.g., by using objects or drawings, and record the compositions and decompositions in base-ten notation. *For example, $10 + 8 = 18$ and $14 = 10 + 4$.*
4. Put in order numbers presented in base-ten notation from 1 to 20 (inclusive), and be able to explain the reasoning.
5. Understand that a decade word refers to one, two, three, four, five, six, seven, eight, or nine tens.
6. Understand that the two digits of a two-digit number represent amounts of tens and ones. *In 29, for example, the 2 represents two tens and the 9 represents nine ones.*

**Composing and decomposing ten**

7. Decompose 10 into pairs of numbers, e.g., by using objects or drawings, and record each decomposition with a drawing or equation.
8. Compose numbers to make 10, e.g., by using objects or drawings, and record each composition with a drawing or equation.
9. ❖For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

## Measurement and Data K-MD

**Direct measurement**

1. Understand that objects have measurable attributes, such as length or weight. A single object might have several measurable attributes of interest.
2. Directly compare two objects with a measurable attribute in common, to see which object has "more of" the attribute. *For example, directly compare the heights of two books and identify which book is taller.*

**Representing and interpreting data**

3. Classify objects or people into given categories; count the numbers in each category and sort the categories by count. *Limit category counts to be less than or equal to 10.*

## Geometry K-G

**Shapes, their attributes, and spatial reasoning**

1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
2. Understand that names of shapes apply regardless of the orientation or overall size of the shape. *For example, a square in any orientation is still a square. Students may initially need to physically rotate a shape until it is "level" before they can correctly name it.*
3. Understand that shapes can be two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
4. Understand that shapes can be seen as having parts, such as sides and vertices ("corners"), and that shapes can be put together to compose other shapes.
5. Analyze and compare a variety of two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, component parts (e.g., number of sides and vertices) and other attributes (e.g., having sides of equal length).
6. Combine two- or three-dimensional shapes to solve problems such as deciding which puzzle piece will fit into a place in a puzzle.

In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for additions and subtractions within 20; (2) developing understanding of whole number relationships, including grouping in tens and ones, (3) developing understanding of linear measurement and measuring lengths, and (4) composing and decomposing geometric shapes.

(1) Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model "put together/take apart," "add to," "take from," and "compare" situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (i.e., adding two is the same as counting on two). They use properties of addition (commutativity and associativity) to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the inverse relationship between addition and subtraction.

(2) Students compare and order whole numbers (at least to 100), to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). They understand the sequential order of the counting numbers and their relative magnitudes through activities such as representing numbers on paths of numbered things.

(3) Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as partitioning (the mental activity of decomposing the length of an object into equal-sized units) and transitivity (e.g., in terms of length, if object A is longer than object B and object B is longer than object C, then object A is longer than object C). They understand linear measure as an iteration of units, and use rulers and other measurement tools with that understanding.

(4) Students compose and decompose plane and solid figures (e.g., put two congruent isosceles triangles together to make a rhombus), building understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine solid and plane figures, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

**Addition and subtraction**

1. ❖Understand the properties of addition.
   a. Addition is commutative. *For example, if 3 cups are added to a stack of 8 cups, then the total number of cups is the same as when 8 cups are added to a stack of 3 cups; that is, 8 + 3 = 3 + 8.*
   b. Addition is associative. *For example, 4 + 3 + 2 can be found by first adding 4 + 3 = 7 then adding 7 + 2 = 9, or by first adding 3 + 2 = 5 then adding 4 + 5 = 9.*
   c. 0 is the additive identity.
2. ❖Explain and justify properties of addition and subtraction, e.g., by using representations such as objects, drawings, and story contexts. Explain what happens when:
   a. The order of addends in a sum is changed in a sum with two addends.
   b. 0 is added to a number.
   c. A number is subtracted from itself.
   d. One addend in a sum is increased by 1 and the other addend is decreased by 1. *Limit to two addends.*
3. ❖Understand that addition and subtraction have an inverse relationship. *For example, if 8 + 2 = 10 is known, then 10 – 2 = 8 and 10 – 8 = 2 are also known.*
4. ❖Understand that when all but one of three numbers in an addition or subtraction equation are known, the unknown number can be found. *Limit to cases where the unknown number is a whole number.*
5. Understand that addition can be recorded by an expression (e.g., 6 + 3), or by an equation that shows the sum (e.g., 6 + 3 = 9). Likewise, subtraction can be recorded by an expression (e.g., 9 – 5), or by an equation that shows the difference (e.g., 9 – 5 = 4).

**Describing situations and solving problems with addition and subtraction**

6. Understand that addition and subtraction apply to situations of adding-to, taking-from, putting together, taking apart, and comparing. *See Glossary, Table 1.*
7. ❖Solve word problems involving addition and subtraction within 20, e.g., by using objects, drawings and equations to represent the problem. *Students should work with all of the addition and subtraction situations shown in the Glossary, Table 1, solving problems with unknowns in all positions, and representing these situations with equations that use a symbol for the unknown (e.g., a question mark or a small square). Grade 1 students need not master the more difficult problem types.*
8. Solve word problems involving addition of three whole numbers whose sum is less than or equal to 20.

## Number—Base Ten 1-NBT

**Numbers up to 100**

1. Read and write numbers to 100.
2. Starting at any number, count to 100 or beyond.
3. Understand that when comparing two-digit numbers, if one number has more tens, it is greater; if the amount of tens is the same in each number, then the number with more ones is greater.
4. Compare and order two-digit numbers based on meanings of the tens and ones digits, using > and < symbols to record the results of comparisons.

**Adding and subtracting in base ten**

5. Calculate mentally, additions and subtractions within 20.
   a. Use strategies that include counting on; making ten (for example, 7 + 6 = 7 + 3 + 3 = 10 + 3 = 13); and decomposing a number (for example, 17 – 9 = 17 – 7 – 2 = 10 – 2 = 8).
6. Demonstrate fluency in addition and subtraction within 10.
7. Understand that in adding or subtracting two-digit numbers, one adds or subtracts like units (tens and tens, ones and ones) and sometimes it is necessary to compose or decompose a higher value unit.
8. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.
9. Add one-digit numbers to two-digit numbers, and add multiples of 10 to one-digit and two-digit numbers.
10. Explain addition of two-digit numbers using concrete models or drawings to show composition of a ten or a hundred.
11. ❖Add two-digit numbers to two-digit numbers using strategies based on place value, properties of operations, and/or the inverse relationship between addition and subtraction; explain the reasoning used.

**Length measurement**

1. Order three objects by length; compare the length of two objects indirectly by using a third object.
2. Understand that the length of an object can be expressed numerically by using another object as a length unit (such as a paper-clip, yardstick, or inch length on a ruler). The object to be measured is partitioned into as many equal parts as possible with the same length as the length unit. The length measurement of the object is the number of length units that span it with no gaps or overlaps. *For example, "I can put four paperclips end to end along the pencil, so the pencil is four paperclips long."*
3. Measure the length of an object by using another object as a length unit.

**Time measurement**

4. Tell time from analog clocks in hours and half- or quarter-hours.

**Representing and interpreting data**

5. Organize, represent, and interpret data with several categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

## Geometry 1-G

**Shapes, their attributes, and spatial reasoning**

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) for a wide variety of shapes.
2. Understand that shapes can be joined together (composed) to form a larger shape or taken apart (decomposed) into a collection of smaller shapes. Composing multiple copies of some shapes creates tilings. *In this grade, "circles," "rectangles," and other shapes include their interiors as well as their boundaries.*
3. Compose two-dimensional shapes to create a unit, using cutouts of rectangles, squares, triangles, half-circles, and quarter-circles. Form new shapes by repeating the unit.
4. Compose three-dimensional shapes to create a unit, using concrete models of cubes, right rectangular prisms, right circular cones, and right circular cylinders. Form new shapes by repeating the unit. *Students do not need to learn formal names such as "right rectangular prism."*
5. Decompose circles and rectangles into two and four equal parts. Describe the parts using the words *halves*, *fourths*, and *quarters*, and using the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the parts. Understand that decomposing into more equal shares creates smaller shares.
6. Decompose two-dimensional shapes into rectangles, squares, triangles, half-circles, and quarter-circles, including decompositions into equal shares.

## Mathematics | Grade 2

In Grade 2, instructional time should focus on three critical areas: (1) developing understanding of base-ten notation; (2) developing fluency with additions and subtractions within 20 and fluency with multi-digit addition and subtraction; and (3) describing and analyzing shapes.

(1) Students develop an understanding of the base-ten system (at least to 1000). Their understanding of the base-ten system includes ideas of counting in units (twos, fives, and tens) and multiples of hundreds, tens, and ones, as well as number relationships, including comparing and ordering. They understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).

(2) Students use their understanding of addition to develop fluency with additions and subtractions within 20. They solve arithmetic problems by applying their understanding of models for addition and subtraction (such as combining or separating sets or using number lines that begin with zero), relationships and properties of numbers, and properties of addition. They develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of two-digit whole numbers. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences. They develop fluency with efficient procedures, including standard algorithms, for adding and subtracting whole numbers; understand and explain why the procedures work based on their understanding of base-ten notation and properties of operations; and use them to solve problems.

(3) Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding attributes of two- and three-dimensional space such as area and volume, and properties such as congruence and symmetry that they will learn about in later grades.

**Addition and subtraction**

1. ❖Explain and justify properties of addition and subtraction, e.g., by using representations such as objects, drawings, and story contexts. Include properties such as:
   a. Changing the order of addends does not change their sum.
   b. Subtracting one addend from a sum of two numbers results in the other addend.
   c. If more is subtracted from a number, the difference is decreased, and if less is subtracted the difference is increased.
   d. In an addition equation, each addend can be decomposed and the parts can be recombined in any order without changing the sum. *For example, 5 + 3 = 8. Because 5 decomposes as 4 + 1, the first addend can be replaced by 4 + 1, yielding (4 + 1) + 3 = 8. Recombining in two different orders: 4 + 4 = 8, also 7 + 1 = 8.*

**Describing situations and solving problems with addition and subtraction**

2. ❖Solve word problems involving addition and subtraction within 100, e.g., by using drawings or equations to represent the problem. *Students should work with all of the addition and subtraction situations shown in the Glossary, Table 1, solving problems with unknown sums, addends, differences, minuends, and subtrahends, and representing these situations with equations that use a symbol for the unknown (e.g., a question mark or a small square). Focus on the more difficult problem types.*
3. Solve two-step word problems involving addition and subtraction within 100, e.g., by using drawings or equations to represent the problem.

## Number—Base Ten 2-NBT

**Numbers up to 1000**

1. Understand that 100 can be thought of as a bundle of tens—a unit called a "hundred."
2. Read and write numbers to 1000 using base-ten notation, number names, and expanded form.
3. Count within 1000; skip count by 2s, 5s, 10s, and 100s.
4. Understand that when comparing three-digit numbers, if one number has more hundreds, it is greater; if the amount of hundreds is the same in each number, then the number with more tens is greater. If the amount of tens and hundreds is the same in each number, then the number with more ones is greater.
5. Compare and order three-digit numbers based on meanings of the hundreds, tens, and ones digits.

**Adding and subtracting in base ten**

6. Fluently add and subtract within 20. By end of Grade 2, know from memory sums of one-digit numbers.
7. Mentally compute sums and differences of multiples of 10. *For example, mentally calculate 130 – 80.*
8. Understand that in adding or subtracting three-digit numbers, one adds or subtracts like units (hundreds and hundreds, tens and tens, ones and ones) and sometimes it is necessary to compose or decompose a higher value unit.
9. Given a number from 100 to 900, mentally find 10 more or 10 less than the number, and mentally find 100 more or 100 less than the number, without counting.
10. Understand that algorithms are predefined steps that give the correct result in every case, while strategies are purposeful manipulations that may be chosen for specific problems, may not have a fixed order, and may be aimed at converting one problem into another. *For example, one might mentally compute 503 – 398 as follows: 398 + 2 = 400, 400 + 100 = 500, 500 + 3 = 503, so the answer is 2 + 100 + 3, or 105.*
11. ❖ Compute sums and differences of one-, two-, and three-digit numbers using strategies based on place value, properties of operations, and/or the inverse relationship between addition and subtraction; explain the reasoning used.
12. ❖Explain why addition and subtraction strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings or objects. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
13. Compute sums of two three-digit numbers, and compute sums of three or four two-digit numbers, using the standard algorithm; compute differences of two three-digit numbers using the standard algorithm.

## Measurement and Data 2-MD

**Length measurement**

1. Understand that 1 inch, 1 foot, 1 centimeter, and 1 meter are conventionally defined lengths used as standard units.
2. Measure lengths using measurement tools such as rulers, yardsticks and measuring tapes; understand that these tools are used to find out how many standard length units span an object with no gaps or overlaps, when the 0 mark of the tool is aligned with an end of the object.

3. Understand that when measuring a length, if a smaller unit is used, more copies of that unit are needed to measure the length than would be necessary if a larger unit were used.
4. Understand that units can be decomposed into smaller units, e.g., 1 foot can be decomposed into 12 inches and 1 meter can be decomposed into 100 centimeters. A small number of long units might compose a greater length than a large number of small units.
5. Understand that lengths can be compared by placing objects side by side, with one end lined up. The difference in lengths is how far the longer extends beyond the end of the shorter.
6. Understand that a sum of two whole numbers can represent a combination of two lengths; a difference of two whole numbers can represent a difference in length; find total lengths and differences in lengths using addition and subtraction.

**Time and money**

7. Find time intervals between hours in one day.
8. Solve word problems involving dollar bills, quarters, dimes, nickels and pennies. *Do not include dollars and cents in the same problem.*

**Representing and interpreting data**

9. Generate measurement data by measuring whole-unit lengths of several objects, or by making repeated measurements of the same object. Show the measurements by making a dot plot, where the horizontal scale is marked off in whole-number units.
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with several categories. Connect representations on bar graph scales, rulers, and number lines that begin with zero. Solve simple Put Together/Take Apart and Compare problems using information presented in a bar graph. *See Glossary, Table 1.*

## Geometry 2-G

**Shapes, their attributes, and spatial reasoning**

1. Understand that different categories of shapes (e.g., rhombuses, trapezoids, rectangles, and others) can be united into a larger category (e.g., quadrilaterals) on the basis of shared attributes (e.g., having four straight sides).
2. Identify and name polygons of up to six sides by the number of their sides or angles.
3. Recognize rectangles, rhombuses, squares and trapezoids as examples of quadrilaterals; draw examples of quadrilaterals that do not belong to any of these subcategories.
4. Draw and identify shapes that have specific attributes, such as number of equal sides or number of equal angles. *Sizes of lengths and angles are compared directly or visually, not compared by measuring.*
5. Recognize objects as resembling spheres, right circular cylinders, and right rectangular prisms. *Students do not need to learn formal names such as "right rectangular prism."*
6. Decompose circular and rectangular objects into two, three, or four equal parts. Describe the parts using the words *halves*, *thirds*, *half of*, *a third of*, etc.; describe the wholes as two halves, three thirds, four fourths. Recognize that a half, a third, or a fourth of a circular or rectangular object—a graham cracker, for example—is the same size regardless of its shape.

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, starting with unit fractions; (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes. Multiplication, division, and fractions are the most important developments in Grade 3.

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through the use of representations such as equal-sized groups, arrays, area models, and equal jumps on number lines for multiplication; and successive subtraction, partitioning, and sharing for division. Through this process, numbers themselves take on new meaning and are no longer only counters for single objects. They represent groups, a number of groups (for example, 3 teams of 6 people), or a comparative factor (3 times as long).

Students use properties of operations to calculate products of whole numbers. They use increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the inverse relationship between multiplication and division.

(2) Students develop an understanding of a definition of a fraction, beginning with unit fractions. They use fractions to represent parts of a whole or distances on a number line that begins with zero. Students understand that the size of a fractional part is relative to the size of the whole (for example, ¼ of a mile is longer than ¾ of a foot, even though $\frac{1}{4} < \frac{3}{4}$), and they are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing and ordering fractions using by models or strategies based on noticing common numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They understand that area can be quantified by finding the total number of same-size units of area required to cover the shape without gaps or overlaps. They understand that a 1-unit by 1-unit square is the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area measure to the area model used to represent multiplication, and they use this connection to justify using multiplication to determine the area of a rectangle. Students contrast area with perimeter.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify the shapes by their sides and angles, and connect these with definitions of shapes. Students investigate, describe, and reason about decomposing and combining polygons to make other polygons. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of attributes and properties of two-dimensional objects.

**Multiplication and division**

1. Understand that multiplication of whole numbers is repeated addition. *For example, 5 × 7 means 7 added to itself 5 times. Products can be represented by rectangular arrays, with one factor the number of rows and the other the number of columns.*
2. ❖Understand the properties of multiplication.
   a. Multiplication is commutative. *For example, the total number in 3 groups with 6 things each is the same as the total number in 6 groups with 3 things each, that is, 3 × 6 = 6 × 3.*
   b. Multiplication is associative. *For example, 4 × 3 × 2 can be calculated by first calculating 4 × 3 = 12 then calculating 12 × 2 = 24, or by first calculating 3 × 2 = 6 then calculating 4 × 6 = 24.*
   c. 1 is the multiplicative identity.
   d. Multiplication distributes over addition (the distributive property). *For example, 5 × (3 + 4) = (5 × 3) + (5 × 4).*
3. ❖Explain and justify properties of multiplication and division, e.g., by using representations such as objects, drawings, and story contexts. Include properties such as:
   a. Changing the order of two factors does not change their product.
   b. The product of a number and 1 is the number.
   c. Dividing a nonzero number by itself yields 1.
   d. Multiplying a quantity by a nonzero number, then dividing by the same number, yields the original quantity.
   e. When one factor in a product is multiplied by a number and another factor divided by the same number, the product is unchanged. *Limit to multiplying and dividing by numbers that result in whole-number quotients.*
   f. Products where one factor is a one-digit number can be computed by decomposing one factor as the sum of two numbers, multiplying each number by the other factor, and adding the two products.
4. ❖Understand that multiplication and division have an inverse relationship. *For example, if 5 × 7 = 35 is known, then 35 ÷ 5 = 7 and 35 ÷ 7 = 5 are also known. The division 35 ÷ 5 means the number which yields 35 when multiplied by 5; because 5 × 7 = 35, then 35 ÷ 5 = 7.*
5. ❖Understand that when all but one of three numbers in a multiplication or division equation are known, the unknown number can be found. *Limit to cases where the unknown number is a whole number.*

**Describing situations and solving problems with multiplication and division**

6. Understand that multiplication and division apply to situations with equal groups, arrays or area, and comparing. *See Glossary, Table 2.*
7. ❖Solve word problems involving multiplication and division within 100, using an equation with a symbol for the unknown to represent the problem. *This standard is limited to problems with whole-number quantities and whole-number quotients. Focus on situations described in the Glossary, Table 2.*
8. ❖Solve one- or two-step word problems involving the four operations. *This standard is limited to problems with whole-number quantities and whole-number quotients.*
9. Understand that multiplication and division can be used to compare quantities (see Glossary, Table 2); solve multiplicative comparison problems with whole numbers (problems involving the notion of "times as much").

## Number—Base Ten 3-NBT

**Numbers up to 10,000**

1. Understand that 1000 can be thought of as a bundle of hundreds—a unit called a "thousand."
2. Read and write numbers to 10,000 using base-ten notation, number names, and expanded form.
3. Count within 10,000; skip count by 10s, 100s and 1000s.
4. Understand that when comparing four-digit numbers, if one number has more thousands, it is greater; if the amount of thousands is the same in each number, then the number with more hundreds is greater; and so on. Compare and order four-digit numbers based on meanings of the digits.

**Adding and subtracting in base ten**

5. Mentally calculate sums and differences of multiples of 10, 100, and 1000. *For example, mentally calculate 1300 – 800*
6. Given a number from 1000 to 9000, mentally find 100 more or 100 less than the number, and mentally find 1000 more or 1000 less than the number, without counting.

**Multiplying and dividing in base ten**

7. ❖Understand that the distributive property is at the heart of strategies and algorithms for multiplication and division computations with numbers in base-ten notation; use the distributive property and other properties of operations to explain patterns in the multiplication table and to derive new multiplication and division equations from known ones. *For example, the distributive property makes it possible to multiply 4 × 7 by decomposing 7 as 5 + 2 and using 4 × 7 = 4 × (5 + 2) = (4 × 5) + (4 × 2) = 20 + 8 = 28.*
8. Fluently multiply one-digit numbers by 10.
9. Use a variety of strategies for multiplication and division within 100. By end of Grade 3, know from memory products of one-digit numbers where one of the factors is 2, 3, 4, or 5.

## Number—Fractions 3-NF

**Fractions as representations of numbers**

1. Understand that a unit fraction corresponds to a point on a number line. *For example, 1/3 represents the point obtained by decomposing the interval from 0 to 1 into three equal parts and taking the right-hand endpoint of the first part. In Grade 3, all number lines begin with zero.*
2. Understand that fractions are built from unit fractions. *For example, 5/4 represents the point on a number line obtained by marking off five lengths of ¼ to the right of 0.*
3. Understand that two fractions are equivalent (represent the same number) when both fractions correspond to the same point on a number line. Recognize and generate equivalent fractions with denominators 2, 3, 4, and 6 (e.g., $^1/_2 = {}^2/_4$, $^4/_6 = {}^2/_3$), and explain the reasoning.
4. Understand that whole numbers can be expressed as fractions. *Three important cases are illustrated by the examples 1 = 4/4, 6 = 6/1, and 7 = (4 × 7)/4. Expressing whole numbers as fractions can be useful for solving problems or making calculations.*

**Fractional quantities**

5. Understand that fractions apply to situations where a whole is decomposed into equal parts; use fractions to describe parts of wholes. *For example, to show 1/3 of a length, decompose the length into 3 equal parts and show one of the parts.*
6. Compare and order fractional quantities with equal numerators or equal denominators, using the fractions themselves, tape diagrams, number line representations, and area models. Use > and < symbols to record the results of comparisons.

## Measurement and Data 3-MD

**The number line and units of measure**

1. Understand that a number line has an origin (0) and a unit (1), with whole numbers one unit distance apart. Use number lines to represent problems involving distances, elapsed time, amounts of money and other quantities. *In such problems, the interval from 0 to 1 may represent a unit of distance, time, money, etc.*
2. Understand that a unit of measure can be decomposed into equal-sized parts, whose sizes can be represented as fractions of the unit. Convert measurements in one unit to measurements in a smaller or a larger unit, and solve problems involving such mixed units (e.g., feet and inches, weeks and days).

**Perimeter and area**

3. Understand and use concepts of area measurement.
   a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
   b. A plane figure which can be covered without gaps or overlaps by *n* unit squares has an area of *n* square units. Areas of some other figures can be measured by using fractions of unit squares or using figures whose areas have been found by decomposing other figures.
   c. When measuring an area, if a smaller unit of measurement is used, more units must be iterated to measure the area in those units.
   d. Determine and compare areas by counting square units. *Use $cm^2$, $m^2$, $in^2$, $ft^2$, and improvised units.*
4. Understand that multiplication of whole numbers can be represented by area models; a rectangular region that is *a* length units by *b* length units (where *a* and *b* are whole numbers) and tiled with unit squares illustrates why the rectangle encloses an area of *a* × *b* square units.
5. Solve problems involving perimeters of polygons.
   a. Add given side lengths, and multiply for the case of equal side lengths.
   b. ❖Find an unknown length of a side in a polygon given the perimeter and all other side lengths; represent these problems with equations involving a letter for the unknown quantity.
   c. Exhibit rectangles with the same perimeter and different area, and with the same area and different perimeter.

**Representing and interpreting data**

6. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *Include single-unit scales and multiple-unit scales; for example, each square in the bar graph might represent 1 pet, 5 pets, or 10 pets.*
7. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a dot plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

## Geometry 3-G

**Properties of 2-dimensional shapes**

1. Understand that a given category of plane figures (e.g., triangles) has subcategories (e.g., isosceles triangles) defined by special properties.
2. Describe, analyze, compare and classify two-dimensional shapes by their properties and connect these properties to the classification of shapes into categories and subcategories (e.g., squares are "special rectangles" as well as "special rhombuses"). *Focus on triangles and quadrilaterals.*

**Structuring rectangular shapes**

3. Understand that rectangular regions can be tiled with squares in rows and columns, or decomposed into such arrays.
4. Structure a rectangular region spatially by decomposing it into rows and columns of squares. Determine the number of squares in the region using that spatial structure (e.g., by multiplication or skip counting).
5. Understand that shapes can be decomposed into parts with equal areas; the area of each part is a unit fraction of the whole. *For example, when a shape is partitioned into 4 parts with equal area, the area of each part is ¼ of the area of the shape.*

In Grade 4, instructional time should focus on four critical areas: (1) continuing to develop understanding and fluency with whole number multiplication, and developing understanding of multi-digit whole number division; (2) developing an understanding of addition and subtraction of fractions with like denominators, multiplication of fractions by whole numbers, and division of whole numbers with fractional answers; (3) developing an understanding of area; and (4) understanding that geometric figures can be analyzed and classified using properties such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

(1) Students use understandings of multiplication to develop fluency with multiplication and division within 100. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models, equal intervals on a number line), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate products or mentally calculate products. They develop fluency with efficient procedures, including the standard algorithm, for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate quotients and mentally calculate quotients, depending upon the context and the numbers involved.

(2) Students develop understanding of operations with fractions. They apply their understandings of fractions as built from unit fractions, and use fraction models to represent the addition and subtraction of fractions with like denominators. Students use the meaning of fractions and the meaning of multiplication to understand and explain why the procedure for multiplying a fraction by a whole number makes sense. They understand and explain the connection between division and fractions.

(3) Students develop their understanding of area. They understand and apply the area formula for rectangles and also find areas of shapes that can be decomposed into rectangles. They select appropriate units, strategies (e.g., decomposing shapes), and tools for solving problems that involve estimating and measuring area.

(4) Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

**Multiplication and division**

1. Find the factor pairs for a given whole number less than or equal to 100; recognize prime numbers as numbers greater than 1 with exactly one factor pair. *Example: The factor pairs of 42 are {42, 1}, {21, 2}, {14, 3}, {7, 6}.*

**Problem solving with the four operations**

2. ❖Solve multistep word problems involving the four operations with whole numbers.
3. ❖Solve problems posed with both whole numbers and fractions. Understand that while quantities in a problem might be described with whole numbers, fractions, or decimals, the operations used to solve the problem depend on the relationships between the quantities regardless of which number representations are involved.
4. Assess the reasonableness of answers using mental computation and estimation strategies including rounding to the nearest 10 or 100.

## Number—Base Ten 4-NBT

**Numbers up to 100,000**

1. Understand that a digit in one place represents ten times what it represents in the place to its right. *For example, 7 in the thousands place represents 10 times as many as than 7 in the hundreds place.*
2. Read, write and compare numbers to 100,000 using base-ten notation, number names, and expanded form.

**Multiplying and dividing in base ten**

3. Understand how the distributive property and the expanded form of a multi-digit number can be used to calculate products of multi-digit numbers.
   a. ❖The product of a one-digit number times a multi-digit number is the sum of the products of the one-digit number with the summands in the expanded form of the multi-digit number. Illustrate this numerically and visually using equations, rectangular arrays, area models, and tape diagrams.
   b. Algorithms for multi-digit multiplication can be derived and explained by writing multi-digit numbers in expanded form and applying the distributive property.
4. Fluently multiply and divide within 100. By end of Grade 4, know from memory products of one-digit numbers where one of the factors is 6, 7, 8, or 9.
5. Mentally calculate products of one-digit numbers and one-digit multiples of 10, 100, and 1000 (e.g., $7 \times 6000$). Mentally calculate whole number quotients with divisors of 10 and 100.
6. Compute products and whole number quotients of two-, three- or four-digit numbers and one-digit numbers, and compute products of two two-digit numbers, using strategies based on place value, the properties of operations, and/or the inverse relationship between multiplication and division; explain the reasoning used.
7. Explain why multiplication and division strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithms.*
8. Compute products of two-digit numbers using the standard algorithm, and check the result using estimation.
9. Given two whole numbers, find an equation displaying the largest multiple of one which is less than or equal to the other. *For example, given 325 and 7, the equation $325 = 46 \times 7 + 3$ shows the largest multiple of 7 less than or equal to 325.*

## Number—Fractions 4-NF

**Operations on fractions**

1. Understand addition of fractions:
   a. Adding or subtracting fractions with the same denominator means adding or subtracting copies of unit fractions. *For example, $2/3 + 4/3$ is 2 copies of $1/3$ plus 4 copies of $1/3$, or 6 copies of $1/3$ in all, that is $6/3$.*
   b. Sums of related fractions can be computed by replacing one with an equivalent fraction that has the same denominator as the other. *For example, the sum of the related fractions $2/3$ and $1/6$ can be computed by rewriting $2/3$ as $4/6$ and computing $4/6 + 1/6 = 5/6$.*
2. Compute sums and differences of fractions with like denominators, add and subtract related fractions within 1 (e.g., $1/2 + 1/4$, $3/10 + 4/100$, $7/8 - 1/4$), and solve word problems involving these operations.
3. ❖ Understand that the meaning of multiplying a fraction by a whole number comes from interpreting multiplication by a whole number as repeated addition. *For example, $3 \times 2/5 = 6/5$ because $3 \times 2/5 = 2/5 + 2/5 + 2/5 = 6/5$.*

4. Solve word problems that involve multiplication of fractions by whole numbers; represent multiplication of fractions by whole numbers using tape diagrams and area models that explain numerical results.
5. ❖Understand that fractions give meaning to the quotient of any whole number by any non-zero whole number. *For example, 3 ÷ 4 = 3/4, because 3/4 multiplied by 4 equals 3. (The division 3 ÷ 4 means the number which yields 3 when multiplied by 4.)*
6. Solve word problems that involve non-whole number quotients of whole numbers; represent quotients of whole numbers using tape diagrams and area models that explain numerical results.

**Decimal concepts**

7. Understand that a two-digit decimal is a sum of fractions with denominators 10 and 100. *For example, 0.34 is 3/10 + 4/100.*
8. Use decimals to hundredths to describe parts of wholes; compare and order decimals to hundredths based on meanings of the digits; and write fractions of the form *a*/10 or *a*/100 in decimal notation. *Use > and < symbols to record the results of comparisons.*

## Measurement and Data 4-MD

**The number line and units of measure**

1. Understand that the unit length on a number line (interval from 0 to 1) can be divided into parts of equal fractional length. Draw number line representations of problem situations involving length, height, and distance including fractional or decimal units. *For example, show distances along a race course to tenths of a mile on a number line, by dividing the unit length into 10 equal parts to get parts of length 1/10; the endpoint of the segment of 1/10 length from 0 represents 1/10 of a mile from the starting point of the race. In Grade 4, all numbers lines begin with zero.*

**Perimeter and area**

2. Understand that if a region is decomposed into several disjoint pieces, then the area of the region can be found by adding the areas of the pieces (when these areas are expressed in the same units).
3. ❖Apply the formulas for area of squares and rectangles. Measure and compute whole-square-unit areas of objects and regions enclosed by geometric figures which can be decomposed into rectangles. *Limit to situations requiring products of one-or two-digit numbers.*
4. ❖Find one dimension of a rectangle, given the other dimension and the area or perimeter; find the length of one side of a square, given the area or perimeter. Represent these problems using equations involving a letter for the unknown quantity.

**Angle measurement**

5. Understand what an angle is and how it is measured:
   a. An angle is formed by two rays with a common endpoint.
   b. An angle is measured by reference to a circle with its center at the common endpoint of the rays. The measure of an angle is based on the fraction of the circle between the points where the two rays intersect the circle.
   c. A one-degree angle turns through 1/360 of a circle, where the circle is centered at the common endpoint of its rays; the measure of a given angle is the number of one-degree angles turned with no gaps or overlaps.
6. Measure angles in whole-number degrees using a protractor; sketch angles of specified measure; ❖find the measure of a missing part of an angle, given the measure of the angle and the measure of a part of it, representing these problems with equations involving a letter for the unknown quantity.

**Representing and interpreting data**

7. Make a dot plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in dot plots. *For example, from a dot plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

## Geometry 4-G

**Lines and angles**

1. Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines; identify these in plane figures.
2. Identify right angles, and angles smaller than or greater than a right angle in geometric figures; recognize right triangles.
3. Classify shapes based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size.

**Line symmetry**

4. Understand that a line of symmetry for a geometric figure is a line across the figure such that the figure can be folded along the line into matching parts

5. Identify line-symmetric figures; given a horizontal or vertical line and a drawing that is not a closed figure, complete the drawing to create a figure that is symmetric with respect to the given line.

In Grade 5, instructional time should focus on four critical areas: (1) developing fluency with addition and subtraction of fractions, developing understanding of the multiplication of fractions and of division of fractions in limited cases (fractions divided by whole numbers and whole numbers divided by unit fractions); (2) developing understanding of and fluency with division of multi-digit whole numbers; (3) developing understanding of and fluency with addition, subtraction, multiplication, and division of decimals; and (4) developing understanding of volume.

(1) Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the inverse relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing fractions by whole numbers and whole numbers by unit fractions.)

(2) Students develop fluency with division of whole numbers; understand why procedures work based on the meaning of base-ten notation and properties of operations; and use these procedures to solve problems. Based on the context of a problem situation, they select the most useful form of the quotient for the answer and interpret it appropriately.

(3) Students apply their understandings of models for decimals, decimal notation, and properties of operations to compute sums and differences of finite decimals. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of finite decimals efficiently and accurately.

(4) Students recognize volume as an attribute of three-dimensional space. They understand that volume can be quantified by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve problems.

**Whole numbers in base ten**

1. Compute quotients of two-, three-, and four-digit whole numbers and two-digit whole numbers using strategies based on place value, the properties of operations, and/or the inverse relationship between multiplication and division; explain the reasoning used.
2. Explain why division strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
3. Use the standard algorithm to compute quotients of two-, three- and four-digit whole numbers and two-digit whole numbers, expressing the results as an equation (e.g., $145 = 11 \times 13 + 2$ or $120 \div 7 = 17\ 1/7$).
4. Fluently add, subtract and multiply whole numbers using the standard algorithm for each operation.

**Decimal concepts**

5. Read, write, and compare numbers expressed as decimals. Understand that a digit in one place represents ten times what it represents in the place to its right. *For example, 7 in the hundredths place represents 10 times as many as 7 in the thousandths place.*
6. Round decimals (to hundredths) to the nearest whole number.
7. Write fractions in decimal notation for fractions with denominators 2, 4, 5, 8, 10, and 100.

**Operations on decimals**

8. Understand that in adding or subtracting finite decimals, one adds or subtracts like units (tenths and tenths, hundredths and hundredths, etc.) and sometimes it is necessary to compose or decompose a higher value unit.
9. Fluently find 0.1 more than a number and less than a number; 0.01 more than a number and less than a number; and 0.001 more than a number and less than a number, for numbers expressed as finite decimals.
10. Compute sums and differences of finite decimals by expressing the decimals as fractions and adding the fractions. *For example, $0.05 + 0.91 = 5/100 + 91/100 = 96/100$ or 0.96.*
11. Compute sums, differences, products, and quotients of finite decimals using strategies based on place value, the properties of operations, and/or the inverse relationships between addition and subtraction and between multiplication and division; explain the reasoning used. *For example, transform $1.5 \div 0.3$ into $15 \div 3 = 5$.*
12. Explain why strategies and algorithms for computations with finite decimals work. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
13. Use the standard algorithm for each of the four operations on decimals (to hundredths).
14. Solve word problems involving operations on decimals.

## Number—Fractions 5-NF

**Fraction equivalence**

1. ❖Understand fraction equivalence:
   a. Multiplying the numerator and denominator of a fraction by the same nonzero whole number produces an equivalent fraction. *For example, $2/3 = (2 \times 4)/(3 \times 4) = 8/12$. ($1/3$ is 4 copies of $1/12$, so $2/3$ is 8 copies of $1/12$.)*
   b. Equivalent fractions correspond to the same point on a number line. *In Grade 5, all numbers lines begin with zero.*
   c. When the numerators of equivalent fractions are divided by their denominators, the resulting quotients are the same.
2. Identify pairs of equivalent fractions; given two fractions with unlike denominators, find two fractions with the same denominator and equivalent to each.
3. Compare and order fractions with like or unlike denominators, e.g., by finding equivalent fractions with the same denominator, and describe the sizes of fractional quantities from a context with reference to the context. *Compare using the fractions themselves, tape diagrams or number line representations, and area models.*

**Operations on fractions**

4. Understand that sums and differences of fractions with unlike denominators can be computed by replacing each with an equivalent fraction so that the resulting fractions have the same denominator. *For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$.*
5. Compute sums and differences of fractions with like or unlike denominators, and solve word problems involving addition and subtraction of fractions. Estimate fraction sums and differences to assess the reasonableness of results.
6. ❖ Understand that multiplying a fraction by $a/b$ means taking $a$ parts of a decomposition of the fraction into $b$ equal parts. *For example, to multiply $2/3 \times 4/5 = 8/15$, one may decompose a whole of size $4/5$ into 3 equal parts; each part has size $4/15$. Two*

*of these parts then make 8/15, so 2/3 × 4/5 = 8/15. (In general, a/b × p/q = ap/bq.) This standard includes multiplication of a whole number by a fraction, by writing the whole number as fraction with denominator 1.*

7. Understand that the area of a rectangle with side lengths $a/b$ and $c/d$ is the product $a/b \times p/q$. This extends the area formula for rectangles to fractional side lengths, and also allows products of fractions to be represented visually as areas of rectangles.
8. ❖Explain and justify the properties of operations with fractions, e.g., by using equations, number line representations, area models, and story contexts.
9. Understand division of unit fractions by whole numbers and division of whole numbers by unit fractions:
   a. Dividing a unit fraction 1/b by a whole number a results in a smaller unit fraction 1/a × b. *For example, 1/3 ÷ 2 = 1/6 because when 1/3 is divided into 2 equal parts, the size of each part is 1/6; a third of a pound of cheese shared between two people will give each person a sixth of a pound. (Using the inverse relationship between multiplication and division: 1/3 ÷ 2 = 1/6 because 1/6 × 2 = 1/3.)*
   b. Dividing a whole number a by a unit fraction 1/b results in a greater whole number a × b. *For example, 2 ÷ 1/3 = 6 because 6 is the number of 1/3s in 2; two pounds of cheese will make six portions of a third of a pound each. (Using the inverse relationship between multiplication and division: 2 ÷ 1/3 = 6 because 6 × 1/3 = 2.)*
10. Calculate products of fractions, and quotients of unit fractions and nonzero whole numbers (with either as divisor), and solve word problems involving these operations. Represent these operations using equations, area models and length models.
11. Understand that a mixed number such as 3 2/5 represents the sum of a whole number and a fraction less than one. Because a whole number can be represented as a fraction (3 = 3/1), and the sum of two fractions is also a fraction, a mixed number also represents a fraction (3 2/5 = 3 + 2/5 = 15/5 + 2/5 = 17/5). Write fractions as equivalent mixed numbers and vice versa.

## Measurement and Data 5-MD

**Units of measure**

1. Understand that quantities expressed in like units can be added or subtracted giving a sum or difference with the same unit; different quantities may be multiplied to obtain a new kind of quantity (e.g., as when two lengths are multiplied to compute an area, or when an area and a length are multiplied to compute a volume).
2. Understand that when measuring a quantity, if a smaller unit is used, more units must be iterated to measure the quantity in those units.
3. Convert among different-sized standard measurement units within a given measurement system (e.g., feet to yards, centimeters to meters) and use conversion in solving multi-step word problems.

**Volume**

4. Understand concepts of volume measurement:
   a. A cube with side length 1 unit (a unit cube) is said to have "one cubic unit" of volume, and can be used to measure volume.
   b. The volume of a right rectangular prism with whole-unit side lengths can be found by packing it with unit cubes and using multiplication to count their number. *For example, decomposing a right rectangular prism 3 length units wide by 5 units deep by 2 units tall shows that its volume is 3 × 5 × 2 cubic units. The base of the prism has area 3 × 5 square units, so the volume can also be expressed as the height times the area of the base.*
   c. When measuring a volume, if a smaller unit is used, more units must be iterated to measure the volume in those units.
   d. If a solid figure is decomposed into several disjoint pieces, then the volume enclosed by the figure can be found by adding the volumes of the pieces (when these volumes are expressed in the same units).
5. Decompose right rectangular prisms into layers of arrays of cubes; determine and compare volumes of right rectangular prisms, and objects well described as right rectangular prisms, by counting cubic units (using $cm^3$, $m^3$, $in^3$, $ft^3$, and improvised units).

**Representing and interpreting data**

6. Make a dot plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in dot plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*

## Geometry 5-G

**Coordinates**

1. Understand that a pair of perpendicular number lines, called axes, defines a coordinate system.
   a. Their intersection is called the origin, usually arranged to coincide with the 0 on each line.
   b. A given point in the plane can be located by using an ordered pair of numbers, called its coordinates. The first number indicates how far to travel from the origin in the direction of one axis, the second number indicates how far to travel in the direction of the second axis.
   c. To avoid ambiguity, conventions dictate that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).
2. Graph points in the first quadrant of the coordinate plane, and identify the coordinates of graphed points. Where ordered pairs arise in a problem situation, interpret the coordinate values in the context of the situation.

**Plane figures**

3. Understand that properties belonging to a category of plane figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
4. Classify plane figures in a hierarchy based on properties.

In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division; (2) developing understanding of and fluency with division of fractions and developing fluency with multiplication of fractions; (3) developing understanding of and using formulas to determine areas of two-dimensional shapes and distinguishing between volume and surface area of three-dimensional shapes; and (4) writing, interpreting, and using expressions and equations.

(1) Students use reasoning about multiplication and division with quantities to solve ratio and rate problems. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students extend whole number multiplication and division to ratios and rates. Thus students expand their repertoires of problems in which multiplication and division can be used to solve problems, and they build on their understanding of fractions to understand ratios. Students solve a wide variety of problems involving ratios and rates.

(2) Students use the meaning of fractions, the meanings of multiplication and division, and the inverse relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students are able to add, subtract, multiply, and divide fractions fluently, and use these operations to solve problems, including multi-step problems and problems involving measurement.

(3) Students reason about relationships among shapes to determine area and surface area. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposition into pieces whose area they can determine.

(4) Students write mathematical expressions and equations that correspond to given situations, they evaluate expressions, and they use expressions and formulas to solve problems. Students understand that a variable is a letter standing for a number, where the number is unknown, or where, for the purpose at hand, it can be any number in the domain of interest. Students understand that expressions in different forms can be equivalent, and they use the laws of arithmetic to rewrite expressions to represent a total quantity in a different way (such as to represent it more compactly or to feature different information). Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships in a table.

Having represented and analyzed data in Grades K–5, students in Grade 6 begin a serious engagement with statistics. The study of variability in data distinguishes statistics from mathematics. Students beginning their study of variability must first recognize statistical questions as those that anticipate variability in the answers. From this conceptual beginning, they learn to describe and summarize distributions of data—an activity that goes beyond merely computing summary statistics to include assessing the shape of a distribution and considering other issues as described in the standards.

**Ratios**

1. Understand the concept of a ratio: Two quantities are said to be in a ratio of $a$ to $b$ when for every $a$ units of the first quantity there are $b$ units of the second. *For example, in a flock of birds, the ratio of wings to beaks might be 2 to 1; this ratio is also written 2:1. In Grade 6, limit to ratios of whole numbers.*
2. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.
3. Solve for an unknown quantity in a problem involving two equal ratios.
4. Describe categorical data sets using ratios (e.g., for every vote candidate A received, candidate C received nearly three votes; the ratio of type O blood donors to type B blood donors was 9:2).

**Unit rates**

5. Understand that for a ratio $a$:$b$, the corresponding unit rate is $a/b$. If there are $a$ units of the first quantity for every $b$ units of the second, where $b \neq 0$, then there are $a/b$ units of the first quantity for 1 unit of the second. *For example, if a recipe has a ratio of 3 cups of flour to 4 cups of sugar, then there is 3/4 cup of flour for each cup of sugar.*
6. ❖Solve unit rate problems including unit pricing and constant speed, including reasoning with equations such as $d = r \times t$, $r = d/t$, $t = d \div r$.

## The Number System 6-NS

**Operations**

1. Understand that the properties of operations apply to, and can be used with, addition and multiplication of fractions.
2. Understand that division of fractions is defined by viewing a quotient as the solution for an unknown-factor multiplication problem. *For example, (2/3) ÷ (5/7) = 14/15 because (5/7) × (14/15) = (2/3).*
3. Solve word problems requiring arithmetic with fractions, using the properties of operations and converting between forms as appropriate; estimate to check reasonableness of answers.
4. Fluently divide whole numbers using the standard algorithm.

**The system of rational numbers**

5. Understand that a number is a point on the number line.
6. Understand that some quantities have opposite directions, such as elevation above and below sea level or money received and spent. These quantities can be described using positive and negative numbers.
7. Understand that number lines familiar from previous grades can be extended to represent negative numbers to the left of zero. *Number lines can also be vertically oriented, as when a coordinate system is formed. Then the conventional terms "to the right of 0" and "to the left of 0" conventionally become "above 0" and "below 0."*
   a. Two different numbers, such as 7 and –7, that are equidistant from zero on a number line are said to be opposites of one another. The opposite of the opposite of a number is the number itself, e.g., –(–3) = 3. The opposite of 0 is 0.
   b. The absolute value of a number $q$, written $|q|$, is its distance from zero, and is always positive or zero.
   c. Fractions and their opposites form a system of numbers called the rational numbers, represented by points on a number line. Whole numbers and their opposites form the integers, which are contained in the rational numbers.
   d. Previous ways of comparing positive numbers can be extended to the rational numbers. The statement $p > q$ means that $p$ is located to the right of $q$ on a number line, while $p < q$ means that $p$ is located to the left of $q$ on a number line. Comparisons can also be made by reasoning appropriately about signed quantities (e.g, –3 > –7 makes sense because –3°C is a higher temperature than –7°C). The way two numbers compare does not always agree with the way their absolute values compare; for example, –3 > –7, but $|-3| < |-7|$.
8. Find and position rational numbers, including integers, on a number line.
9. Use rational numbers to describe quantities such as elevation, temperature, account balance and so on. Compare these quantities, recording the results of comparisons using > and < symbols.
10. Graph points and identify coordinates of points on the coordinate plane in all four quadrants. Where ordered pairs arise in a problem situation, interpret the coordinate values in the context of the situation.

**Expressions**

1. Understand that an expression records operations with numbers or with letters standing for numbers. *For example, the expression 2 · (8 + 7) records adding 8 and 7 then multiplying by 2; the expression 5 − y records subtracting y from 5. Focus on the operations of addition, subtraction, multiplication and division, with some attention to square or cube roots.*
2. Understand the use of variables in expressions and algebraic conventions:
   a. A letter is used to stand for a number in an expression in cases where the number is unknown, or where, for the purpose at hand, it can be any number in a domain of interest. Such a letter is called a variable.
   b. If a variable appears in an expression more than once (e.g., as in $t + 3t$), that variable is understood to refer to the same number in each instance.
   c. The multiplication symbol can be omitted when writing products of two or more variables or of a number and a variable. *For example, the expressions xy and 2a indicate $x \times y$ and $2 \times a$, respectively.*
3. Describe the structure and elements of simple expressions using correct terminology (sum, term, product, factor, quotient, coefficient); describe an expression by viewing one or more of its parts as a single entity. *For example, describe the expression 2 · (8 + 7) as a product of two factors, by viewing (8 + 7) as a single entity. The second factor is itself a sum of two terms.*
4. Understand and generate equivalent expressions:
   a. Understand that two expressions are equivalent if they name the same number regardless of which numbers the variables in them stand for. *For example, the expressions $x + 3$ and $4x$ are not equivalent, even though they happen to name the same number in the case when x stands for 1.*
   b. Understand that applying the laws of arithmetic to an expression results in an equivalent expression. *For example, applying the distributive law to the expression $3 \cdot (2 + x)$ leads to the equivalent expression $6 + 3x$. Applying the distributive law to $y + y + y$ leads to the equivalent expression $y \times (1 + 1 + 1)$, i.e., $y \times 3$ and then the commutative law of multiplication leads to the equivalent expression $3y$.*
   c. Generate equivalent expressions to reinterpret the meaning of an expression. *For example, $2t + 3t$ records the addition of twice a quantity to three times itself; applying the distributive law leads to the equivalent expression $5t$, so that the original expression can be reinterpreted as recording five times the quantity.*

**Quantitative relationships and the algebraic approach to problems**

5. Understand that an equation is a statement that two expressions are equal, and a solution to an equation is a replacement value of the variable (or replacement values for all the variables if there is more than one) that makes the equation true.
6. Using the idea of maintaining equality between both sides of the equation, solve equations of the form $x + p = q$ and $px = q$ for cases in which $p$, $q$ and $x$ are all nonnegative rational numbers.
7. Choose variables to represent quantities in a word problem, and construct simple expressions or equations to solve the problem by reasoning about the quantities.
8. Understand that a variable can be used to represent a quantity that can change, often in relationship to another changing quantity, and an equation can express one quantity, thought of as the dependent variable, in terms of other quantities, thought of as the independent variables; represent a relationship between two quantities using equations, graphs, and tables; translate between any two of these representations. *For example, describe the terms in a sequence $t = 3, 6, 9, 12, \ldots$ of multiples of 3 by writing the equation $t = 3n$ for $n = 1, 2, 3, 4, \ldots$.*

## Geometry 6-G

**Properties of area, surface area, and volume**

1. Understand that plane figures can be decomposed, reassembled, and completed into new figures; use this technique to derive area formulas.
2. Find the areas enclosed by right triangles, other triangles, special quadrilaterals, and polygons (by composing into rectangles or decomposing into triangles and other shapes).
3. Understand that three-dimensional figures can be formed by joining rectangles and triangles along their edges to enclose a solid region with no gaps or overlaps. The surface area is the sum of the areas of the enclosing rectangles and triangles.
4. Find the surface area of cubes, prisms and pyramids (include the use of nets to represent these figures).
5. Solve problems involving area, volume and surface area of objects.
6. Give examples of right rectangular prisms with the same surface area and different volumes, and with the same volume and different surface areas.

7. ❖Use exponents and symbols for square roots and cube roots to express the area of a square and volume of a cube in terms of their side lengths, and to express their side lengths in terms of their area or volume.

## Statistics and Probability 6-SP

**Variability and measures of center**

1. Understand that a statistical question is one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question , but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*
2. Understand that a set of data generated by answers to a statistical question typically shows variability—not all of the values are the same—and yet often the values show an overall pattern, often with a tendency to cluster.
   a. A measure of center for a numerical data set summarizes all of its values using a single number. The median is a measure of center in the sense that approximately half the data values are less than the median, while approximately half are greater. The mean is a measure of center in the sense that it is the value that each data point would take on if the total of the data values were redistributed fairly, and in the sense that it is the balance point of a data distribution shown on a dot plot.
   b. A measure of variation for a numerical data set describes how its values vary using a single number. The interquartile range and the mean absolute deviation are both measures of variation.

**Summarizing and describing distributions**

3. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
4. Summarize numerical data sets, such as by:
   a. Reporting the number of observations.
   b. Describing the nature of the variable, including how it was measured and its units of measurement. *Data sets can include fractional values at this grade but not negative values.*
   c. Describing center and variation, as well as describing any overall pattern and any striking deviations from the overall pattern.
5. Relate the choice of the median or mean as a measure of center to the shape of the data distribution being described and the context in which it is being used. Do the same for the choice of interquartile range or mean average deviation as a measure of variation. *For example, why are housing prices often summarized by reporting the median selling price, while students' assigned grades are often based on mean homework scores?*

# Mathematics | Grade 7

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and solving linear equations; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about similar objects (including geometric figures) by using scale factors that relate corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.

(2) Students develop a unified understanding of number, recognizing fractions, decimals, and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division and their properties to all rational numbers, including integers and numbers represented by complex fractions and negative fractions. By applying the laws of arithmetic, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain why the rules for adding, subtracting, multiplying, and dividing with negative numbers make sense. They use the arithmetic of rational numbers as they formulate and solve linear equations in one variable and use these equations to solve problems.

(3) Students use ideas about distance and angles, how they behave under dilations, translations, rotations and reflections, and ideas about congruence and similarity to describe and analyze figures and situations in two- and three-dimensional space and to solve problems, including multi-step problems. Students prove that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students apply this reasoning about similar triangles to solve problems, such as finding heights and distances. Students see the plausibility of the formulas for the circumference and area of a circle. For example, in the case of area, they may do so by reasoning about how lengths and areas scale in similar figures or by decomposing a circle or circular region and rearranging the pieces.

(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

**Analyzing proportional relationships**

1. Form ratios of nonnegative rational numbers and compute corresponding unit rates. *For example, a person might walk ½ mile in each ¼ hour; the unit rate for this ratio is (1/2)/(1/4) miles per hour, equivalently 2 miles per hour. Include ratios of lengths, areas and other quantities, including when quantities being compared are measured in different units.*
2. Recognize situations in which two quantities covary and have a constant ratio. (The quantities are then said to be in a proportional relationship and the unit rate is called the constant of proportionality.) Decide whether two quantities that covary are in a proportional relationship, e.g., by testing for equivalent ratios or graphing on a coordinate plane.
3. Compute unit rates and solve proportional relationship problems in everyday contexts, such as shopping, cooking, carpentry, party planning, etc. Represent proportional relationships by equations that express how the quantities are related via the constant of proportionality or unit rate. *For example, total cost, t, is proportional to the number, n, purchased at a constant price, p; this relationship can be expressed as $t = pn$.*
4. Plot proportional relationships on a coordinate plane where each axis represents one of the two quantities involved, observe that the graph is a straight line through the origin, and find unit rates from a graph. Explain what a point $(x, y)$ means in terms of the situation, with special attention to the points (0, 0) and $(1, r)$ where $r$ is the unit rate.
5. Compare tables, graphs, formulas, diagrams, and verbal descriptions that represent or partially represent proportional relationships; explain correspondences among the representations including how the unit rate is shown in each.

**Percent**

6. Understand that percentages are rates per 100. For example, 30% of a quantity means $30/100$ times the quantity. A percentage can be a complex fraction, as in $3.75\% = 3.75/100$.
7. Find a percentage of a quantity; solve problems involving finding the whole given a part and the percentage.
8. Solve multistep percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error, expressing monthly rent as a percentage of take-home pay.*

## The Number System 7-NS

**The system of rational numbers**

1. Understand that the rules for manipulating fractions extend to complex fractions.
2. Understand and perform addition and subtraction with rational numbers:
   a. Understand that on a number line, the sum $p + q$ is the number located a distance $|q|$ from $p$, to the right of $p$ if $q$ is positive and to the left of $p$ if $q$ is negative. A number and its opposite are additive inverses (i.e., their sum is zero).
   b. Compute sums of signed numbers using the laws of arithmetic. *For example, $7 + (-3) = 4$ because $7 + (-3) = (4 + 3) + (-3) = 4 + [3 + (-3)] = 4 + [0] = 4$.*
   c. Understand that subtraction of rational numbers is defined by viewing a difference as the solution of an unknown-addend addition problem. Subtraction of a rational number gives the same answer as adding its additive inverse.
   d. Explain and justify rules for adding and subtracting rational numbers, using a number line and practical contexts. *For example, relate $r + (-s) = r - s$ to a bank transaction; explain why $p - (q + r) = p - q - r$.*
   e. Understand that the additive inverse of a sum is the sum of the additive inverses, that is $-(p + q) = -p + -q$. *For example, $-(6 + -2) = (-6) + 2$ because $[6 + (-2)] + [(-6) + 2] = [6 + (-6)] + [(-2) + 2] = [0] + [0] = 0$.*
3. Understand and perform multiplication and division with rational numbers:
   a. Understand that the extension of multiplication from fractions to rational numbers is determined by the requirement that multiplication and addition satisfy the laws of arithmetic, particularly the distributive law, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers.
   b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If $p/q$ is a rational number, then $-(p/q) = (-p)/q = p/(-q)$.
   c. Calculate products and quotients of rational numbers, and use multiplication and division to solve word problems. *Include signed quantities.*

**The system of real numbers**

4. Understand that there are numbers that are not rational numbers, called irrational numbers, e.g., $\pi$ and $\sqrt{2}$. Together the rational and irrational numbers form the real number system. In school mathematics, the real numbers are assumed to satisfy the laws of arithmetic.

## Expressions and Equations 7-EE

**Expressions**

1. Interpret numerical expressions at a level necessary to calculate their value using a calculator or spreadsheet. For expressions with variables, use and interpret conventions of algebraic notation, such as $y/2$ is $y \div 2$ or $1/2 \times y$; $(3 \pm y)/5$ is $(3 \pm y) \div 5$ or $1/5 \times (3 \pm y)$; $a^2$ is $a \times a$, $a^3$ is $a \times a \times a$, $a^2b$ is $a \times a \times b$.
2. Generate equivalent expressions from a given expression using the laws of arithmetic and conventions of algebraic notation. Include:
   a. Adding and subtracting linear expressions, as in $(2x + 3) + x + (2 - x) = 2x + 5$.
   b. Factoring, as in $4x + 4y = 4(x + y)$ or $5x + 7x + 10y + 14y = 12x + 24y = 12(x + 2y)$.
   c. Simplifying, as in $-2(3x - 5) + 4x = 10 - 2x$ or $x/3 + (x - 2)/4 = 7x/12 - 1/2$.

**Quantitative relationships and the algebraic approach to problems**

3. Choose variables to represent quantities in a word problem, and construct simple equations to solve the problem by reasoning about the quantities.
   a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where $p$, $q$, and $r$ are nonnegative rational numbers and the solution is a nonnegative rational number. Fluently solve equations of these forms, e.g., by undoing the operations involved in producing the expression on the left.
   b. Solve the same word problem arithmetically and algebraically. *For example, "J. has 4 packages of balloons and 5 single balloons. In all, he has 21 balloons. How many balloons are in a package?" Solve this problem arithmetically (using a sequence of operations on the given numbers), and also solve it by using a variable to stand for the number of balloons in a package, constructing an equation such as $4b + 5 = 21$ to describe the situation then solving the equation.*
   c. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, $P + 0.05P = 1.05P$ means that "increase by 5%" is the same as "multiply by 1.05."*

## Geometry 7-G

**Congruence and similarity**

1. Verify experimentally the fact that a rigid motion (a sequence of rotations, reflections, and translations) preserves distance and angle, e.g., by using physical models, transparencies, or dynamic geometry software:
   a. Lines are taken to lines, and line segments to line segments of the same length.
   b. Angles are taken to angles of the same measure.
   c. Parallel lines are taken to parallel lines.
2. Understand the meaning of congruence: a plane figure is congruent to another if the second can be obtained from the first by a rigid motion.
3. Verify experimentally that a dilation with scale factor $k$ preserves lines and angle measure, but takes a line segment of length $L$ to a line segment of length $kL$.
4. Understand the meaning of similarity: a plane figure is similar to another if the second can be obtained from the first by a similarity transformation (a rigid motion followed by a dilation).
5. Solve problems involving similar figures and scale drawings. *Include computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.*
6. Use informal arguments involving approximation by lines, squares, and cubes to see that a similarity transformation with a scale factor of $k$ leaves angle measures unchanged, changes lengths by a factor of $k$, changes areas by a factor of $k^2$, and changes volumes by a factor of $k^3$.
7. Know the formulas relating the area, radius and circumference of a circle and solve problems requiring the use of these formulas; give an informal derivation of the relationship between the circumference and area of a circle.

**Angles**

8. Justify facts about the angle sum of triangles, exterior angles, and alternate interior angles created when parallel lines are cut by a transversal, e.g., by using physical models, transparencies, or dynamic geometry software to make rigid motions and give informal arguments. *For example, arrange three copies of the same triangle so that the three angles appear to form a line, and give an argument in terms of transversals why this is so.*
9. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

**Situations involving randomness**

1. Simulate situations involving randomness using random numbers generated by a calculator or a spreadsheet or taken from a table. *For example, if you guess at all ten true/false questions on a quiz, how likely are you to get at least seven answers correct?*
2. Use proportional reasoning to predict relative frequencies of outcomes for situations involving randomness, but for which a theoretical answer can be determined. For *example, when rolling a number cube 600 times, one would predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. How far off might your prediction be? Use technology to generate multiple samples to approximate a distribution of sample proportions. Repeat the process for smaller sample sizes.*

**Random sampling to draw inferences about a population**

3. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
4. Understand the importance of measures of variation in sample quantities (like means or proportions) in reasoning about how well a sample quantity estimates or predicts the corresponding population quantity.
5. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

**Comparative inferences about two populations**

6. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean average deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*
7. Use measures of center and measures of variability for numerical data from uniform random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade book are generally longer than the words in a chapter of a sixth-grade book.*

In Grade 8, instructional time should focus on three critical areas: (1) solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) understanding and applying the Pythagorean Theorem.

(1) Students use linear equations, and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize proportions ($y/x = m$ or $y = mx$) as a special case of linear equations, $y = mx + b$, understanding that the constant of proportionality ($m$) is the slope and the graphs are lines through the origin. They understand that the slope ($m$) of a line is a constant rate of change, so that if the input or $x$-coordinate changes by an amount $A$, the output or $y$-coordinate changes by the amount $mA$. Students also formulate and solve linear equations in one variable and use these equations to solve problems. Students also use a linear equation to describe the association between two quantities in a data set (such as arm span vs. height for students in a classroom). At this grade, fitting the model, and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question.

Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

(2) Students grasp the concept of a function as a rule that assigns to each element of its domain exactly one element of its range. They use function notation and understand that functions describe situations where one quantity determines another. They can translate among verbal, tabular, graphical, and algebraic representations of functions (noting that tabular and graphical representations are usually only partial representations), and they describe how aspects of the function are reflected in the different representations.

(3) Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem is valid, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons.

**The system of real numbers**

1. Understand informally that every number on a number line has a decimal expansion, which can be found for rational numbers using long division. Rational numbers are those with repeating decimal expansions (this includes finite decimals which have an expansion that ends in a sequence of zeros).
2. Informally explain why $\sqrt{2}$ is irrational.
3. Use rational approximations (including those obtained from truncating decimal expansions) to compare the size of irrational numbers, locate them approximately on a number line, and estimate the value of expressions (e.g., $\pi^2$). *For example, show that the square root of 2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

## Expressions and Equations 8-EE

**Linear equations in one variable**

1. Understand that a linear equation in one variable might have one solution, infinitely many solutions, or no solutions. Which of these possibilities is the case can be determined by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where $a$ and $b$ are different numbers).
2. Solve linear equations with rational number coefficients, including equations that require expanding expressions using the distributive law and collecting like terms.

**Linear equations in two variables**

3. Understand that the slope of a non-vertical line in the coordinate plane has the same value for any two distinct points used to compute it. This can be seen using similar triangles.
4. Understand that two lines with well-defined slopes are parallel if and only if their slopes are equal.
5. Understand that the graph of a linear equation in two variables is a line, the set of pairs of numbers satisfying the equation. If the equation is in the form $y = mx + b$, the graph can be obtained by shifting the graph of $y = mx$ by $b$ units (upwards if $b$ is positive, downwards if $b$ is negative). The slope of the line is $m$.
6. Understand that a proportional relationship between two variable quantities $y$ and $x$ can be represented by the equation $y = mx$. The constant $m$ is the unit rate, and tells how much of $y$ per unit of $x$.
7. Graph proportional relationships and relationships defined by a linear equation; find the slope and interpret the slope in context.
8. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*

**Systems of linear equations**

9. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
10. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because the quantity $3x + 2y$ cannot simultaneously be 5 and 6.*
11. Solve and explain word problems leading to two linear equations in two variables.
12. Solve problems involving lines and their equations. *For example, decide whether a point with given coordinates lies on the line with a given equation; construct an equation for a line given two points on the line or one point and the slope; given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*

## Functions 8-F

**Function concepts**

1. Understand that a function from one set (called the domain) to another set (called the range) is a rule that assigns to each element of the domain (an input) exactly one element of the range (the corresponding output). The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. *Function notation is not required in Grade 8.*
2. Evaluate expressions that define functions, and solve equations to find the input(s) that correspond to a given output.
3. Compare properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*

4. Understand that a function is linear if it can be expressed in the form $y = mx + b$ or if its graph is a straight line. *For example, the function $y = x^2$ is not a linear function because its graph contains the points (1,1), (−1,1) and (0,0), which are not on a straight line.*

**Functional relationships between quantities**

5. Understand that functions can describe situations where one quantity determines another.
6. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship; from two $(x, y)$ values, including reading these from a table; or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
7. Describe qualitatively the functional relationship between two quantities by reading a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

## Geometry 8-G

**Congruence and similarity**

1. Use coordinate grids to transform figures and to predict the effect of dilations, translations, rotations and reflections.
2. Explain using rigid motions the meaning of congruence for triangles as the equality of all pair of sides and all pairs of angles.
3. Give an informal explanation using rigid motions of the SAS and ASA criteria for triangle congruence, and use them to prove simple theorems.
4. Explain using similarity transformations the meaning of similarity for triangles as the equality of all pairs of angles and the proportionality of all pairs of sides.
5. Give an informal explanation using similarity transformations of the AA and SAS criteria for triangle similarity, and use them to prove simple theorems.

**The Pythagorean Theorem**

6. The side lengths of a right triangle are related by the Pythagorean Theorem. Conversely, if the side lengths of a triangle satisfy the Pythagorean Theorem, it is a right triangle.
7. Explain a proof of the Pythagorean Theorem and its converse.
8. Use the Pythagorean Theorem to determine unknown side lengths in right triangles and to solve problems in two and three dimensions.
9. Use the Pythagorean Theorem to find the distance between two points in a coordinate system.

**Plane and solid geometry**

10. Draw (freehand, with ruler and protractor, and with technology) geometric shapes from given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the triangle is uniquely defined, ambiguously defined or nonexistent.
11. Understand that slicing a three-dimensional figure with a plane produces a two-dimensional figure. Describe plane sections of right rectangular prisms and right rectangular pyramids.
12. Use hands-on activities to demonstrate and describe properties of: parallel lines in space, the line perpendicular to a given line through a given point, lines perpendicular to a given plane, lines parallel to a given plane, the plane or planes passing through three given points, and the plane perpendicular to a given line at a given point.

## Statistics and Probability 8-SP

**Patterns of association in bivariate data**

1. Understand that scatter plots for bivariate measurement data may reveal patterns of association between two quantities.
2. Construct and interpret scatter plots for bivariate measurement data. Describe patterns such as clustering, outliers, positive or negative association, linear association, nonlinear association.
3. Understand that a straight line is a widely used model for exploring relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
4. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*
5. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables

collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*

## Where is the College-and-Career-Readiness line drawn?

The high school standards specify the mathematics that all students should learn in order to be college and career ready. The high school standards also describe additional mathematics that students should learn to pursue careers and majors in science, technology, engineering and mathematics (STEM) fields. Other forms of advanced work are possible (for example in discrete mathematics or advanced statistics) and can be eventually added to the standards.

Standards beyond the college and career readiness level that are necessary for STEM careers are prefixed with a symbol STEM, as in this example:

> STEM Graph complex numbers in polar form and interpret arithmetic operations on complex numbers geometrically.

Any standard without this tag is understood to be in the common core mathematics curriculum for all students.

## How are the high school standards organized?

The high school standards are listed in conceptual categories, as shown in the Table below. **Appendix A (online) contains drafts of model course descriptions based on these standards**. Conceptual categories portray a coherent view of core high school mathematics; a student's work with Functions, for example, crosses a number of traditional course boundaries, potentially up through and including Calculus.

Conceptual Organization of the High School Standards

| CCRS Draft September 17th | High School Standards Draft March 10 |
|---|---|
| Number | Number and Quantity |
| Quantity | |
| Expressions | Algebra |
| Equations | |
| Coordinates | |
| Functions | Functions |
| Geometry | Geometry |
| Statistics | Statistics and Probability |
| Probability | |
| Modeling | Modeling** |

* Standards formerly appearing under Coordinates now appear under other headings.

** Making mathematical models is now a Standard for Mathematical Practice. Standards formerly appearing under Modeling are now distributed under other major headings. High school standards with relevance to modeling are flagged with a (★) symbol. A narrative description of modeling remains in the high school standards, but there are no specific standard statements in that narrative description.

## Mathematics | High School—Number and Quantity

**Numbers and Number Systems.** During the years from kindergarten to eighth grade, students must repeatedly extend their conception of number. At first, "number" means "counting number": 1, 2, 3, … Soon after that, 0 is used to represent "none" and the whole numbers are formed by the counting numbers together with zero. The next extension is fractions. At first, fractions are barely numbers and tied strongly to pictorial representations. Yet by the time students understand division of fractions, they have a strong concept of fractions as numbers and have connected them, via their decimal representations, with the base-ten system used to represent the whole numbers. During middle school, fractions are augmented by negative fractions to form the rational numbers. In Grade 7, students extend this system once more, augmenting the rational numbers with the irrational numbers to form the real numbers. In high school, students will be exposed to yet another extension of number, when the real numbers are augmented by the imaginary numbers to form the complex numbers.

Students sometimes have difficulty accepting new kinds of numbers when these differ in appearance and properties from those of a familiar system. For example, students might decide that complex numbers are not numbers because they are not written with numerical digits, or because they do not describe positive or negative quantities. Indeed, this ascent through number systems makes it fair to ask: what does the word *number* mean that it can mean all of these things? One possible answer is that a number is something that can be used to do mathematics: calculate, solve equations, or represent measurements. Historically, number systems have been extended when there is an intellectual or practical benefit in using the new numbers to solve previously insoluble problems.[1]

Although the referent of "number" changes, the four operations stay the same in important ways. The commutative, associative, and distributive laws extend the properties of operations to the integers, rational numbers, real numbers, and complex numbers. The inverse relationships between addition and subtraction, and multiplication and division are maintained in these larger systems.

Calculators are useful in this strand to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

**Quantities.** In their work in measurement up through Grade 8, students primarily measure commonly used attributes such as length, area, volume, and so forth. In high school, students encounter novel situations in which they themselves must conceive the attributes of interest. Such a conceptual process might be called quantification. Quantification is important for science, as when surface area suddenly "stands out" as an important variable in evaporation. Quantification is also important for companies, who must conceptualize relevant attributes and create or choose suitable metrics by which to measure them.

## Content Outline

The Real Number System

Quantities

The Complex Number System

Vector Quantities and Matrices

[1] See Harel, G., "A Standpoint of Research on Middle/Higher Number and Quantity," a research review provided for the Common Core State Standards Initiative.

1. Understand that the laws of exponents for positive integer exponents follow from an understanding of exponents as indicating repeated multiplication, and from the associative law for multiplication.
2. Understand that the definition of the meaning of zero, positive rational, and negative exponents follows from extending the laws of exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, since* $(5^{1/3})^3 = 5^{(1/3)\cdot 3} = 5^1 = 5$, $5^{1/3}$ *is a cube root of* 5.
3. Understand that sums and products of rational numbers are rational.
4. Understand that the sum of a rational number and an irrational number is irrational, and that the product of a nonzero rational number and an irrational number is irrational.
5. Rewrite expressions using the laws of exponents. *For example,* $(5^{1/2})^3 = 5^{3/2}$ *and* $1/5 = 5^{-1}$.

## Quantities★ N-Q

1. Understand that the magnitude of a quantity is independent of the unit used to measure it. *For example, the density of a liquid does not change when it is measured in another unit. Rather, its measure changes. The chosen unit "measures" the quantity by giving it a numerical value ("the density of lead is 11.3 times that of water").*
2. Use units as a way to understand problems and to guide the solution of multi-step problems, involving, e.g., acceleration, currency conversions, derived quantities such as person-hours and heating degree days, social science rates such as per-capita income, and rates in everyday life such as points scored per game.
3. Define metrics for the purpose of descriptive modeling. *For example, find a good measure of overall highway safety; propose and debate measures such as fatalities per year, fatalities per year per driver, or fatalities per vehicle-mile traveled.*
4. Add, subtract, multiply, and divide numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
5. Use and interpret quantities and units correctly in algebraic formulas.
6. Use and interpret quantities and units correctly in graphs and data displays (function graphs, data tables, scatter plots, and other visual displays of quantitative information). Generate graphs and data displays using technology.

## The Complex Number System N-CN

1. Understand that the relation $i^2 = -1$ and the commutative, associative, and distributive laws can be used to calculate with complex numbers.
2. STEM Understand that polynomials can be factored over the complex numbers, e.g., as in $x^2 + 4 = (x + 2i)(x - 2i)$.
3. STEM Understand that complex numbers can be visualized on the complex plane. Real numbers correspond to points on the horizontal (real) axis, and imaginary numbers to points on the vertical axis.
4. STEM Understand that on the complex plane, arithmetic of complex numbers can be interpreted geometrically: addition is analogous to vector addition, and multiplication can be understood as rotation and dilation about the origin. Complex conjugation is reflection across the real axis.
5. STEM Understand that on the complex plane, as on the real line, the distance between numbers is the absolute value of the difference, and the midpoint of a segment is the average of the numbers at its endpoints.
6. Add, subtract, and multiply complex numbers.
7. STEM Find the conjugate of a complex number; use conjugates to find absolute values and quotients of complex numbers.
8. STEM Solve quadratic equations with real coefficients that have complex solutions using a variety of methods.
9. STEM Graph complex numbers in rectangular form.
10. STEM Graph complex numbers in polar form and interpret arithmetic operations on complex numbers geometrically.
11. STEM Explain why the rectangular and polar forms of a complex number represent the same number.

★ Standard with close connection to modeling.

1. STEM Understand that vector quantities have both magnitude and direction. Vector quantities are typically represented by directed line segments. The magnitude of a vector $\mathbf{v}$ is commonly denoted $|\mathbf{v}|$ or $||\mathbf{v}||$.
2. STEM Understand that vectors are determined by the coordinates of their initial and terminal points, or by their components.
3. STEM Understand that vectors can be added end-to-end, component-wise, or by the parallelogram rule. The magnitude of a sum of two vectors is typically not the sum of the magnitudes.
4. STEM Understand that a vector $\mathbf{v}$ can be multiplied by a real number $c$ (called a scalar in this context) to form a new vector $c\mathbf{v}$ with magnitude $|c|v$. When $|c|v \neq 0$, the direction of $c\mathbf{v}$ is either along $\mathbf{v}$ (for $c > 0$) or against $\mathbf{v}$ (for $c < 0$). Scalar multiplication can be shown graphically by scaling vectors and possibly reflecting them in the origin; scalar multiplication can also be performed component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.
5. STEM Understand that vector subtraction $\mathbf{v} - \mathbf{w}$ is defined as $\mathbf{v} + (-\mathbf{w})$. Two vectors can be subtracted graphically by connecting the tips in the appropriate order.
6. STEM Understand that matrices can be multiplied by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled. Matrices of the same dimensions can be added or subtracted. Matrices with compatible dimensions can be multiplied. Unlike multiplication of numbers, matrix multiplication is not a commutative operation, but still satisfies the associative and distributive laws.
7. STEM Understand that a vector, when regarded as a matrix with one column, can be multiplied by a matrix of suitable dimensions to produce another vector. A $2 \times 2$ matrix can be viewed as a transformation of the plane.
8. STEM Understand that a system of linear equations can be represented as a single matrix equation in a vector variable.
9. STEM Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.
10. STEM Perform basic vector operations (addition, subtraction, scalar multiplication) both graphically and algebraically.
11. STEM Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.
12. STEM Solve problems involving velocity and quantities that can be represented by vectors.★
13. STEM Add, subtract, and multiply matrices of appropriate dimensions.
14. STEM Use matrices to store and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
15. STEM Represent systems of linear equations as matrix equations.
16. STEM Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension greater than $3 \times 3$).

★ Standard with close connection to modeling.

**Expressions.** An expression is a description of a computation on numbers and symbols that represent numbers, using arithmetic operations and the operation of raising a number to rational exponents. Conventions about the use of parentheses and the order of operations assure that each expression is unambiguous. Creating an expression that describes a computation involving a general quantity requires the ability to express the computation in general terms, abstracting from specific instances.

Reading an expression with comprehension involves analysis of its underlying structure. This may suggest a different but equivalent way of writing the expression that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price $p$. Rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying the price by a constant factor.

Algebraic manipulations are governed by deductions from the commutative, associative, and distributive laws and the inverse relationships between the four operations, and the conventions of algebraic notation. These extend what students have learned about arithmetic expressions in K–8 to expressions that involve exponents, radicals, and representations of real numbers, and, for STEM-intending students, complex numbers.

At times, an expression is the result of applying operations to simpler expressions. Viewing such an expression by singling out these simpler expressions can sometimes clarify its underlying structure.

A spreadsheet or a CAS environment can be used to experiment with algebraic expressions, perform complex algebraic manipulations,and understand how algebraic manipulations behave.

**Equations and inequalities**. An equation is a statement that two expressions are equal. Solutions to an equation are numbers that make the equation true when assigned to the variables in it. If the equation is true for all numbers, then it is called an identity; identities are often discovered by using the laws of arithmetic or the laws of exponents to transform one expression into another.

The solutions of an equation in one variable form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs of numbers, which can be graphed in the coordinate plane. Two or more equations and/or inequalities form a system. A solution for such a system must satisfy every equation and inequality in the system.

An equation can often be solved by successively transforming it into one or more simpler equations. The process is governed by deductions based on the properties of equality. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, stimulating the extension of that system. For example, the solution of $x + 1 = 0$ is an integer, not a whole number; the solution of $2x + 1 = 0$ is a rational number, not an integer; the solutions of $x^2 - 2 = 0$ are real numbers, not rational numbers; and the solutions of $x^2 + 2 = 0$ are complex numbers, not real numbers.

The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = ((b_1+b_2)/2)h$, can be solved for $h$ using the same deductive process.

Inequalities can be solved by reasoning about the properties of inequality. Many, but not all, of the properties of equality continue to hold for inequalities and can be useful in solving them.

*Connections to Functions and Modeling*. Expressions can define functions, and equivalent expressions define the same function. Equations in two variables may also define functions. Asking when two functions have the same value leads to an equation; graphing the two functions allows for the approximate solution of the equation. Converting a verbal description to an equation, inequality, or system of these is an essential skill in modeling.

## Content Outline

### Seeing Structure in Expressions

### Arithmetic with Polynomials and Rational Expressions

### Creating Equations that Describe Numbers or Relationships

### Reasoning with Equations and Inequalities

1. Understand that different forms of an expression may reveal different properties of the quantity in question; a purpose in transforming expressions is to find those properties. *Examples: factoring a quadratic expression reveals the zeros of the function it defines, and putting the expression in vertex form reveals its maximum or minimum value; the expression* $1.15^t$ *can be rewritten as* $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ *to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*
2. Understand that complicated expressions can be interpreted by viewing one or more of their parts as single entities.
3. Interpret an expression that represents a quantity in terms of the context. *Include interpreting parts of an expression, such as terms, factors and coefficients.* ★
4. Factor, expand, and complete the square in quadratic expressions.
5. See expressions in different ways that suggest ways of transforming them. *For example, see* $x^4 - y^4$ *as* $(x^2)^2 - (y^2)^2$, *thus recognizing it as a difference of squares that can be factored as* $(x^2 - y^2)(x^2 + y^2)$.
6. Rewrite expressions using the laws of exponents. *For example,* $(x^{1/2})^3 = x^{3/2}$ *and* $1/x = x^{-1}$.
7. Use the laws of exponents to interpret expressions for exponential functions, recognizing positive rational exponents as indicating roots of the base and negative exponents as indicating the reciprocal of a power. *For example, identify the per unit percentage change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, *and conclude whether it represents exponential growth or decay. Recognize that any nonzero number raised to the zero power is 1, for example,* $12(1.05)^0 = 12$. *Avoid common errors such as confusing* $6(1.05)^t$ *with* $(6 \cdot 1.05)^t$ *and* $5(0.03)^t$ *with* $5(1.03)^t$.
8. STEM Prove the formula for the sum of a geometric series, and use the formula to solve problems.

## Arithmetic with Polynomials and Rational Expressions A-APR

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication.
2. Understand that polynomial identities become true statements no matter which real numbers are substituted. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.*
3. Understand the Remainder Theorem: For a polynomial $p(x)$ and a number $a$, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
4. STEM Understand that the Binomial Theorem gives the expansion of $(x + a)^n$ in powers of $x$ for a positive integer $n$ and a real number $a$, with coefficients determined for example by Pascal's Triangle. The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument.
5. STEM Understand that rational expressions are quotients of polynomials. They form a system analogous to the rational numbers, closed under division by a nonzero rational function.
6. Add, subtract and multiply polynomials.
7. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the polynomial.
8. Transform simple rational expressions using the commutative, associative, and distributive laws, and the inverse relationship between multiplication and division.
9. Divide a polynomial $p(x)$ by a divisor of the form $x - a$ using long division.
10. STEM Identify zeros and asymptotes of rational functions, when suitable factorizations are available, and use the zeros and asymptotes to construct a rough graph of the function.
11. STEM Divide polynomials, using long division for linear divisors and long division or a computer algebra system for higher degree divisors.

## Creating Equations That Describe Numbers or Relationships A-CED*

1. Understand that equations in one variable are often created to describe properties of a specific but unknown number.
2. Understand that equations in two or more variables that represent a relationship between quantities can be built by experimenting with specific numbers in the relationship.
3. Write equations and inequalities that specify an unknown quantity or to express a relationship between two or more quantities. Use the equations and inequalities to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*

★ Standard with close connection to modeling.

4. Rearrange formulas to highlight a quantity of interest. *For example, transform Ohm's law $V = IR$ to highlight resistance $R$; in motion with constant acceleration, transform $v_{f,x}^2 - v_{i,x}^2 = 2a_x(x_f - x_i)$ to highlight the change in position along the x-axis, $x_f - x_i$.*

## Reasoning with Equations and Inequalities A-REI

1. Understand that to solve an equation algebraically, one makes logical deductions from the equality asserted by the equation, often in steps that replace it with a simpler equation whose solutions include the solutions of the original one.
2. Understand that the method of completing the square can transform any quadratic equation in $x$ into an equivalent equation of the form $(x - p)^2 = q$. This leads to the quadratic formula.
3. Understand that given a system of two linear equations in two variables, adding a multiple of one equation to another produces a system with the same solutions. This principle, combined with principles already encountered with equations in one variable, allows for the simplification of systems.
4. Understand that the graph of an equation in two variables is the set of its solutions plotted in the coordinate plane, often forming a curve or a line.
5. Understand that solutions to two equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
6. Understand that the solutions to a linear inequality in two variables can be graphed as a half-plane (excluding the boundary in the case of a strict inequality).
7. Understand that solutions to several linear inequalities in two variables correspond to points in the intersection of the regions in the plane defined by the solutions to the inequalities.
8. Understand that equations and inequalities can be viewed as constraints in a problem situation, e.g., inequalities describing nutritional and cost constraints on combinations of different foods.★
9. STEM Understand that the relationship between an invertible function $f$ and its inverse function can be used to solve equations of the form $f(x) = c$.
10. Solve simple rational and radical equations in one variable, noting and explaining extraneous solutions.
11. Solve linear equations in one variable, including equations with coefficients represented by letters.
12. Solve quadratic equations in one variable. *Include methods such as inspection (e.g. for $x^2 = 49$), square roots, completing the square, the quadratic formula and factoring. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers $a$ and $b$.*
13. Solve equations $f(x) = g(x)$ approximately by finding the intersections of the graphs of $f(x)$ and $g(x)$, e.g. using technology to graph the functions. *Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, exponential, and logarithmic functions.*
14. Solve linear inequalities in one variable and graph the solution set on a number line.
15. Solve systems of linear equations algebraically and graphically, focusing on pairs of linear equations in two variables.
16. Solve algebraically a simple system consisting of one linear equation and one quadratic equation in two variables; for example, find points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.
17. Graph the solution set of a system of linear inequalities in two variables.
18. In modeling situations, represent constraints by systems of equations and/or inequalities, and interpret solutions of these systems as viable or non-viable options in the modeling context.★
19. In the context of exponential models, solve equations of the form $a\,b^{ct} = d$ where $a$, $c$, and $d$ are specific numbers and the base $b$ is 2, 10, or $e$.★
20. STEM Relate the properties of logarithms to the laws of exponents and solve equations involving exponential functions.
21. STEM Use inverse functions to solve equations of the form $a\sin(bx + c) = d$, $a\cos(bx + c) = d$, and $a\tan(bx + c) = d$.

★ Standard with close connection to modeling.

## Mathematics | High School—Functions

Functions describe situations where one quantity determines another. For example, the return on $10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because nature and society are full of dependencies between quantities, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour, $v$; the rule $T(v) = 100/v$ expresses this relationship algebraically and defines a function whose name is $T$.

The set of inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context.

A function can be described in various ways, such as by a graph (e.g., the trace of a seismograph); by a verbal rule, as in, "I'll give you a state, you give me the capital city"; or by an algebraic expression like $f(x) = a + bx$. The graph of a function is often a useful way of visualizing the relationship the function models, and manipulating a mathematical expression for a function can throw light on the function's properties. Graphing technology and spreadsheets are also useful tools in the study of functions.

Functions presented as expressions can model many important phenomena. Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with a constant term of zero describe proportional relationships.

A graphing utility or a CAS can be used to experiment with properties of the functions and their graphs and to build computational models of functions, including recursively defined functions.

*Connections to Expressions, Equations, Modeling and Coordinates.* Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

## Content Outline



† Specific standards for calculus domains are not listed.

## Interpreting Functions A-IF

1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$.
2. Understand that functions of a single variable have key characteristics, including: zeros; extreme values; average rates of change (over intervals); intervals of increasing, decreasing and/or constant behavior; and end behavior.
3. Understand that a function defined by an expression may be written in different but equivalent forms, which can reveal different properties of the function.
4. Use function notation and evaluate functions for inputs in their domains.
5. Describe qualitatively the functional relationship between two quantities by reading a graph (e.g., where the function is increasing or decreasing, what its long-run behavior appears to be, and whether it appears to be periodic). ★
6. Sketch a graph that exhibits the qualitative features of a function that models a relationship between two quantities. ★
7. Compare properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, draw conclusions about the graph of a quadratic function from its algebraic expression.*
8. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.* ★
9. Describe the qualitative behavior of functions presented in graphs and tables. *Identify: intercepts; intervals where the function is increasing, decreasing, positive or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.* ★
10. Use technology to exhibit the effects of parameter changes on the graphs of linear, power, quadratic, square root, cube root, and polynomial functions, and simple rational, exponential, logarithmic, sine, cosine, absolute value, and step functions. ★
11. Transform quadratic polynomials algebraically to reveal different features of the function they define, such as zeros, extreme values, and symmetry of the graph.

## Building Functions A-BF

1. Understand that functions can be described by specifying an explicit expression, a recursive process or steps for calculation.
2. Understand that sequences are functions whose domain is a subset of the nonnegative integers.
3. STEM Understand that composing a function $f$ with a function $g$ creates a new function called the composite function—for an input number $x$, the output of the composite function is $f(g(x))$.
4. STEM Understand that the inverse of an invertible function "undoes" what the function does; that is, composing the function with its inverse in either order returns the original input. One can sometimes produce an invertible function from a non-invertible function by restricting the domain (e.g., squaring is not an invertible function on the real numbers, but squaring is invertible on the nonnegative real numbers).
5. Write a function that describes a relationship between two quantities, for example by varying parameters in and combining standard function types (such as linear, quadratic or exponential functions). Use technology to experiment with parameters and to illustrate an explanation of the behavior of the function when parameters vary. ★
6. Solve problems involving linear, quadratic, and exponential functions. ★
7. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.
8. Generate an arithmetic or geometric sequence given a recursive rule for the sequence. ★
9. As a way to describe routine modeling situations, write arithmetic and geometric sequences both recursively and in closed form, and translate between the two forms. ★
10. STEM Evaluate composite functions and compose functions symbolically.
11. STEM Read values of an inverse function from a graph or a table, given that the function has an inverse.
12. STEM For linear or simple exponential functions, find a formula for an inverse function by solving an equation.
13. STEM Verify symbolically by composition that one function is the inverse of another.

## Linear, Quadratic, and Exponential Models A-LQE

1. Understand that a linear function, defined by $f(x) = mx + b$ for some constants $m$ and $b$, models a situation in which a quantity changes at a constant rate, $m$, relative to another. ★
2. Understand that quadratic functions have maximum or minimum values and can be used to model problems with optimum solutions. ★
3. Understand that an exponential function, defined by $f(x) = ab^x$ or by $f(x) = a(1 + r)^x$ for some constants $a$, $b > 0$ and $r > -1$, models a situation where a quantity grows or decays by a constant factor or a constant percentage change over each unit interval. ★
4. Understand that linear functions grow by equal differences over equal intervals; exponential functions grow by equal factors over equal intervals. ★
5. Understand that in an arithmetic sequence, differences between consecutive terms form a constant sequence, and second differences are zero. Conversely, if the second differences are zero, the sequence is arithmetic. Arithmetic sequences can be seen as linear functions. ★
6. Understand that in a sequence that increases quadratically (e.g., $a_n = 3n^2 + 2n + 1$), differences between consecutive terms form an arithmetic sequence, and second differences form a constant sequence. Conversely, if the second differences form a constant sequence with nonzero value, the sequence increases quadratically. ★
7. Understand that in a geometric sequence, ratios of consecutive terms are all the same. ★
8. Understand that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. ★
9. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. ★
10. Construct a function to describe a linear relationship between two quantities. Determine the rate of change and constant term of a linear function from a graph, a description of a relationship, or from two $(x, y)$ values (include reading these from a table). ★
11. Use quadratic functions to model problems, e.g., in situations with optimum solutions. ★
12. Construct an exponential function in the form $f(x) = a(1 + r)^x$ or $f(x) = ab^x$ to describe a relationship in which one quantity grows with respect to another at a constant percent growth rate or a with a constant growth factor. ★
13. Interpret the rate of change and constant term of a linear function or sequence in terms of the situation it models, and in terms of its graph or a table of values. ★
14. Calculate and interpret the growth factor for an exponential function (presented symbolically or as a table) given a fixed interval. Estimate the growth factor from a graph. ★
15. Recognize a quantitative relationship as linear, exponential, or neither from description of a situation. ★
16. Compare quantities increasing exponentially to quantities increasing linearly or as a polynomial function. ★

## Trigonometric Functions F-TF

1. STEM Understand that the unit circle in the coordinate plane enables one to define the sine, cosine, and tangent functions for real numbers.
2. STEM Understand that trigonometric functions are periodic by definition, and sums and products of functions with the same period are periodic.
3. STEM Understand that restricting trigonometric functions to a domain on which they are always increasing or always decreasing allows for the construction of an inverse function.
4. STEM Revisit trigonometric functions and their graphs in terms of radians.
5. STEM Use the unit circle to determine geometrically the values of sine, cosine, tangent for integer multiples of $\pi/4$ and $\pi/6$.
6. STEM Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
7. STEM Solve simple trigonometric equations formally using inverse trigonometric functions and evaluate the solutions numerically using technology. *Solving trigonometric equations by means of the quadratic formula is optional.*

## Limits and Continuity† F-LC

★ Standard with close connection to modeling.

† Specific standards for calculus domains are not listed.

† Specific standards for calculus domains are not listed.

# Mathematics | High School—Modeling

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

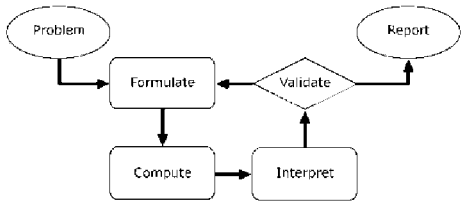
A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of 3 million people, and how it might be distributed.
- Planning a table tennis tournament for 7 players at a club with 4 tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Risk situations, like extreme sports, pandemics and terrorism.
- Relating population statistics to individual predictions.

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.




The basic modeling cycle is summarized in the diagram. It involves (1) identifying variables in the situation and selecting those than represent essential features, (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables, (3) analyzing and performing operations on these relationships to draw conclusions, (4) interpreting the results of the mathematics in terms of the original situation, (5) validating the conclusions by comparing them with the situation, and then, either improving the model or, if it is acceptable, (6) reporting on the conclusions and the reasoning behind them. Choices, assumptions and approximations are present throughout this cycle.

In descriptive modeling, a model simply describes the phenomena or summarizes them in a compact form. Graphs of observations are a familiar descriptive model—for example, graphs of global temperature and atmospheric $CO_2$ over time.

Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such

problems.

Graphing utilities, spreadsheets, CAS environments, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

## Modeling Standards

*Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol* (★).

## Mathematics | High School—Statistics and Probability*

Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data; in critically reviewing uses of statistics in public media and other reports it is important to consider the study design, how the data were gathered, and the analyses employed as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model. One begins to make a probability model by listing or describing the possible outcomes (the sample space) and assigning probabilities. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the additive and multiplicative laws of probability. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of two-way tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, functional models, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

*Connections to Functions and Modeling*. Functional models may be used to approximate data; if the data are approximately linear, the relationship may be modeled with a regression line and the strength and direction of such a relationship may be expressed through a correlation coefficient.

## Content Outline

### Summarizing Categorical and Measurement Data

### Probability Models

### Independently Combined Probability Models

### Making Inferences and Justifying Conclusions Drawn from Data

### Conditional Probability and the Laws of Probability

### Experimenting and Simulating to Model Probabilities

### Using Probability to Make Decisions

* Most or all of the standards in Statistics and Probability have a close connection to modeling.

1. Understand that statistical methods take variability into account to support making informed decisions based on data collected to answer specific questions.
2. Understand that visual displays and summary statistics condense the information in data sets into usable knowledge.
3. Understand that patterns of association or relationships between variables may emerge through careful analysis of multi-variable data.
4. Summarize comparative or bivariate categorical data in two-way frequency tables. Interpret joint, marginal and conditional relative frequencies in the context of the data, recognizing possible associations and trends in bivariate categorical data.
5. Compare data on two or more count or measurement variables by using plots on the real number line (dot plots, histograms, and box plots). Use statistics appropriate to the shape of the data distribution to summarize center (median, mean) and spread (interquartile range, standard deviation) of the data sets. Interpret changes in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
6. Represent bivariate quantitative data on a scatter plot and describe how the variables are related.
7. Fit a linear function for scatter plots that suggest a linear association. Informally assess the fit of the model function by plotting and analyzing residuals.
8. Use a model function fitted to the data to solve problems in the context of the data, interpreting the slope (rate of change) and the intercept (constant term).
9. Compute (using technology) and interpret the correlation coefficient for a linear relationship between variables.
10. Distinguish between correlation and causation.

## Probability Models S-PM

1. Understand that in a probability model, individual outcomes have probabilities that sum to 1. When outcomes are categorized, the probability of a given type of outcome is the sum of the probabilities of all the individual outcomes of that type.
2. Understand that uniform probability models are useful models for processes such as (i) the selection of a person from a population; (ii) the selection of a number in a lottery; (iii) any physical situation in which symmetry suggests that different individual outcomes are equally likely.
3. Understand that two different empirical probability models for the same process will rarely assign exactly the same probability to a given type of outcome. But if the data sets are large and the methods used to collect the data for the two data sets are consistent, the agreement between the models is likely to be reasonably good.
4. Understand that a (theoretical) uniform probability model may be judged by comparing it to an empirical probability model for the same process. If the theoretical assumptions are appropriate and the data set is large, then the two models should agree approximately. If the agreement is not good, then it may be necessary to modify the assumptions underlying the theoretical model or look for factors that might have affected the data used to create the empirical model.
5. Use a uniform probability model to compute probabilities for a process involving uncertainty, including the random selection of a person from a population and physical situations where symmetry suggests that different individual outcomes are equally likely.
   a. List the individual outcomes to create a sample space.
   b. Label the individual outcomes in the sample space to reflect important characteristics or quantities associated with them.
   c. Determine probabilities of individual outcomes, and determine the probability of a type or category of outcome as the fraction of individual outcomes it includes.
6. Generate data by sampling, repeated experimental trials, and simulations. Record and appropriately label such data, and use them to construct an empirical probability model. Compute probabilities in such models.
7. Compare probabilities from a theoretical model to probabilities from a corresponding empirical model for the same situation. If the agreement is not good, explain possible sources of the discrepancies.

## Independently Combined Probability Models S-IPM

1. Understand that to describe a pair of random processes (such as tossing a coin and rolling a number cube), or one random process repeated twice (such as randomly selecting a student in the class on two different days), two probability models can be combined into a single model.

a. The sample space for the combined model is formed by listing all possible ordered pairs that combine an individual outcome from the first model with an individual outcome from the second. Each ordered pair is an individual outcome in the combined model.

b. The total number of individual outcomes (ordered pairs) in the combined model is the product of the number of individual outcomes in each of the two original models.

2. Understand that when two probability models are combined independently, the probability that one type of outcome in the first model occurs together with another type of outcome in the second model is the product of the two corresponding probabilities in the original models (the Multiplication Rule).
3. Combine two uniform models independently to compute probabilities for a pair of random processes (e.g., flipping a coin twice, selecting one person from each of two classes).
   a. Use organized lists, tables and tree diagrams to represent the combined sample space.
   b. Determine probabilities of ordered pairs in the combined model, and determine the probability of a particular type or category of outcomes in the combined model, as the fraction of ordered pairs corresponding to it.
4. For two independently combined uniform models, use the Multiplication Rule to determine probabilities.

## Making Inferences and Justifying Conclusions S-IC

1. Understand that statistics is a process for making inferences about population parameters based on a sample from that population; randomness is the foundation for statistical inference.
2. Understand that the design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions.
3. Understand that simulation-based techniques are powerful tools for making inferences and justifying conclusions from data.
4. Use probabilistic reasoning to decide if a specified model is consistent with results from a given data-generating process. (For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?)
5. Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.
6. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
7. Use data from a randomized experiment to compare two treatments; justify significant differences between parameters through the use of simulation models for random assignment.
8. Evaluate reports based on data.

## Conditional Probability and the Laws of Probability S-CP

1. Understand that events are subsets of a sample space; often, events of interest are defined by using characteristics (or categories) of the sample points, or as unions, intersections, or complements thereof ("and," "or," "not"). A sample point may belong to several events (categories).
2. Understand that if A and B are two events, then in a uniform model the conditional probability of A given B, denoted by $P(A \mid B)$, is the fraction of B's sample points that also lie in A.
3. Understand that the laws of probability allow one to use known probabilities to determine other probabilities of interest.
4. Compute probabilities by constructing and analyzing sample spaces, representing them by tree diagrams, systematic lists, and Venn diagrams.
5. Use the laws of probability to compute probabilities.
6. Apply concepts such as intersections, unions and complements of events, and conditional probability and independence to define or analyze events, calculate probabilities and solve problems.
7. Construct and interpret two-way tables to show probabilities when two characteristics (or categories) are associated with each sample point. Use a two-way table to determine conditional probabilities. ★
8. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. ★
9. Use permutations and combinations to compute probabilities of compound events and solve problems.

★ Standard with close connection to modeling.

## Experimenting and Simulating to Model Probabilities S-ES

1. Understand that sets of data obtained from surveys, simulations or other means can be used as probability models, by treating the data set itself as a sample space, in which the sample points are the individual pieces of data.
2. Understand that the probability of an outcome can be interpreted as an assertion about the long-run proportion of the outcome's occurrence if the random experiment is repeated a large number of times.
3. Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.
4. Compare the results of simulations with predicted probabilities. When there are substantial discrepancies between predicted and observed probabilities, explain them.
5. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.

## Using Probability to Make Decisions S-MD

1. Understand that the expected value of a random variable is the weighted average of its possible values, with weights given by their respective probabilities.
2. Understand that when the possible outcomes of a decision can be assigned probabilities and payoff values, the decision can be analyzed as a random variable with an expected value, e.g., of an investment.
3. Calculate expected value, e.g. to determine the fair price of an investment.
4. Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).
5. Evaluate and compare two investments or strategies with the same expected value, where one investment or strategy is safer than the other.
6. Evaluate and compare two investments or strategies, where one investment or strategy is safer but has lower expected value. Include large and small investments, and situations with serious consequences.
7. Analyze decisions and strategies using probability concepts (e.g. product testing, medical testing, pulling a hockey goalie at the end of a game).

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Understanding the attributes of geometric objects often relies on measurement: a circle is a set of points in a plane at a fixed distance from a point; a cube is bounded by six squares of equal area; when two parallel lines are crossed by a transversal, pairs of corresponding angles are congruent.

The concepts of congruence, similarity and symmetry can be united under the concept of geometric transformation. Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent. Applying a scale transformation to a geometric figure yields a similar figure. The transformation preserves angle measure, and lengths are related by a constant of proportionality.

The definitions of sine, cosine and tangent for acute angles are founded on right triangle similarity, and, with the Pythagorean theorem, are fundamental in many real-world and theoretical situations.

Coordinate geometry is a rich field for exploration. How does a geometric transformation such as a translation or reflection affect the coordinates of points? How is the geometric definition of a circle reflected in its equation? Coordinates can describe locations in three dimensions and extend the use of algebraic techniques to problems involving the three-dimensional world we live in.

Dynamic geometry environments provide students with experimental and modeling tools that allow them to investigate geometric phenomena in much the same was as CAS environments allow them to experiment with algebraic phenomena.

*Connections to Equations and Inequalities*. The correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling and proof.

## Content Outline

### Congruence

### Similarity, Right Triangles, and Trigonometry

### Circles

### Expressing Geometric Properties with Equations

### Trigonometry of General Triangles

### Geometric Measurement and Dimension

### Modeling with Geometry

## Congruence G-CO

1. Understand that two geometric figures are congruent if there is a sequence of rigid motions (rotations, reflections, translations) that carries one onto the other. This is the principle of superposition.
2. Understand that criteria for triangle congruence are ways to specify enough measures in a triangle to ensure that all triangles drawn with those measures are congruent.
3. Understand that criteria for triangle congruence (ASA, SAS, and SSS) can be established using rigid motions.
4. Understand that geometric diagrams can be used to test conjectures and identify logical errors in fallacious proofs.
5. Know and use (in reasoning and problem solving) definitions of angles, polygons, parallel, and perpendicular lines, rigid motions, parallelograms and rectangles.
6. Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; two lines parallel to a third are parallel to each other; points on a perpendicular bisector of a segment are exactly those equidistant from the segment's endpoints.*
7. Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180°, base angles of isosceles triangles are congruent, the triangle inequality, the longest side of a triangle faces the angle with the greatest measure and vice-versa, the exterior-angle inequality, and the segment joining midpoints of two sides of a triangle parallel to the third side and half the length.*
8. Use and prove properties of and relationships among special quadrilaterals: parallelogram, rectangle, rhombus, square, trapezoid and kite.
9. Characterize parallelograms in terms of equality of opposite sides, in terms of equality of opposite angles, and in terms of bisection of diagonals; characterize rectangles as parallelograms with equal diagonals.
10. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*
11. Construct an equilateral triangle, a square and a regular hexagon inscribed in a circle.
12. Use two-dimensional representations to transform figures and to predict the effect of translations, rotations, and reflections.
13. Use two-dimensional representations to transform figures and to predict the effect of dilations.

## Similarity, Right Triangles, and Trigonometry G-SRT

1. Understand that dilating a line produces a line parallel to the original. (In particular, lines passing through the center of the dilation remain unchanged.)
2. Understand that the dilation of a given segment is parallel to the given segment and longer or shorter in the ratio given by the scale factor. A dilation leaves a segment unchanged if and only if the scale factor is 1.
3. Understand that the assumed properties of dilations can be used to establish the AA, SAS, and SSS criteria for similarity of triangles.
4. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of sine, cosine, and tangent.
5. Understand that a line parallel to one side of a triangle divides the other two proportionally, and conversely.
6. Use triangle similarity criteria to solve problems and to prove relationships in geometric figures. *Include a proof of the Pythagorean theorem using triangle similarity.*
7. Use and explain the relationship between the sine and cosine of complementary angles.
8. Use sine, cosine, tangent, and the Pythagorean Theorem to solve right triangles[2] in applied problems.
9. STEM Give an informal explanation using successive approximation that a dilation of scale factor $r$ changes the length of a curve by a factor of $r$ and the area of a region by a factor of $r^2$.

## Circles G-C

1. Understand that dilations can be used to show that all circles are similar.
2. Understand that there is a unique circle through three non-collinear points, and four circles tangent to three non-concurrent lines.

[2] A right triangle has five parameters, its three lengths and two acute angles. Given a length and any other parameter, "solving a right triangle" means finding the remaining three parameters.

3. Identify and define radius, diameter, chord, tangent, secant, and circumference.
4. Identify and describe relationships among angles, radii, and chords. *Include the relationship between central, inscribed and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*
5. Determine the arc lengths and the areas of sectors of circles, using proportions.
6. STEM Construct a tangent line from a point outside a given circle to the circle.
7. STEM Prove and use theorems about circles, and use these theorems to solve problems involving:
   a. Symmetries of a circle
   b. Similarity of a circle to any other
   c. Tangent line, perpendicularity to a radius
   d. Inscribed angles in a circle, relationship to central angles, and equality of inscribed angles
   e. Properties of chords, tangents, and secants as an application of triangle similarity.

## Expressing Geometric Properties with Equations G-GPE

1. Understand that two lines with well-defined slopes are perpendicular if and only if the product of their slopes is equal to –1.
2. Understand that the equation of a circle can be found using its definition and the Pythagorean Theorem.
3. Understand that transforming the graph of an equation by reflecting in the axes, translating parallel to the axes, or applying a dilation in one of the coordinate directions corresponds to substitutions in the equation.
4. STEM Understand that an ellipse is the set of all points whose distances from two fixed points (the foci) are a constant sum. The graph of $x^2/a^2 + y^2/b^2 = 1$ is an ellipse with foci on one of the axes.
5. STEM Understand that a parabola is the set of points equidistant from a fixed point (the focus) and a fixed line (the directrix). The graph of any quadratic function is a parabola, and all parabolas are similar.
6. STEM Understand that the formula $A = \pi ab$ for the area of an ellipse can be derived from the formula for the area of a circle.★
7. Use the slope criteria for parallel and perpendicular lines to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
8. Find the point on the segment between two given points that divides the segment in a given ratio.
9. Use coordinates to compute perimeters of polygons and areas for triangles and rectangles, e.g. using the distance formula.★
10. Decide whether a point with given coordinates lies on a circle defined by a given equation.
11. Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point (0, 2).
12. Complete the square to find the center and radius of a circle given by an equation.
13. STEM Find an equation for an ellipse given in the coordinate plane with major and minor axes parallel to the coordinate axes.
14. STEM Calculate areas of ellipses to solve problems.★

## Trigonometry of General Triangles G-TGT

1. STEM Understand that the formula $A = \frac{1}{2}\, ab \sin(C)$ for the area of a triangle can be derived by drawing an auxiliary line from a vertex perpendicular to the opposite side. Applying this formula in three different ways leads to the Law of Sines.
2. STEM Understand that the Law of Cosines generalizes the Pythagorean Theorem.
3. STEM Understand that the sine, cosine and tangent of the sum or difference of two angles can be expressed in terms of sine, cosine, and tangent of the angles themselves using the addition formulas.
4. STEM Understand that the Laws of Sines and Cosines embody the triangle congruence criteria, in that three pieces of information are usually sufficient to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that "Side-Side-Angle" is not a congruence criterion.
5. STEM Explain proofs of the Law of Sines and the Law of Cosines.

★ Standard with close connection to modeling.

6. STEM Use the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

## Geometric Measurement and Dimension G-GMD

1. Understand that the area of a decomposed figure is the sum of the areas of its components and is independent of the choice of dissection.
2. STEM Understand that lengths of curves and areas of curved regions can be defined using the informal notion of limit.
3. STEM Understand that Cavalieri's principle allows one to understand volume formulas informally by visualizing volumes as stacks of thin slices.
4. Find areas of polygons by dissecting them into triangles.
5. Explain why the volume of a cylinder is the area of the base times the height, using informal arguments.
6. For a pyramid or a cone, give a heuristic argument to show why its volume is one-third of its height times the area of its base.
7. Apply formulas and solve problems involving volume and surface area of right prisms, right circular cylinders, right pyramids, cones, spheres and composite figures.
8. STEM Identify cross-sectional shapes of slices of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
9. STEM Use the behavior of length and area under dilations to show that the circumference of a circle is proportional to the radius and the area of a circle is proportional to the square of the radius. Identify the relation between the constants of proportionality with an informal argument involving dissection and recomposition of a circle into an approximate rectangle.

## Modeling with Geometry G-MG

1. Understand that models of objects and structures can be built from a library of standard shapes; a single kind of shape can model seemingly different objects. ★
2. Use geometric shapes, their measures and their properties to describe objects (e.g., modeling a tree trunk or a human torso or as a cylinder). ★
3. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot). ★
4. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios). ★

★ Standard with close connection to modeling.

# Glossary

**Addition and subtraction within 10, 20, or 100**. Addition or subtraction of whole numbers with whole number answers, and with sum or minuend at most 10, 20, or 100. Example: $8 + 2 = 10$ is an addition within 10, $14 - 5 = 9$ is a subtraction within 20, and $55 - 18 = 37$ is a subtraction within 100.

**Additive inverses**. Two numbers whose sum is 0 are additive inverses of one another. Example: $3/4$ and $-3/4$ are additive inverses of one another because $3/4 + (-3/4) = (-3/4) + 3/4 = 0$.

**Box plot**. A method of visually displaying a distribution of data values by using the median, quartiles, and extremes of the data set. A box shows the middle 50% of the data.[3]

**Complex fraction**. A fraction $A/B$ where $A$ and/or $B$ are fractions.

**Congruent**. Two plane or solid figures are congruent if one can be obtained from the other by a sequence of rigid motions (rotations, reflections, and translations).

**Counting on**. A strategy for finding the number of objects in a group without having to count every member of the group. For example, if a stack of books is known to have 8 books and 3 more books are added to the top, it is not necessary to count the stack all over again; one can find the total by *counting on*—pointing to the top book and saying "eight," following this with "nine, ten, eleven. There are eleven books now."

**Decade word**. A word referring to a single-digit multiple of ten, as in *twenty*, *thirty*, *forty*, etc.

**Dot plot**. A method of visually displaying a distribution of data values where each data value is shown as a dot or mark above a number line. Also known as a line plot.[4]

**Dilation**. A transformation that moves each point along the ray through the point emanating from a fixed center, and multiplies distances from the center by a common scale factor.

**Empirical probability model**. A probablity model based on a data set for a random process in which the probability of a particular type or category of outcome equals the percentage of data points included in the category. Example: If a coin is tossed 10 times and 4 of the tosses are Heads, then the empirical probability of Heads in the empirical probability model is $4/10$ (equivalently 0.4 or 40%).

**Equivalent fractions**. Two fractions $a/b$ and $c/d$ that represent the same number.

**Expanded form**. A multidigit number is expressed in expanded form when it is written as a sum of single-digit multiples of powers of ten. For example, $643 = 600 + 40 + 3$.

**First quartile**. For a data set with median $M$, the first quartile is the median of the data values less than $M$. Example: For the data set {1, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the first quartile is 6.[5] *See also* median, third quartile, interquartile range.

**Fraction**. A number expressible in the form $a/b$ where $a$ is a whole number and $b$ is a positive whole number. (The word *fraction* in these standards always refers to a nonnegative number.) *See also* rational number.

**Independently combined probability models**. Two probability models are said to be combined independently if the probability of each ordered pair in the combined model equals the product of the original probabilities of the two individual outcomes in the ordered pair.

**Integer**. A number expressible in the form $a$ or $-a$ for some whole number $a$.

**Interquartile Range**. A measure of variation in a set of numerical data, the interquartile range is the distance between the first and third quartiles of the data set. Example: For the data set {1, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the interquartile range is $15 - 6 = 9$. *See also* first quartile, third quartile.

**Laws of arithmetic**. See Table 3 in this Glossary.

**Line plot**. See dot plot.

**Mean**. A measure of center in a set of numerical data, computed by adding the values in a list and then dividing by the number of values in the list.[6] Example: For the data set {1, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the mean is 21.

**Mean absolute deviation**. A measure of variation in a set of numerical data, computed by adding the distances between each data value and the mean, then dividing by the number of data values. Example: For the data set {2, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the mean absolute deviation is 20.

**Median**. A measure of center in a set of numerical data. The median of a list of values is the value appearing at the center of a sorted version of the list—or the mean of the two central values, if the list contains an even number of values. Example: For the data set {2, 3, 6, 7, 10, 12, 14, 15, 22, 90}, the median is 11.

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[3] Adapted from Wisconsin Department of Public Instruction, http://dpi.wi.gov/standards/mathglos.html, accessed March 2, 2010.

[4] Adapted from Wisconsin Department of Public Instruction, *op. cit.*.

[5] Many different methods for computing quartiles are in use. The method defined here is sometimes called the Moore and McCabe method. See Langford, E., "Quartiles in Elementary Statistics," *Journal of Statistics Education* Volume 14, Number 3 (2006),

[6] To be more precise, this defines the *arithmetic mean*.

**Multiplication and division within 100**. Multiplication or division of whole numbers with whole number answers, and with product or dividend at most 100. Example: $72 \div 8 = 9$.

**Multiplicative inverses**. Two numbers whose product is 1 are multiplicative inverses of one another. Example: $3/4$ and $4/3$ are multiplicative inverses of one another because $3/4 \times 4/3 = 4/3 \times 3/4 = 1$.

**Properties of equality**. See Table 4 in this Glossary.

**Properties of inequality**. See Table 5 in this Glossary.

**Properties of operations**. Associativity and commutativity of addition and multiplication, distributivity of multiplication over addition, the additive identity property of 0, and the multiplicative identity property of 1.See Table 3 in this Glossary.

**Probability**. A number between 0 and 1 used to quantify likelihood for processes that have uncertain outcomes (such as tossing a coin, selecting a person at random from a group of people, tossing a ball at a target, testing for a medical condition).

**Rational number**. A number expressible in the form $a/b$ or $-a/b$ for some fraction $a/b$. The rational numbers include the integers.

**Related fractions**. Two fractions are said to be related if one denominator is a factor of the other.[7]

**Rigid motion**. A transformation of points in space consisting of one or more translations, reflections, and/or rotations. Rigid motions are here assumed to preserve distances and angle measures.

**Sample space**. In a probability model for a random process, a list of the individual outcomes that are to be considered.

**Scatter plot**. A graph in the coordinate plane representing a set of bivariate data. For example, the heights and weights of a group of people could be displayed on a scatter plot.[8]

**Similarity transformation**. A rigid motion followed by a dilation.

**Tape diagrams**. Drawings that look like a segment of tape, used to illustrate number relationships. Also known as strip diagrams, bar models or graphs, fraction strips, or length models.

**Teen number**. A whole number that is greater than or equal to 11 and less than or equal to 19.

**Third quartile**. For a data set with median $M$, the third quartile is the median of the data values greater than $M$. Example: For the data set $\{2, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the third quartile is 15. *See also* median, first quartile, interquartile range.

**Uniform probability model**. A probability model in which the individual outcomes all have the same probability ($1/N$ if there are $N$ individual outcomes in the sample space). If a given type of outcome consists of $M$ individual outcomes, then the probability of that type of outcome is $M/N$. Example: if a uniform probability model is used to model the process of randomly selecting a person from a class of 32 students, and if 8 of the students are left-handed, then the probability of randomly selecting a left-handed student is $8/32$ (equivalently $1/4$, 0.25 or 25%).

**Whole numbers**. The numbers 0, 1, 2, 3, ....

[7] See Ginsburg, Leinwand and Decker (2009), *Informing Grades 1-6 Mathematics Standards Development: What Can Be Learned from High-Performing Hong Kong, Korea, and Singapore?*, Table A1, p. A-5, grades 3 and 4.

[8] Adapted from Wisconsin Department of Public Instruction, *op. cit.*.

**TABLE 1**. Common addition and subtraction situations.[9]

| | Result Unknown | Change Unknown | Start Unknown |
|---|---|---|---|
| **Add to** | Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now?<br>2 + 3 = ? | Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two?<br>2 + ? = 5 | Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before?<br>? + 3 = 5 |
| **Take from** | Five apples were on the table. I ate two apples. How many apples are on the table now?<br>5 – 2 = ? | Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat?<br>5 – ? = 3 | Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before?<br>? – 2 = 3 |

| | Total Unknown | Addend Unknown | Both Addends Unknown[10] |
|---|---|---|---|
| **Put Together/ Take Apart[11]** | Three red apples and two green apples are on the table. How many apples are on the table?<br>3 + 2 = ? | Five apples are on the table. Three are red and the rest are green. How many apples are green?<br>3 + ? = 5, 5 – 3 = ? | Grandma has five flowers. How many can she put in her red vase and how many in her blue vase?<br>5 = 0 + 5, 5 = 5 + 0<br>5 = 1 + 4, 5 = 4 + 1<br>5 = 2 + 3, 5 = 3 + 2 |

| | Difference Unknown | Bigger Unknown | Smaller Unknown |
|---|---|---|---|
| **Compare[12]** | ("How many more?" version):<br>Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy?<br>("How many fewer?" version):<br>Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie?<br>2 + ? = 5, 5 – 2 = ? | (Version with "more"):<br>Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have?<br>(Version with "fewer"):<br>Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have?<br>2 + 3 = ?, 3 + 2 = ? | (Version with "more"):<br>Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have?<br>(Version with "fewer"):<br>Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have?<br>5 – 3 = ?, ? + 3 = 5 |

[9] Adapted from Box 2-4 of National Research Council (2009, op. cit., pp. 32, 33).

[10] These *take apart* situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean *makes* or *results in* but always does mean *is the same number as*.

[11] Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation especially for small numbers less than or equal to 10.

[12] For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using *more* for the bigger unknown and using *less* for the smaller unknown). The other versions are more difficult.

**TABLE 2.** Common multiplication and division situations.[13]

| | **Unknown Product** | **Group Size Unknown** ("How many in each group?" Division) | **Number of Groups Unknown** ("How many groups?" Division) |
|---|---|---|---|
| | **$3 \times 6 = ?$** | **$3 \times ? = 18$ and $18 \div 3 = ?$** | **$? \times 6 = 18$ and $18 \div 6 = ?$** |
| **Equal Groups** | There are 3 bags with 6 plums in each bag. How many plums are there in all?<br>*Measurement example.* You need 3 lengths of string, each 6 inches long. How much string will you need altogether? | If 18 plums are shared equally into 3 bags, then how many plums will be in each bag?<br>*Measurement example.* You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be? | If 18 plums are to be packed 6 to a bag, then how many bags are needed?<br>*Measurement example.* You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have? |
| **Arrays,[14] Area[15]** | There are 3 rows of apples with 6 apples in each row. How many apples are there?<br>*Area example.* What is the area of a 3 cm by 6 cm rectangle? | If 18 apples are arranged into 3 equal rows, how many apples will be in each row?<br>*Area example.* A rectangle has area 18 square centimeters. If one side is 3 cm long, how long is a side next to it? | If 18 apples are arranged into equal rows of 6 apples, how many rows will there be?<br>*Area example.* A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is a side next to it? |
| **Compare** | A blue hat costs \$6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost?<br>*Measurement example.* A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long? | A red hat costs \$18 and that is 3 times as much as a blue hat costs. How much does a blue hat cost?<br>*Measurement example.* A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first? | A red hat costs \$18 and a blue hat costs \$6. How many times as much does the red hat cost as the blue hat?<br>*Measurement example.* A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first? |
| **General** | $a \times b = ?$ | $a \times ? = p$ and $p \div a = ?$ | $? \times b = p$ and $p \div b = ?$ |

[13] The first examples in each cell are examples of discrete things. These are easier for students and should be given before the measurement examples.
[14] The language in the array examples shows the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery window are in 3 rows and 6 columns. How many apples are in there? Both forms are valuable.
[15] Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

**TABLE 3**. The laws of arithmetic, including the properties of operations (identified with °). Here $a$, $b$ and $c$ stand for arbitrary numbers in a given number system. The laws of arithmetic apply to the rational number system, the real number system, and the complex number system.

| | |
|---|---|
| °*Associative law of addition* | $(a + b) + c = a + (b + c)$ |
| °*Commutative law of addition* | $a + b = b + a$ |
| °*Additive identity property of 0* | $a + 0 = 0 + a = a$ |
| *Existence of additive inverses* | For every $a$ there exists $-a$ so that $a + (-a) = (-a) + a = 0$. |
| °*Associative law of multiplication* | $(a \times b) \times c = a \times (b \times c)$ |
| °*Commutative law of multiplication* | $a \times b = b \times a$ |
| °*Multiplicative identity property of 1* | $a \times 1 = 1 \times a = a$ |
| *Existence of multiplicative inverses* | For every $a \neq 0$ there exists $1/a$ so that $a \times 1/a = 1/a \times a = 1$. |
| °*Distributive law of multiplication over addition* | $a \times (b + c) = a \times b + a \times c$ |

**TABLE 4**. The properties of equality. Here $a$, $b$ and $c$ stand for arbitrary numbers in the rational, real, or complex number systems.

| | |
|---|---|
| *Reflexive property of equality* | $a = a$ |
| *Symmetric property of equality* | If $a = b$, then $b = a$. |
| *Transitive property of equality* | If $a = b$ and $b = c$, then $a = c$. |
| *Addition property of equality* | If $a = b$, then $a + c = b + c$. |
| *Subtraction property of equality* | If $a = b$, then $a - c = b - c$. |
| *Multiplication property of equality* | If $a = b$, then $a \times c = b \times c$. |
| *Division property of equality* | If $a = b$ and $c \neq 0$, then $a \div c = b \div c$. |
| *Substitution property of equality* | If $a = b$, then $b$ may be substituted for $a$ in any expression containing $a$. |

**TABLE 5**. The properties of inequality. Here $a$, $b$ and $c$ stand for arbitrary numbers in the rational or real number systems.

| |
|---|
| Exactly one of the following is true: $a < b$, $a = b$, $a > b$. |
| If $a > b$ and $b > c$ then $a > c$. |
| If $a > b$, then $b < a$. |
| If $a > b$, then $-a < -b$. |
| If $a > b$, then $a \pm c > b \pm c$. |
| If $a > b$ and $c > 0$, then $a \times c > b \times c$. |
| If $a > b$ and $c < 0$, then $a \times c < b \times c$. |
| If $a > b$ and $c > 0$, then $a \div c > b \div c$. |
| If $a > b$ and $c < 0$, then $a \div c < b \div c$. |

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# Common Core State Standards Initiative
# Standards-Setting Criteria

The following criteria guided the standards development workgroups in setting the draft college and career readiness standards.

**Preamble:** The Common Core State Standards define the rigorous skills and knowledge in English Language Arts and Mathematics that need to be effectively taught and learned for students to be ready to succeed academically in credit-bearing, college-entry courses and in workforce training programs. These standards have been developed to be:

- Fewer, clearer, and higher, to best drive effective policy and practice;
- Aligned with college and work expectations, so that all students are prepared for success upon graduating from high school;
- Inclusive of rigorous content and applications of knowledge through higher-order skills, so that all students are prepared for the 21st century;
- Internationally benchmarked, so that all students are prepared for succeeding in our global economy and society; and
- Research and evidence-based.

The standards intend to set forward thinking goals for student performance based in evidence about what is required for success. The standards developed will set the stage for US education not just beyond next year, but for the next decade, and they must ensure ***all*** American students are prepared for the global economic workplace. Furthermore, the standards created will not lower the bar but raise it for all students; as such, we cannot narrow the college-ready focus of the standards to just preparation of students for college algebra and English composition and therefore will seek to ensure all students are prepared for all entry-level, credit-bearing, academic college courses in English, mathematics, the sciences, the social sciences, and the humanities. The objective is for all students to enter these classes ready for success (defined for these purposes as a C or better).

**Goal**: The standards as a whole must be essential, rigorous, clear and specific, coherent, and internationally benchmarked.

**Essential**: The standards must be reasonable in scope in defining the knowledge and skills students should have to be ready to succeed in entry-level, credit-bearing, academic college courses and in workforce training programs.

Workforce training programs pertain to careers that:
1) Offer competitive, livable salaries above the poverty line
2) Offer opportunities for career advancement
3) Are in a growing or sustainable industry

College refers to two- and four-year postsecondary schools

Entry-level, credit-bearing, academic college courses (e.g. English, mathematics, sciences, social sciences, humanities)

**Rigorous:** The standards will include high-level cognitive demands by asking students to demonstrate deep conceptual understanding through the application of content knowledge and skills to new situations.

High-level cognitive demand includes reasoning, justification, synthesis, analysis, and problem-solving.

**Clear and Specific:** The standards should provide sufficient guidance and clarity so that they are teachable, learnable, and measurable. The standards will also be clear and understandable to the general public.

Quality standards are precise and provide sufficient detail to convey the level of performance expected without being overly prescriptive. (the "what" not the "how"). The standards should maintain a relatively consistent level of grain size.

**Teachable and learnable**: Provide sufficient guidance for the design of curricula and instructional materials. The standards must be reasonable in scope, instructionally manageable, and promote depth of understanding.

The standards will not prescribe *how* they are taught and learned but will allow teachers flexibility to teach and students to learn in various instructionally relevant contexts.

**Measureable:** Student attainment of the standards should be observable and verifiable and the standards can be used to develop broader assessment frameworks

**Coherent:** The standards should convey a unified vision of the big ideas and supporting concepts within a discipline and reflect a progression of learning that is meaningful and appropriate.

**Grade-by-grade standards**: The standards will have limited repetition across the grades or grade spans to help educators align instruction to the standards.

**Internationally benchmarked:** The standards will be informed by the content, rigor, and organization of standards of high-performing countries so that all students are prepared for succeeding in our global economy and society.

# Common Core State Standards Initiative
# Standards-Setting Considerations

The following considerations guided the standards development workgroups in setting the draft college and career readiness standards.

**Fewer, clearer, higher:** One of the goals of this process was to produce a set of fewer, clearer and higher standards. It is critical that any standards document be translatable to and teachable in the classroom. As such, the standards must cover only those areas that are critical for student success. This meant making tough decisions about what to include in the standards; however, these choices were important to ensure the standards are useable by teachers.

**Evidence:** This work has made unprecedented use of evidence in deciding what to include – or not include – in the standards. Each document includes a brief narrative on the choices that were made based on evidence. Rather than focusing on the *opinions* of experts exclusively, evidence to guide the decisions about what to include in the standards was used. This is a key difference between this process and the processes that have come before.

**Internationally benchmarked:** These standards are informed by the content, rigor and organization of standards of high-performing countries and states so that all students are prepared to succeed in a global economy and society.

**Special populations:** In the development of these standards, the inclusion of all types of learners was a priority. Writers selected language intended to make the standards documents accessible to different learners.

**Assessment:** While an assessment of the common core state standards in not currently being developed, these standards will ultimately be the basis for an assessment system that would include multiple measures of student performance. Once states agree on the final standards, attention will be turned to creating a high quality system of measurement that would include proper incentives for teachers to teach these standards and a variety of assessments that will reinforce teaching and learning tied to the agreed upon expectations.

**Standards and curriculum:** Standards are not curriculum. This initiative is about developing a set of standards that are common across states. The curriculum that follows will continue to be a local responsibility (or state-led, where appropriate). The curriculum could become more consistent from state to state based on the commonality of the standards; however, there are multiple ways to teach these standards, and therefore, there will be multiple approaches that could help students accomplish the goals set out in the standards.

**21st century skills:** These documents are not an attempt to demonstrate everything that a student should learn; rather, we have focused on two areas – English-language Arts and Mathematics. The standards have incorporated 21st century skills where possible. They are not inclusive of all the skills students need for success in the 21st Century, but many of these skills will be required across disciplines.

# News Release

06/01/2009

## Forty-Nine States and Territories Join Common Core Standards Initiative

## NGA Center, CCSSO Convene State-led Process to Develop Common English-language arts and Mathematics Standards

Contact: Jodi Omear, 202-624-5346
Office of Communications

**WASHINGTON—** The National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) today released the names of the states and territories that have joined the Common Core State Standards Initiative: **Alabama; Arizona; Arkansas; California; Colorado; Connecticut; Delaware; District of Columbia; Florida; Georgia; Hawaii; Idaho; Illinois; Indiana; Iowa; Kansas; Kentucky; Louisiana; Maine; Maryland; Massachusetts; Michigan; Minnesota; Mississippi; Montana; Nebraska; Nevada; New Hampshire; New Jersey; New Mexico; New York; North Carolina; North Dakota; Ohio; Oklahoma; Oregon; Pennsylvania; Puerto Rico; Rhode Island; South Dakota; Tennessee; Utah; Vermont; Virgin Islands; Virginia; Washington; West Virginia; Wisconsin; Wyoming**.

In the twenty-six years since the release of *A Nation at Risk,* states have made great strides in increasing the academic rigor of education standards. Yet, America's children still remain behind other nations in terms of academic achievement and preparedness to succeed.

By signing on to the common core state standards initiative, governors and state commissioners of education across the country are committing to joining a state-led process to develop a common core of state standards in English language arts and mathematics

for grades K-12. These standards will be research and evidence-based, internationally benchmarked, aligned with college and work expectations and include rigorous content and skills.

"To maintain America's competitive edge, we need all of our students to be prepared and ready to compete with students from around the world," said **NGA Vice Chair Vermont Gov. Jim Douglas**. "Common standards that allow us to internationally benchmark our students' performance with other top countries have the potential to bring about a real and meaningful transformation of our education system to the benefit of all Americans."

"As state school chiefs, we have been discussing and building momentum for state-led, voluntary common standards that are both rigorous and internationally benchmarked for the past two years.," stated **CCSSO President and Arkansas Commissioner of Education Ken James**. "The broad level of commitment we have received from states across the nation for this unprecedented effort is both gratifying and exciting. It also clearly illustrates that this is an idea whose time has arrived."

The Common Core State Standards Initiative is being jointly led by the NGA Center and CCSSO in partnership with Achieve, Inc; ACT and the College Board. It builds directly on recent efforts of leading organizations and states that have focused on developing college- and career-ready standards and ensures that these standards can be internationally benchmarked to top-performing countries around the world.

The goal is to have a common core of state standards that states can voluntarily adopt. States may choose to include additional standards beyond the common core as long as the common core represents at least 85 percent of the state's standards in English language arts and mathematics.

"Measuring our students against international benchmarks is an important step," said **Virginia Gov. Timothy Kaine**. "Today, we live in a world without borders. It not only matters how Virginia students compare to those in surrounding states – it matters how

we compete with countries across the world."

"Only when we agree about what all high school graduates need to be successful will we be able to tackle the most significant challenge ahead of us: transforming instruction for every child," said **CCSSO President-Elect and Maine Education Commissioner Sue Gendron**. "Common standards will provide educators clarity and direction about what all children need to succeed in college and the workplace and allow states to more readily share best practices that dramatically improve teaching and learning. Our graduates and frankly, the future of our economy, cannot wait any longer for our educational practices to give equal opportunity for success to every student."

The NGA Center and CCSSO are coordinating the process to develop these standards and have created an expert validation committee to provide an independent review of the common core state standards, as well as the grade-by-grade standards. This committee will be composed of nationally and internationally recognized and trusted education experts who are neutral to – and independent of – the process. The college and career ready standards are expected to be completed in July 2009. The grade-by-grade standards work is expected to be completed in December 2009.

###

*Founded in 1908, the National Governors Association (NGA) is the collective voice of the nation's governors and one of Washington, D.C.'s most respected public policy organizations. Its members are the governors of the 50 states, three territories and two commonwealths. NGA provides governors and their senior staff members with services that range from representing states on Capitol Hill and before the Administration on key federal issues to developing and implementing innovative solutions to public policy challenges through the NGA Center for Best Practices. For more information, visit www.nga.org.*

*The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states,*

*the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public. http://www.ccsso.org/*

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DRAFT

**ASSOCIATE SUPERINTENDENT APPROVAL** 

**STATE BOARD MEETING DATE: June 28, 2010**

**SUBJECT: Common Core State Standards Initiative**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: June 17, 2010**

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**BACKGROUND INFORMATION:**

The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) have initiated a state-led process of developing and adopting a common core of state standards.

The intent of the Common Core Standards Initiative is to assure that all children graduate from high school ready for college, work, and success in the global economy. It is a significant and historic opportunity for states to collectively accelerate and drive education reform. The initiative continues to be a critical component of AZ's Race to the Top eligibility and application, and statewide education reform as well.

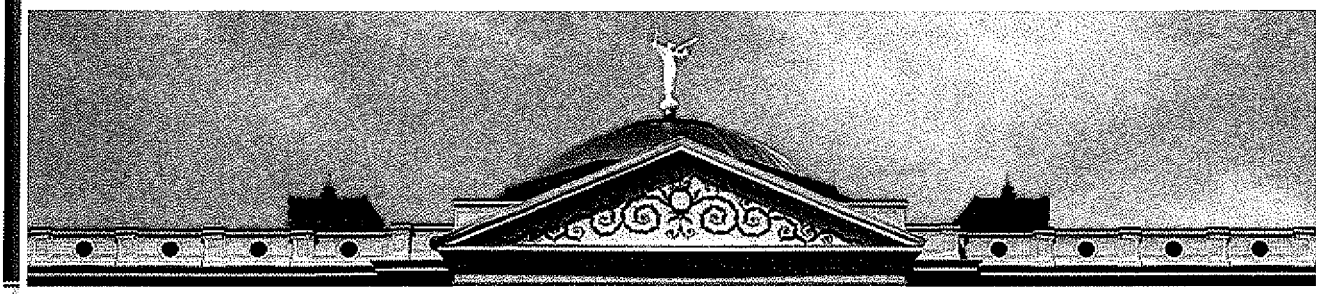
Today's report is the culmination of the many updates State Board members have received throughout the process of this national work and Arizona's efforts on the Common Core Standards Initiative. **We will present the Common Core Standards (English Language Arts and Mathematics) to the State Board of Education for adoption.**

In an effort to continue our process of informing educational stakeholders and the general public, we will request permission to post the approved Standards on the AZ Department of Education Website for 30 days. The public will be invited to review the approved Common Core Standards and made recommendation on possible AZ Specific additions not to exceed 15% of the total standard in either of the subject areas. ADE will also host four (4) Public Webinars to provide pertinent information on the Common Core Standards.

Pertinent information regarding Common Assessment Consortia efforts will be discussed with the Board as well.

**BOARD ACTION REQUESTED: [] INFORMATION [x] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [x] NO [ ]**





15-701. Common school; promotions; requirements; certificate; supervision of eighth grades by superintendent of high school district; high school admissions; academic credit

A. The state board of education shall:

1. Prescribe a minimum course of study, as defined in section 15-101 and incorporating the academic standards adopted by the state board of education, to be taught in the common schools.

2. Prescribe competency requirements for the promotion of pupils from the eighth grade and competency requirements for the promotion of pupils from the third grade incorporating the academic standards in at least the areas of reading, writing, mathematics, science and social studies.

3. Distribute guidelines for the school districts to follow in prescribing criteria for the promotion of pupils from grade to grade in the common schools. These guidelines shall include recommended procedures for insuring that the cultural background of a pupil is taken into consideration when criteria for promotion are being applied.

B. Pursuant to the guidelines which the state board of education distributes, the governing board of a school district shall:

1. Prescribe curricula that include the academic standards in the required subject areas pursuant to subsection A, paragraph 1 of this section.

2. Prescribe criteria for the promotion of pupils from grade to grade in the common schools in the school district. These criteria shall include accomplishment of the academic standards in at least reading, writing, mathematics, science and social studies, as determined by district assessment. Other criteria may include additional measures of academic achievement and attendance.

C. The governing board may prescribe the course of study and competency requirements for promotion which are in addition to or higher than the course of study and competency requirements which the state board prescribes.

D. A teacher shall determine whether to promote or retain a pupil in grade in a common school as provided in section 15-521, paragraph 3 on the basis of the prescribed criteria. The governing board, if it reviews the decision of a teacher to promote or retain a pupil in grade in a common school as provided in section 15-342, paragraph 11, shall base its decision on the prescribed criteria.

E. A governing board may provide and issue certificates of promotion to pupils whom it promotes from the eighth grade of a common school. Such certificates shall be signed by the principal or superintendent of schools. Where there is no principal or superintendent of schools, the certificates shall be signed by the teacher of an eighth grade. The certificates shall admit the holders to any high school in the state.

F. A governing board may request certificates of promotion from the county school superintendent. If a governing board requests these certificates from the county school superintendent, the county school superintendent shall furnish and sign the certificates.

G. Within any high school district or union high school district, the superintendent of the high school district shall supervise the work of the eighth grade of all schools employing no superintendent or principal.

H. A school district shall not deny a pupil who is between the ages of sixteen and twenty-one years admission to a high school because the pupil does not hold an eighth grade certificate. Governing boards shall establish procedures for determining the admissibility of pupils who are under sixteen years of age and who do not hold eighth grade certificates.

I. The state board of education shall adopt rules to allow common school pupils who can demonstrate competency in a particular academic course or subject to obtain academic credit for the course or subject without enrolling in the course or subject.

15-741. Assessment of pupils

A. The state board of education shall:

1. Adopt rules for purposes of this article pursuant to title 41, chapter 6.

2. Adopt and implement an Arizona instrument to measure standards test to measure pupil achievement of the state board adopted academic standards in reading, writing and mathematics in at least four grades designated by the board. The board shall determine the manner of implementation. The board shall not require high school pupils to meet or exceed the standards measured by the Arizona instrument to measure standards test in any standards other than reading, writing and mathematics in order to graduate from high school. The board may administer assessments of the academic standards in social studies and science, except that a pupil shall not be required to meet or exceed the social studies or science standards measured by the Arizona instrument to measure standards test in order to graduate from high school.

## Arizona Academic Standards - Development Outline
## Process and Component Parts

| | |
|---|---|
| I. | Advertise and recruit committee members |
| II. | **Select Committee and Assemble Materials**<br>• Standard Revision Committees include a statewide representation of educators that represent school districts large and small, rural and urban, as well as the ethnic and socioeconomic diversity of Arizona.<br>• Committees utilize nationally recognized publications to establish content guidelines during the development of the draft, including national standards in the content area, the NAEP framework, and other states' standards. |
| III. | **Develop Draft Documents of the Revised Standard**<br>• The committee created draft documents by first reviewing the existing standards.<br>• The performance objectives were articulated, or aligned, to the appropriate grade levels using the national standards and NAEP framework as a guide.<br>• Over a period of months, subcommittees, composed of representatives of the full committee, met to refine the documents. Both horizontal and vertical alignment and spiraling of content was considered.<br>• A guiding principle in the articulation process was whether a performance objective was reasonable, useful, and appropriate.<br>• The measurability of each performance objective was also considered. |
| IV. | **Review of Draft Standard**<br>• Provide the draft to nationally recognized consultants and university and local experts to review.<br>• Present draft of standard to State Board of Education; request permission to place a draft of the standard on the ADE website for public review.<br>• Online forms are available to receive public comments about the draft<br>• Public hearings occur throughout the state to collect additional comments. |
| V. | **Revisions of the Draft**<br>• Collect and organize all public comments,<br>• The committee reviews all comments and recommends appropriate modifications to the standard.<br>• Content may be added, deleted, modified, or shifted to a different grade level. |
| VI. | Complete final edits of the draft and secure committee approval |
| VII. | Present the standard to the State Board of Education for adoption, and the Implementation Plan defining support for the field for their information. |

## Appendix(B)(1)-9 - Timeline for Adoption

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|---|---|
| December 7, 2009 | Inform the State Board of Education of national work to date on Common Core Standards and update them on Arizona's national and local efforts in this area. Invite Board member participation into the process. |
| January 25, 2010 | Progress report to State Board of Education |
| February 22, 2010 | Presentation of initial draft of transition plan for the adoption of Common Core Standards |
| March 22, 2010 | Progress report to State Board of Education |
| April 26, 2010 | Progress report to State Board of Education; presentation of new timeline |
| May 24, 2010 | Progress report to State Board of Education; update on release of Final Common Core Standards. ADE staff request permission to post final version of Common Core Standards upon release. From the date of public release of Common Core through July 25, 2010, public will be invited to review the final version of Common Core Standards and make recommendations on possible Arizona specific additions (maximum 15%). |
| June 28, 2010 | Presentation of Common Core Standards (English Language Arts and Mathematics) to State Board of Education with **SBE adoption of Common Core Standards as an Action Item.** Feedback received from AZ stakeholders will be shared with the Board at this time. |
| Summer 2010 | The Arizona Department of Education will host four (4) Public Webinars to provide pertinent information on the Common Core Standards and invite feedback on possible state specific additions.<br><br>The Arizona Department of Education staff and committees of stakeholders in both English Language Arts and Mathematics will review public feedback and finalize recommendations to the State Board of Education regarding state specific additions.<br><br>A leadership committee of educational stakeholders, including university and county partners, will meet to develop regionally-based assistance for implementation of Common Core Standards in English Language Arts and Mathematics.<br><br>Leadership committee will assist in creating Arizona specific supporting documents such as crosswalks (crosswalking the current standards to the new standards), change summaries (highlighting critical changes in each grade level), and other instructional documents as determined by the stakeholder group. |
| August 23, 2010 | Presentation to State Board of Education regarding public feedback; request to adopt the Arizona State Specific Additions to the Common Core Standards in English Language Arts and Mathematics |
| October, 2010 | Support documents are revised and finalized to include state specific additions.<br><br>2010 (K-CCR) Arizona English Language Arts and Mathematics Standards are officially released. Technical assistance and professional development begins. |

**Mary A. Knuck, NBCT**
(b)(6)

## Education

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|---|---|
| Arizona State University | Ed.D. in Curriculum & Instruction (In progress) |
| Rutgers University | Leadership Institute in Discrete Mathematics |
| Northern Arizona University | Master of Elementary Education |
| Chapman College | Certified, Elementary K-8 |
| Purdue University | Bachelor of Science, Microbiology |

## Professional Experience

| | |
|---|---|
| 2007-Present | Deputy Associate Superintendent, Standards- Based Best Practices, Arizona Department of Education |
| 2004-Present | Program Administrator for the Arizona Mathematics and Science Partnership (MSP) Program at the Arizona Department of Education |
| 2003-2007 | Program Director, Curriculum Specialist, Arizona Department of Education |
| 2001-2006 | Adjunct Professor, Arizona State University |
| 1999-2009 | National Board Candidate Facilitator |
| 1999-2003 | Educational Consultant, Houghton Mifflin Co. |
| 1991-1999 | Teacher, Paradise Valley Unified School District |

## Activities / Accomplishments

| | |
|---|---|
| 2010 | Presenter, National Council of Teachers of Mathematics Annual Conference-San Diego, CA |
| **2009-2010** | **Member of Mathematics Work Team for the Common Core State Standards Initiative** |
| 2009-2010 | Mathematics Educator Member of Instructional Team, AZ Intel Math Program Pilot |
| **2009** | **Recertified -National Board Certified Teacher, Middle Childhood Generalist** |
| 2004-2007 | Head Lead Teacher, Leadership Institute in Discrete Mathematics-Ohio, Rhode Island, Massachusetts |
| 2006 | Presenter, National Council of Teachers of Mathematics Regional Conference-Phoenix, AZ |
| 2003 | Presenter, Southern Nevada Mathematics Conference-Las Vegas, Nevada |
| 2002 | Presenter, Put Reading First: Solving the Assessment Puzzle-Paradise Valley School District |
| 2002 | Presenter, National Council of Teachers of Mathematics Annual Conference-Las Vegas, Nevada |

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| 2001 | Presenter, National Council of Teachers of Mathematics Annual Conference-Orlando, Florida |
| 2000-2001 | Head Lead Teacher, Leadership Institute in Discrete Mathematics-Greenville, NC |
| 2000 | Presenter, Arizona Association of Teachers Annual Conference-Glendale, AZ |
| 2000 | Lead Teacher, Discrete Teaching Institute-Cave Creek School District |
| 1999-2000 | Site Facilitator, Leadership Institute in Discrete Mathematics-Scottsdale, AZ |
| 2000 | Facilitator, Alignment of Language Arts Curriculum to Arizona State Standards-Cave Creek School District |
| 2000 | Presenter, Writing is Thinking: Witnessing the Six Traits in Action-Cave Creek School District Training Sessions |
| 2000 | Presenter, Writing is Thinking: Witnessing the Six Traits in Action-Paradise Valley School District Training Sessions |
| 1999 | Presenter, National Council of Teachers of Mathematics Regional Conference-Phoenix, AZ |
| **1999** | **National Board Certified Teacher, Middle Childhood Generalist** |
| 1999 | Presenter, West Coach Literacy Conference-Anaheim, CA |
| **1998** | **Presidential Award for Excellence in Elementary Mathematics Teaching** |
| **1998** | **Video Demonstration Teacher for PBS MATHLINE-Algebraic Thinking Math Project** |
| **1998** | **Arizona Science Teacher Association's Elementary Science Teacher of the Year** |
| 1998-2000 | Third Grade District Science Expert-Paradise Valley School District |
| 1998-2002 | Member of *The Reading Teacher* Review Team |
| 1998-1999 | Member, California Early Literacy Learning Team-Sonoran Sky Elementary |
| 1998 | Recipient of Teacher Venture Grant-Building Character: Kids Making a Difference |
| 1998 | Presenter, Arizona Association of Teachers of Mathematics Annual Conference-Mesa, AZ |
| 1998 | Lead Teacher, Leadership Institute in Discrete Mathematics-Scottsdale, AZ |
| 1997-1998 | Conducting Action Research in the Classroom-Recipient of International Reading Association Teacher Researcher Grant |
| 1997-1998 | Member of Arizona's Action Research Team-Six Traits Analytical Model of Writing |
| 1997 | Presenter, Arizona Association of Teachers of Mathematics Annual Conference-Mesa, AZ |
| 1997 | Assessment Presenter-1997 Arizona Performance Assessment Academy, Arizona State University |
| 1997 | Participant, Workshop Workshop (creating staff development models) Leadership Institute in Discrete Mathematics, Rutgers University |
| 1996 | Presenter, Arizona Reading Association State Conference-Phoenix, AZ |
| 1995-1996 | Presenter, Mathematics Symposium-Discrete Mathematics Topics |
| 1995 | Presenter, Portfolio II-Learning Connection (A Consortium of Educational Institutions Serving the North Valley) |
| 1995 | Presenter, Staff Development-Reflecting on Portfolios-Sonoran Sky Elementary |
| 1995 | Videotaping of Model Mathematics Lesson by Houghton Mifflin to be used for staff development in district and across the country |
| 1994-1997 | Third Grade District Literacy Site-An opportunity for district teachers to visit my classroom and experience literacy development in action |

State of Arizona
Department of Education

Tom Horne
Superintendent of
Public Instruction

Date: March 10, 2010

To: Superintendents, Charter Holders, and Principals

From: Cheryl J. Lebo
Associate Superintendent of Standards & Assessment

Mary Knuck
Deputy Associate Superintendent of Standards Based Best Practices

Subject: Common Core State Standards

This memo is an informational update on the work of Common Core State Standards, and a request that educational stakeholders within Arizona take the opportunity to provide feedback on the public draft released by the National Governor's Association Best Practices (NGA) and the Council of Chief State School Officers (CCSSO) on March 10, 2010.

As you know, Arizona was one of approximately 40 states who submitted Race to the Top Grant applications to the Federal Government. Directed by the Governor's office, this competitive effort involved the P-20 Coordinating Council and education stakeholders throughout the state. While not successful in Round I, the state has every intention of submitting in Round II, with the hope of success in the effort to bring additional monies and opportunities for students within our state. One of the requirements of the RTTT application is an agreement to adopt the Common Core State Standards.

A major goal of the **Common Core State Standards Initiative** is to assure that academic expectations for students are consistent across all states and territories. Arizona has been involved, through the Arizona Department of Education, in giving feedback throughout the process to date. The ADE staff members have worked with educational stakeholders representing content specialists, teachers, districts, community colleges and universities, in giving state feedback as requested to draft versions in Mathematics and English Language Arts.

This is ***your opportunity*** to give input into the process. We ask that you do so at this critical juncture. We want Arizona's voice to be heard. Please visit www.corestandards.org for more information on the initiative itself, and directions for giving feedback. Please extend the invitation to your school boards, parents, business partners, and in particular, your teachers, administrators, and curriculum specialists to visit the site and give feedback from now until **April 2, 2010.**

Once Common Core State Standards have been finalized, the State Board of Education will formally consider them for adoption. At that time, a finalized and updated timeline for Standards adoption will be posted on Hot Topics on the ADE website, and on both the Standards and the Assessment web pages.

For more information, check out the homepage of the ADE website (www.azed.gov) under Hot Topics, and click on Common Core State Standards.

**Appendix (B)(1)-11b - State Board Agenda**

State of Arizona
Department of Education

Tom Horne
Superintendent of
Public Instruction

Date: January 25, 2010

To: Superintendents, Charter Holders, and Principals

From: Cheryl J. Lebo
Associate Superintendent of Standards & Assessment

Mary Knuck
Deputy Associate Superintendent of Standards Based Best Practices

Subject: Common Core Standards

Arizona was one of approximately 40 states who submitted Race to the Top Grant applications to the Federal Government this week. Directed by the Governor's office, this competitive effort involved the P-20 Coordinating Council and education stakeholders throughout the state.

One of the requirements of the RTTT application is an agreement to adopt the Common Core Standards. A major goal of the **Common Core State Standards Initiative,** a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) is to assure that academic expectations for students are consistent across all states and territories.

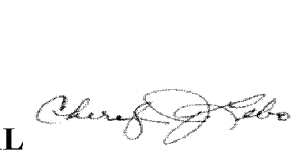
Arizona has been involved, through the AZ Department of Education, in giving feedback throughout the process to date. ADE staff members have worked with educational stakeholders representing content specialists, teachers, districts, community colleges and universities, in giving state feedback as requested to draft versions of the Common Core in Mathematics and English Language Arts. As final decisions are made, monthly updates are being submitted to the State Board regarding the work of the development of the Common Core.

The timeline for the completion of the work is quite rigorous. Presently, public drafts of Common Core Standards in Mathematics and English Language Arts are scheduled to be available the first week in February. The feedback is due on February 19. The purpose of this letter is not only to advise you of this work, but also to invite you to visit www.commoncore.org for more information. Please extend this invitation to your teachers, administrators, and curriculum specialists to visit the site, and to give feedback during the first two weeks in February.

Once the process is completed, the State Board of Education will formally consider the Common Core Standards for adoption. At that time, a finalized and updated timeline for Standards adoption will be posted on Hot Topics on the ADE website, and on both the Standards and the Assessment web pages.

Attached, please see the draft timeline presented to the State Board of Education.

**Appendix (B)(1)-11c - State Board Agenda Items**

**ASSOCIATE SUPERINTENDENT APPROVAL** 

**STATE BOARD MEETING DATE: May 24, 2010**

**SUBJECT: Common Core State Standards Initiative / Assessment Consortium**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: May 6, 2010**

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**BACKGROUND INFORMATION:**

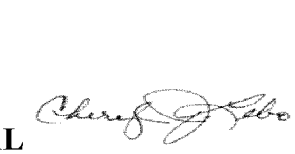
The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) are continuing work in this state-led process to develop and adopt a common core of state academic standards. The intent of the Common Core Standards Initiative is to assure that all children graduate from high school ready for college, work, and success in the global economy. When these standards are complete, they are to be: aligned with college and work expectations; clear, understandable and consistent; rigorous in content with application of knowledge through high-order skills; built upon the strengths and lessons of current state standards; informed by top-performing countries in order to make sure our students are prepared to succeed in our global economy and society; and evidence-based. The initiative continues to be a critical component of AZ's Race to the Top eligibility and application.

Today's agenda item serves as a progress report for State Board members on the status of the national work to date, the current release date for the final version of Common Core Standards and it will highlight pertinent information on Arizona's current and planned efforts around the Common Core Standards Initiative, including a communication plan to stakeholders.

In addition, we will give a progress report on the status of AZ's submission to be a member of a Common Assessment Consortia.

**BOARD ACTION REQUESTED: [X] INFORMATION [ ] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [x] NO [ ]**

**ASSOCIATE SUPERINTENDENT APPROVAL** 

**STATE BOARD MEETING DATE: April 26, 2010**

**SUBJECT: Common Core State Standards Initiative / Assessment Consortium**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: April 8, 2010**

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**BACKGROUND INFORMATION:**

The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) are continuing work in this state-led process to develop and adopt a common core of state academic standards. The intent of the Common Core Standards Initiative is to assure that all children graduate from high school ready for college, work, and success in the global economy. When these standards are complete, they are to be: aligned with college and work expectations; clear, understandable and consistent; rigorous in content with application of knowledge through high-order skills; built upon the strengths and lessons of current state standards; informed by top-performing countries in order to make sure our students are prepared to succeed in our global economy and society; and evidence-based. The initiative continues to be a critical component of AZ's Race to the Top eligibility and application.

Today's report is the continuation of ongoing updates for State Board members on the national work to date, as well as Arizona's current and planned efforts around the Common Core Standards Initiative. In addition, we will update the board and share pertinent information regarding Common Assessment Consortia efforts.

Because the national work is taking longer than originally announced, a new AZ Draft Timeline is being submitted for consideration by the State Board.

**BOARD ACTION REQUESTED: [X] INFORMATION [ ] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [x ] NO [ ]**

**ASSOCIATE SUPERINTENDENT APPROVAL** 

**STATE BOARD MEETING DATE: March 22, 2010**

**SUBJECT: Common Core State Standards Initiative**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: March 4, 2010**

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**BACKGROUND INFORMATION:**

The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) have initiated a state-led process of developing and adopting a common core of state standards.

The intent of the Common Core Standards Initiative is to assure that all children graduate from high school ready for college, work, and success in the global economy. It is a significant and historic opportunity for states to collectively accelerate and drive education reform. The initiative continues to be a critical component of AZ's Race to the Top eligibility and application.

Today's report is the continuation of ongoing updates for State Board members on the national work to date, as well as Arizona's current and planned efforts around the Common Core Standards Initiative. In addition, we will update the board and share pertinent information regarding Common Assessment Consortia efforts.

**BOARD ACTION REQUESTED: [X] INFORMATION [ ] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [ ] NO [ X ]**

**ASSOCIATE SUPERINTENDENT APPROVAL** 

**STATE BOARD MEETING DATE: February 22, 2010**

**SUBJECT: Common Core State Standards Initiative**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: February 11, 2010**

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**BACKGROUND INFORMATION:**

The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) have initiated a state-led process of developing and adopting a common core of state standards.

The intent of the Common Core Standards Initiative is to assure that all children graduate from high school ready for college, work, and success in the global economy. It is a significant and historic opportunity for states to collectively accelerate and drive education reform. The initiative is a critical component of AZ's Race to the Top eligibility and application.

Today's report is part of an ongoing update for State Board members on national work to date, as well as Arizona's efforts around the initiative. In addition, we will present an initial draft of the transition plan for the potential adoption of the Common Core Standards.

**BOARD ACTION REQUESTED: [X] INFORMATION [ ] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [X] NO [ ]**

## Appendix (B)(1)-11g - State Board Agenda Items

**Common Core Standards Update/ Connection with Assessment**

**January 25, 2010**

***Comments to the State Board of Education:***

1. **Introduction of topic / reference Mary Knuck, Roberta Alley**
2. **Progress to date**
    - **Much work has been occurring to date; directed by CCSSO and NGA at the national level with work being accomplished by stakeholders from all of the states and territories participating, as well as the professional content organizations, NEA and AFT.**
    - **State Committees have given feedback on the draft documents; Mathematics, committees have met 3 times; ELA committees have met twice and will come together for a third time Jan. 27th; feedback due later that evening.**
3. **New Timeline**
    a. **Feedback on Confidential K-12 ELA/Mathematics Standard Draft ~ January 22**
    b. **Public Draft due to be posted ~ 1st Week of February**
    c. **Feedback due on Public Draft ~ February 19**
    d. **Final Draft : End of February/ Early March**
4. **Standards- Setting Considerations / Letter to Superintendants and Principals**
5. **Because of changes in the timeline of the project, (and depending on the final release of the Common Core Standards) Arizona's draft timeline may have to be slightly adjusted.**
6. **Assessment Connection / Consortia for the Race to Top Assessment Grant Application**

The United States Department of Education (USDOE) has announced that there will be a grant opportunity for a consortium of states to develop an assessment system of the Common Academic Standards. A commitment to be part of a consortium was also a component in the evaluation of the Race to the Top Grant.

Superintendent Horne signed non-binding MOUs with two consortia (one with Florida as the lead state and a balanced assessment consortium with West Virginia as the lead) and a Statement of Principles with Achieve on January 2010. These were submitted with the Race to the Top Grant application. Other states also signed multiple MOUs. At this time, the State needs to make a commitment to be part of the planning and readiness to respond to the grant application guidance that is being released in March with the grant application due in June.

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**Appendix (B)(1)-11h - State Board Agenda Items**

**ASSOCIATE SUPERINTENDENT APPROVAL** _____

**STATE BOARD MEETING DATE: December 7, 2009**

**SUBJECT: Common Core State Standards Initiative**

**SUBMITTED BY: Cheryl J. Lebo**

**MANAGEMENT TEAM REVIEW: November 19, 2009**

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**BACKGROUND INFORMATION:**

The Council of Chief State School Officers (CCSSO) and the National Governor's Association Center for Best Practices (NGA Center) have initiated a state-led process of developing and adopting a common core of state standards.

This Common Core Standards Initiative is a significant and historic opportunity for states to collectively accelerate and drive education reform toward the ultimate goal of all children graduating from high school ready for college, work, and success in the global economy. Built off of the research and good work states have already done to build and implement high-quality standards, this initiative should lead to standards that are research-and evidence-based, aligned with college and work expectations, include rigorous content and skills, and be internationally benchmarked.

Today's report will briefly review national work to date, Arizona's efforts around the initiative, and the connection of the Common Core Standards Initiative with AZ's Race to the Top eligibility and application.

**BOARD ACTION REQUESTED: [X] INFORMATION [ ] ACTION/DESCRIBED BELOW**

**ATTACHMENTS: YES [X] NO [ ]**

# PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREERS
# MEMORANDUM OF UNDERSTANDING

**Purpose.** This document commits states to participate in the Partnership for Assessment of Readiness for College and Career, a state-led consortium that will collaborate on the development of common, high-quality assessments aligned to the Common Core State Standards (CCSS) in English language arts and mathematics for grades 3-8 and high school. The primary goal of the Partnership's work is to measure and document students' college and career readiness against common academic standards and to measure students' progress toward this target throughout the rest of the system.

While participating in the Partnership demonstrates the state's commitment to pursue a common assessment system that enables comparisons against the CCSS across all Partnership states, it does not commit the state to a specific assessment design at this point. Partnership states are still considering several options for the design of a common assessment system in pursuit of the Race to the Top (RTTT) Comprehensive Assessments Grant and will not be asked to commit to the Partnership's application until a later date. Until that time, all participating states will have the opportunity to contribute to and shape the Partnership's proposal.

**Preliminary Design Principles.** Partnership states have identified the following major purposes and uses for the assessment system. As the Partnership collaborates to develop its application for the RTTT assessment competition, these purposes will guide its work.

- The primary purpose is to measure and document students' **college and career readiness** and to measure students' progress toward this target throughout the rest of the system. Students meeting the college and career readiness standards will be eligible for placement into entry-level credit-bearing, rather than remedial, courses in public 2- and 4-year postsecondary institutions in participating states.

- Additionally, the partnership is committed to ensuring that the assessment results:
  - Are **comparable across states** at the student level;
  - Meet **internationally rigorous benchmarks**;
  - Support valid assessment of **student longitudinal growth**; and
  - Serve as a **signal for good instructional practices**.

- The results must be able to support multiple levels and forms of accountability including:
  - Decisions about **promotion and graduation for individual students**,
  - **Teacher and leader evaluations**, and
  - **School accountability** determinations.

**Roles and Responsibilities of Partnership States.** The Partnership will employ a multi-level governance and management structure designed to guide the partnership through the submission of the proposal.

- The **Governing States** are comprised of a representative group of leaders from Partnership states that are committed to implementing the assessment system developed by the partnership, should it win a grant from the Race to the Top Comprehensive Assessment System competition, and are responsible for guiding the proposal development process. Each Governing State will commit a team comprised of the chief, assessment director, and other key officials from the SEA, Governor's office, and higher education as appropriate.
- The **Proposal Design Team** will include officials from partnership states who will work with an advisory group of national and international experts to create an assessment system design for the Partnership's proposal. The design team will include as many states as are interested in and capable of contributing to and shaping the design of the proposed next generation assessment system.

- **Participating States** will include other partnership states that are unable to provide staff time to the design team but will provide rapid feedback on drafts of the proposal through the development phase.

**State Commitment**. This memorandum of understanding is voluntary and non-binding for states. States signing this MOU should do so with the intent of continuing in the Partnership through the proposal development, assessment development, and implementation phases. However, there will be an opportunity for states re-assess their participation in the Partnership before it submits its application for a Race to the Top Comprehensive Assessment Systems Grant by June 23, 2010.

**Agreement.** The undersigned state leader agrees to the process and structure as described above and attests accordingly by his/her signature below.

| **Signature(s) for the State of: Arizona** | |
|---|---|
| Authorized State Signature:  | |
| Name: Tom Horne | Date: May 5, 2010 |
| Title: Superintendent of Public Instruction | |
| | |

## PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREERS
## PARTICIPATING STATES
**MAY 25, 2010**

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1. Alabama
2. Arizona
3. Arkansas
4. California
5. Colorado
6. Delaware
7. District of Columbia
8. Florida
9. Georgia
10. Hawaii
11. Illinois
12. Indiana
13. Kentucky
14. Louisiana
15. Maryland
16. Massachusetts
17. Mississippi
18. New Hampshire
19. New Jersey
20. New York
21. North Dakota
22. Ohio
23. Oklahoma
24. Pennsylvania
25. Rhode Island
26. South Carolina
27. Tennessee

# PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREER
## OVERVIEW
## MARCH 20, 2010

*In January 2010, twenty-eight states signed an agreement to participate in the Common Assessment Partnership and seventeen states signed with the Florida-led Common Assessment Consortium[1]. Since then many leaders and assessment experts from these states have engaged in work, facilitated by Achieve, to develop a shared vision and set of design principles for a multi-state assessment system. During this period, leading states in both consortia – Florida, Massachusetts and Louisiana – worked to align the visions of the two consortia. This document represents their collective vision and a summary of current agreements and understandings.*

The Race to the Top Assessment Competition presents states with an unprecedented opportunity to move from the state-led development of common core standards in mathematics and English language arts to a common measurement for student performance and growth. The Common Core State Standards (CCSS) will require students to demonstrate knowledge and skills in deep and meaningful ways, as well as to reason, synthesize, think critically, and solve problems. A compelling vision for common assessments demands fully measuring the depth and breadth of the concepts and skills represented in the common core standards. However, states recognize the tension between their desire for innovative, forward-looking assessments and the realities of limited resources available to them for ongoing test administration. States in this partnership have agreed to strike a balance between pushing ahead towards next-generation assessment systems while acknowledging the design and fiscal tradeoffs, including the ability to sustain these assessments over the long term.

The state leaders recognize that trying to project costs more than five years in the future is filled with many uncertainties, such as the potential cost savings from technologies that have not been invented yet. Therefore, these state leaders have agreed that they will be ruthless about researching and designing an affordable and practical system without sacrificing innovative assessments that can drive instruction. Partnership states will bring the best intellectual resources to bear to tackle this challenge and develop solutions that will allow states to maximize the value of innovative assessment features while minimizing cost and turnaround time for results.

In the near term, the partnership expects that the substantial costs for developing the assessment system outlined below will be paid for by the RTTT assessment grant award. However, the partnership members recognize that the costs of implementing and sustaining an innovative assessment system could require more resources than many states are currently budgeting for assessment even with new technological developments. The states are committed to building a sustainable system, and it is their hope that the federal government will continue to provide funding to help support the ongoing administration costs for innovative assessment systems.

**Purposes and Uses**

The initial state members have identified the following major purposes and uses for the assessment system results.

- The primary purpose is to measure and document students' **college and career readiness** at the end of high school and to measure students' progress toward this target throughout the rest of the system. Students meeting the college and career ready standards will be eligible to placed into credit bearing rather than remedial courses in all public 2- and 4-year postsecondary institutions in all participating states.

[1] The combined list of states: Alabama, Arizona, Arkansas, California, Delaware, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, and Wisconsin.

- Additionally the partnership is committed to ensuring that the assessment results:
  - Are **comparable across states** at the student level;
  - Meet **internationally rigorous benchmarks;**
  - Support valid assessment of **student longitudinal growth;** and
  - Serve as a **signal for good instructional practices.**
- The results must be able to support multiple levels and forms of accountability including:
  - Decisions about **promotion and graduation for individual students,**
  - **Teacher and leader evaluations**, and
  - **School accountability** determinations.

**Cross-Cutting Design Considerations**

While there are many design issues unique to either the grades 3-8 or high school assessment system, the following issues cut across the design of all of the assessments in the system.

- ***Comprehensive and Coherent System***. A comprehensive assessment system design will be used to ensure coherence among summative, interim, and formative assessments, even if the partnership focuses development efforts on the summative measures.
- ***Operational Use.*** The partnership's summative assessment system will be available for the first operational use by the spring of 2014.
- ***Migration to Computer-Based Testing***. The initial operational assessment will be available in both computer and paper formats, but by the spring of 2016, paper formats will be available for specific testing accommodations only.
- ***Common Performance Levels***. All partnership states will use common performance level descriptors, standard setting process, and cut scores to define common achievement levels.
- ***Student-Level Growth***. The summative assessments will provide valid inferences regarding individual student growth and progress toward college and career readiness. Partnership members are committed to exploring the use of a common student growth model in order to facilitate comparisons of growth across member states.
- ***International Benchmarking***. The assessments will be designed to assure that students are being held to internationally competitive expectations via:
  - tight alignment with the internationally benchmarked common core state standards;
  - benchmarking the actual assessments against assessments from high performing countries; and
  - pursuing empirically-based international comparisons at target grade levels.
- ***Item Types.*** The partnership will ensure that the assessments measure the depth and breadth of the CCSS and signal good instruction. In consideration of cost, scoring time, and test administration time, the partnership will pursue innovations in item types that require higher order thinking skills but that can be scored via computer. There is also recognition that a target of college and career readiness requires expectations for complex performances; assessments will include open-response tasks.
- ***Testing Conditions.*** The partnership is committed to using the most uniform test administration policies and practices possible to enable meaningful comparisons of results across states.
- ***Special Populations.*** The assessments will be as inclusive as possible, particularly for students with disabilities and English language learners. The partnership will also require—to the fullest extent possible—the use of uniform accommodation policies and practices in all member states.
- ***Robust Writing Assessments***. The partnership will create robust (i.e., not just single prompts) direct writing assessments for every grade 3-11. All states will administer these at key grades and will be free to administer them (or allow LEAs to do so) at the other grades.

- ***Classroom-Embedded Performance Tasks***. The partnership will develop classroom-embedded performance tasks, starting first with writing as described above. Partnership states will participate in a pilot administration of these embedded tasks. The results from these tasks will not be included in summative judgments until the validity of such judgments can be assured.
- ***Released Items and Item Analysis***. The partnership will release operational items along with relevant student performance information (e.g., released-item reports).
- ***Model Instructional Supports.*** The partnership will develop model curriculum frameworks in grades K-8 and model course syllabi for high school that illustrate specific instructional options for educators targeting the CCSS, the common assessments, and embedded performance tasks.
- ***Assessments in Grades K-2.*** The partnership is interested in collaborating on some form of a K-2 assessment system.

**Assessment Design Considerations**

***Grades 3-8***. The assessment system for grades 3-8 will provide students, parents, and educators with clear signals about whether students are on track to acquiring the knowledge and skills foundational for success in and after high school. These assessments will include the following unique design considerations, as well as the cross-cutting features described above:

- Reading and mathematics assessments will be administered at the end of each school year in all grades.
- Writing will be assessed separately at specific as yet to be determined grades.

***High School***. The major focus of the high school assessment system will be to determine whether students can demonstrate the knowledge and skills necessary for success in college and careers.

- The partnership states are committed to involving higher education in the design of the assessments and associated performance standards.
- The partnership is committed to developing at least two approaches to high school assessment.
    - **End-of-course exams** will be developed for a limited set of mathematics and English courses.
    - **End-of-domain assessments** will be created to assess students at key points in time during their high school experience.
- The partnership is committed to designing these two approaches such that college/career ready determinations from each have comparable meanings.

**Governance**

The partnership will employ a multi-level governance and management structure designed to guide the partnership through the submission of the proposal.

- The **Governing Board** will be comprised of a representative group of leaders from partnership states and will be responsible for major policy decisions such as the overall direction of the partnership, major purposes and uses of the assessment system, fiscal authority and rules for state engagement.
- The **Design Group** will include officials from 8-12 states with expertise in assessment design and development and will work with an advisory group of national and international experts to create the design for a next generation assessment system.
- The **Review Team** will be comprised of state representatives from all partnership states and will be responsible for providing input to and feedback on the assessment system design.
- Achieve will serve as the coordinating **management partner** with the National Center for the Improvement of Educational Assessment (Center for Assessment) serving as a technical support partner.

## Appendix (B)(2)-4 - Biography of Deputy Associate Superintendent Roberta Alley

**Roberta L. Alley**
***Deputy Associate Superintendent for Assessment***
***Arizona Department of Education***

I have had varied and rich experiences as an educator in multiple states. This has lead to my current position, Deputy Associate Superintendent for Assessment for Arizona. All of my experiences in the classroom, as an administrator of a building and as a reading/language arts specialist have given me an understanding of the importance of an assessment system that is both rigorous and fair. The past seven years in a leadership role in assessment has led to a greater understanding of the process and procedures needed to produce that assessment system. I now am active in national discussions concerning assessment of the Common Core. May 2010, I was selected as the vice-chairman of the Assessment Group for *Education Information Management Advisory Consortium (EIMAC)* which is affiliated with the *Council of Chief State School Officers (CCSSO)*. I am also serving on the design team for the Partnership for the *Assessment of Readiness for College and Career Consortium (PARCC)* which is applying for the Race to the Top Assessment Grant.

**Work Experience:**

14 years teaching pre-kindergarten through middle school in Nebraska, Texas, and Arizona
8 years as a district reading specialist and early intervention specialist in Wisconsin and Maryland
6 years as a building administrator in Texas, Maryland, and Missouri
7 years as the Deputy Associate Superintendent for Assessment in the Arizona Department of Education,

**Education:**

BS in Education University of Nebraska 1973
Graduate Work at Texas Tech University 1981-87
MS in Education, Arizona State University 1992
Graduate Work at Arizona State University 1992-94 (Reading and Administration)
Graduate work at University of Wisconsin 1995 (District Reading Specialist)
Graduate Work at Edgewood College, Madison, Wisconsin (Administration Certification as Principal K-12 and District Curriculum Specialist K-12) 1996-1998

# Transitioning to the AZ Common Core Standards (2010)

The Arizona Department of Education is committed not only to developing clear and rigorous standards, but to supporting and assisting schools in implementing those standards so that all Arizona's students have the opportunity to learn them. With that goal in mind, and to be responsive to the field, the ADE has developed an implementation plan to transition to the AZ Common Core Standards (2010) in mathematics and English language arts.

This document outlines the professional development and technical assistance the Arizona Department of Education will sponsor to ensure that districts, schools and teachers receive the assistance they need in integrating the Common Core Standards in mathematics and English language arts into a comprehensive course of study in K-12 which also includes science, social studies, educational technology, fine arts, and health/physical education. It is our goal to help teachers recognize how standards complement one another and how learning is strengthened when connections are made across curricular areas.

The support and assistance plan is comprised of two components:

I. Professional Development
   a. Curriculum alignment and development (lesson plans) including developing assessment systems aligned to the new standards
   b. Mathematics and English language arts content specific sessions
   c. Integrating mathematics and English language arts: Cross-curricular connections
   d. Leadership development with support for sequencing instructional change with connections to Response to Intervention

II. Technical Assistance
   a. Resources: The built-in instructional support that provides clarification/explanation of the performance objectives and supporting instructional examples to assist teachers in understanding and teaching the content of the standards
   b. Resources: The selection and use of instructional materials that support the mathematics and English language arts standards
   c. Closer to home: Regional assistance in implementation
   d. Communication networks

It is not an all-inclusive or rigid plan; the ADE will modify, adjust, and add as the plan progresses. It is our belief that careful and intentional planning will allow educators to experience a natural and smooth transition from the "old" to the "new" standards and enhance their abilities to effectively teach in a standards-based system.

**NOTE: A goal of the ADE is to offer several opportunities on IDEAL to take advantage of technology in providing professional development and technical assistance.**

## Professional Development: Mathematics and English Language Arts

| Content | Provider/Timeline/Location |
|---|---|
| ***"AZ Counts Conference"***<br>This conference will provide a mechanism for:<br>• Introducing the new documents with instructional support<br>• "Unwrapping" the big ideas<br>• Crosswalking "old" standards with the "new"<br>• Highlighting grade level changes<br>• Digging deeper into critical concepts | • ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Fall 2010<br>• Regional |
| ***"Introducing Arizona's Mathematics and English Language Arts Standards: When, How and with What?"***<br>These K-12 sessions will provide teachers with an overview of the standards and present strategies to incorporate the standards into the curriculum; resources will be highlighted to teach the standards. | • ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Fall 2010-ongoing<br>• Regional<br>• IDEAL |
| ***"Unwrapping the Mathematics and English Language Arts Standards"***<br>This half-day session will:<br>• Introduce the new documents<br>• "Unpack" the big ideas<br>• Crosswalk "old" standard with the "new"<br>• Highlight changes at each grade level<br>• Examine scheduling options in the elementary school day<br>• Examine curriculum/lesson design<br>• Review available resources<br>• Identify connections within the standards and cross-curricular connections | • ADE Staff, standards specialists w/ featured presenters and Arizona teachers<br>• Begin during 2010-2011 school year - ongoing<br>• Regional<br>• Webinar<br>• IDEAL |
| ***"Curriculum Mapping"***<br>This session will provide strategies to align curriculum to our state standards and allows for the planning of content coverage in the school year. | • National and Arizona presenters<br>• Begin during 2010-2011 school year - ongoing<br>• Regional |

| | |
|---|---|
| ***"Selecting Mathematics and English Language Arts Instructional Materials Seminars"***<br>These seminars identify factors involved in selecting curricula including alignment to state standards; examine the ADE's process and protocol for the review and analyses of instructional materials to determine alignment; facilitate teams in conducting a gap analysis between standards and instructional materials; and support teams in considering effective selection and implementation processes. | • ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Begin during 2010-2011 school year - ongoing<br>• Regional |
| ***"Curriculum Topic Study in Mathematics"***<br>This one-day workshop will assist K-12 educators in deepening their understanding of the important mathematics topics they teach by building a bridge between state standards, research on students' ideas and misconceptions in mathematics, and opportunities for students to learn important concepts through improved teacher practice. | • ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Begin during 2011-2012 school year - ongoing<br>• Regional |
| **ADE Academies focusing on Leadership in Mathematics and English Language Arts**<br>A new session will be offered that focuses on leadership development with support for sequencing instructional change with connections to Response to Intervention. This opportunity will highlight important changes in the standards that will impact curriculum, instruction, and assessment. | • National and Arizona presenters<br>• ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Ongoing, regional |
| **ADE Academies focusing on Mathematics and English Language Arts Topics**<br>Various academies will be scheduled throughout the school year. These sessions target specific content identified through analysis of statewide AIMS results as areas of focus. | • National and Arizona presenters<br>• ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Ongoing, regional |
| **ADE Academies/ Institutes/Conferences**<br>At various professional development opportunities scheduled throughout the year, sessions on the Common Core Standards will be offered, such as:<br>• Mega Conference - November<br>• AZ LEADS | • ADE staff and standards specialists w/ featured presenters and Arizona teachers<br>• Ongoing |

## Technical Assistance:

| Resources | Timeline/Source |
|---|---|
| **IDEAL**<br>This searchable online database provides curricular resources, including trade books, lesson plans, reading passages, media, examples, assessment items, and links to external web sites that will support understanding and implementation of the Common Core Standards. | • IDEAL staff<br>• ADE Staff, standards specialists, and Arizona teachers<br>• Ongoing |
| **ADE website: Mathematics and English Language Arts Content Pages**<br>These content sites will contain relevant information to support the Mathematics and English Language Arts Standards. | • ADE Staff<br>• Ongoing |
| ***Mathematics and English Language Arts Standards Documents with AZ Instructional Support, Crosswalks, Changes Summaries, and Sample Tests with Student Think Throughs***<br>The Mathematics and English Language Arts Standards documents will be available by grade level with built-in instructional support and in various grade level bands in a horizontal format. All of these documents will be provided in both word and PDF. The crosswalks from the "new" standards to the "old" standards and the changes summaries by grade level will be posted on the website for assistance in the transition. Development of grade level *Sample Tests and Student Think Throughs* will be created that align with the new standards. These unique think throughs will focus on how a student might analyze a test item on a particular skill. | • ADE staff and Common Core Committee<br>• Ongoing revision of instructional support and student sample tests and student think throughs |

**Support**

| | |
|---|---|
| **County ESA Meetings**<br>These meetings will provide ongoing opportunities to discuss strategies for the implementation of the Common Core Standards (2010). | • ADE Staff and standards specialists<br>• Quarterly |

| | |
|---|---|
| **Professional Organization Meetings**<br>These meetings will ensure the ongoing communication between professional organizations and the ADE to address highly qualified teacher issues, content issues, implementation issues, available resources and discuss challenges and solutions. | • ADE Staff<br>• Arizona Association for Teachers of Mathematics<br>• Arizona Reading Association<br>• Arizona English Teachers Association<br>• Current and ongoing |
| **IDEAL** message boards for learning, discussion/reflection, etc. | • ADE Staff , standards Specialists<br>• Fall 2010 |

**Appendix (B)(3)-2a –**
**Declarations of Curricular Alignment**

State of Arizona
Department of Education

Tom Horne
Superintendent of
Public Instruction

August 13, 2009

To School Board Presidents, Superintendents, and/or Charter Administrators:

Public schools in Arizona (including charter schools) are expected to provide all of their students the opportunity to learn the Arizona Academic Standards. In order to demonstrate this, all public schools (including charter schools) must annually submit to the Arizona Department of Education a Declaration of Curricular and Instructional Alignment to the Arizona Academic Standards in Reading, Writing, Mathematics, Science and Social Studies. We have transitioned from benchmark to articulated standards in mathematics, reading, writing, science and social studies on a staggered schedule. The process/schedule of submission of Declarations has been modified accordingly. Declarations become even more critical to ensure that district/school curriculum and instruction are aligned with the articulated academic standards as the State Board approves them. The timeline for implementing the articulated standards is as follows:

| Standard | Year Adopted | Inclusion in Declaration |
|---|---|---|
| Articulated Reading | 2003 | 2004-05 |
| Articulated Writing | 2004 | 2005-06 |
| Articulated Science | 2004 | 2005-06 |
| Articulated Social Studies | 2005 | 2007-08 |
| 2008 Articulated Mathematics | 2008 | 2009-10 |

The Declaration statement from the Governing Board and Superintendent/Charter administrator is due **October 15, 2009.** The Declaration may be submitted at anytime prior to the deadline.

We strongly encourage districts and schools to take advantage of training, workshops and professional development offered by the Arizona Department of Education to examine these articulated standards documents and to complete the alignment process at the district/school level as quickly as possible. This sense of urgency will ensure that all Arizona students have the opportunity to learn rigorous content in a comprehensive curriculum. These efforts will result in better curriculum, better teachers and better schools, the cornerstones of my administration.

The Principal Declarations will be sent out December 3, 2009 and will be due February 4, 2010.

For questions about the Declarations, please call Teresa Rivera at 602-364-2335. Please submit all Declarations to the following **FAX: 602-364-0902**

Standards-Based Best Practices
Arizona Department of Education
Cheryl J. Lebo
Associate Superintendent of Standards and Assessment
1535 West Jefferson St., Bin #5
Phoenix AZ 85007

Sincerely,

Tom Horne

Tom Horne

Enclosures

State of Arizona
Department of Education

**Tom Horne**
Superintendent of
Public Instruction

## DECLARATION OF CURRICULAR & INSTRUCTIONAL ALIGNMENT TO THE ARIZONA ACADEMIC STANDARDS

All public schools (including charter schools) must submit annually to the Arizona Department of Education (ADE) a Declaration of Curricular and Instructional Alignment to the Arizona Academic Standards for language arts (Reading Standard Articulated by Grade Level 2003 and Writing Standard Articulated by Grade Level 2004), mathematics (2008 Mathematics Standard Articulated by Grade Level), science (Science Standard Articulated by Grade Level 2004) and social studies (Social Studies Standard Articulated by Grade Level 2005) referred to in this document collectively as the "Standards". The Declaration requires affirmations from the governing board, superintendent, and principal (or equivalent charter school officials), regarding the alignment of curriculum and the evaluation of instruction to the Standards.

**Governing Board**

The Governing Board of the _____ School District /Charter affirms that it has adopted a curriculum that is aligned with the Arizona Academic Standards and adopted an evaluation system that assesses whether teachers are integrating the Standards into their instructional practices. These policies are in effect for the 2009-2010 school year.

The deadline for submitting the Governing Board Declaration is October 15, 2009. The Declaration may be submitted at anytime prior to the deadline.

My signature below affirms the foregoing is accurate and complete:

_____

Name (print or type) Title

_____

Signature Date

This Declaration is to be submitted to the Arizona Department of Education by October 15, 2009. Please submit this Governing Board Declaration and the Superintendent/Charter Administrator Declaration together at the following **FAX: 602-364-0902.**

Standards-Based Best Practices
Arizona Department of Education
Cheryl J. Lebo
Associate Superintendent of Standards & Assessment
1535 West Jefferson St, Bin #5
Phoenix AZ 85007

☒**Governing Board** ☐**Superintendent/Charter Administrator** ☐**School Principal**

**Appendix (B)(3)-2c**
**Declarations of Curricular Alignment**

State of Arizona
Department of Education

**Tom Horne**
Superintendent of
Public Instruction

## DECLARATION OF CURRICULAR & INSTRUCTIONAL ALIGNMENT TO THE ARIZONA ACADEMIC STANDARDS

All public schools (including charter schools) must submit annually to the Arizona Department of Education (ADE) a Declaration of Curricular and Instructional Alignment to the Arizona Academic Standards for language arts (Reading Standard Articulated by Grade Level 2003 and Writing Standard Articulated by Grade Level 2004), mathematics (2008 Mathematics Standard Articulated by Grade Level), science (Science Standard Articulated by Grade Level 2004), and social studies (Social Studies Standard Articulated by Grade Level 2005) referred to in this document collectively as the "Standards". The Declaration requires affirmations from the governing board, superintendent, and principal (or equivalent charter school officials), regarding the alignment of curriculum and the evaluation of instruction to the Standards.

**Superintendent/Charter Administrator**

In my capacity as superintendent/charter administrator of the _____ School District/Charter, I affirm that:

1. The Governing Board of _____ School District/Charter has adopted a curriculum that is aligned with the Arizona Academic Standards and adopted an evaluation system that assesses whether teachers are integrating the Standards into their instructional practices. These policies are in effect for the 2009-2010 school year.
2. The District/Charter administration of the _____ _____ School District/Charter is implementing these policies by:
   a. providing instructional materials aligned to the Standards.
   b. providing (or arranging for others to provide) opportunities for teachers and principals to receive training related to the Standards.
   c. administering the District/Charter's system of teacher evaluation to confirm that teachers are integrating the Standards into their instructional practices.
   d. *for non-unified school districts*: collaborating on a curriculum alignment agreement between all corresponding feeders and receiving districts.

The deadline for submitting the Superintendent/Charter Administrator Declaration is October 15, 2009. The Declaration may be submitted at anytime prior to the deadline.

My signature below affirms the foregoing is accurate and complete:

_____

Name (print or type) Title

_____

Signature Date

This Declaration is to be submitted to the Arizona Department of Education by October 15, 2009. Please submit this Superintendent/Charter Administrator Declaration and the Governing Board Declaration together to the following **FAX: 602-364-0902**.

Standards-Based Best Practices
Arizona Department of Education
Cheryl J. Lebo
Associate Superintendent of Standards & Assessment
1535 West Jefferson St., Bin #5
Phoenix AZ 85007

☐ **Governing Board** ☒ **Superintendent/Charter Administrator** ☐ **School Principal**

State of Arizona
Department of Education

**Tom Horne**
Superintendent of
Public Instruction

## DECLARATION OF CURRICULAR & INSTRUCTIONAL ALIGNMENT TO THE ARIZONA ACADEMIC STANDARDS

All public schools (including charter schools) must submit annually to the Arizona Department of Education (ADE) a Declaration of Curricular and Instructional Alignment to the Arizona Academic Standards for language arts (Reading Standard Articulated by Grade Level 2003 and Writing Standard Articulated by Grade Level 2004), mathematics (2008 Mathematics Standard Articulated by Grade Level), science (Science Standard Articulated by Grade Level 2004) and social studies (Social Studies Standards Articulated by Grade Level 2005) referred to in this document collectively as the "Standards". The Declaration requires affirmations from the governing board, superintendent, and principal (or equivalent charter school officials), regarding the alignment of curriculum and the evaluation of instruction to the Standards.

### School Principal

In my official capacity, as principal of _____ School/Charter School _____ School District/Charter Administration Office, I affirm that for the **2009-2010** school year the teachers under my supervision:

1. were provided access to the Arizona Academic Standards and the curriculum.
2. received instructional materials aligned to the Standards.
3. received training related to the Standards, unless those teachers were excused for appropriate reasons.
4. were evaluated to assess whether they integrated the Standards into their instructional practices to the extent the Standards apply to their teaching area(s).

The deadline for submitting the Principal Declaration is February 4, 2010.

My signature below affirms the foregoing is accurate and complete:

_____

Name (print or type) Title

_____

Signature Date

This Declaration is to be submitted to the Arizona Department of Education by February 4, 2010 at the following **FAX: 602-364-0902**.

Standards-Based Best Practices
Arizona Department of Education
Cheryl J. Lebo
Associate Superintendent of Standards & Assessment
1535 West Jefferson St., Bin #5
Phoenix AZ 85007

☐ **Governing Board** ☐ **Superintendent/Charter Administrator** ☒ **School Principal**

Senate Engrossed House Bill

State of Arizona
House of Representatives
Forty-eighth Legislature
Second Regular Session
2008

# HOUSE BILL 2211

AN ACT

AMENDING SECTIONS 5-504, 5-505, 5-507, 5-522, 5-523, 15-185, 15-901 AND 15-901.02, ARIZONA REVISED STATUTES; AMENDING SECTION 15-904, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2008, CHAPTER 206, SECTION 1; AMENDING TITLE 15, CHAPTER 9, ARTICLE 1, ARIZONA REVISED STATUTES, BY ADDING SECTION 15-910.04; AMENDING SECTIONS 15-943, 15-945, 15-947, 15-947.01 AND 15-977, ARIZONA REVISED STATUTES; AMENDING TITLE 15, CHAPTER 13, ARTICLE 5, ARIZONA REVISED STATUTES, BY ADDING SECTION 15-1682.03; AMENDING SECTIONS 15-1851, 15-1852, 15-1853, 15-1854, 15-1855, 15-1871, 15-1874, 15-1875 AND 15-2011, ARIZONA REVISED STATUTES; AMENDING TITLE 15, CHAPTER 16, ARTICLE 4, ARIZONA REVISED STATUTES, BY ADDING SECTION 15-2032; AMENDING SECTIONS 28-8101, 28-8103 AND 41-1276, ARIZONA REVISED STATUTES; REPEALING SECTIONS 41-3008.14 AND 41-3008.19, ARIZONA REVISED STATUTES; AMENDING TITLE 41, CHAPTER 27, ARTICLE 2, ARIZONA REVISED STATUTES, BY ADDING SECTIONS 41-3010.24 AND 41-3018.19; REPEALING LAWS 2006, CHAPTER 375, SECTION 6; REPEALING LAWS 2007, CHAPTER 264, SECTION 14; MAKING APPROPRIATIONS; RELATING TO KINDERGARTEN THROUGH HIGHER EDUCATION BUDGET RECONCILIATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

school facilities board shall consider the availability of school district monies when establishing the repayment schedule.

D. If a union school district enters into a loan agreement with the school facilities board pursuant to subsection A of this section, the school district governing board shall request that the county school superintendent call for an election no later than twelve months of the date of the loan agreement entered into by the school facilities board and the union high school district to authorize the school district to issue class B bonds for the purposes prescribed in this section. The publicity pamphlet for the bond election shall be prepared and distributed pursuant to section 15-491, subsection H, paragraph 6, subdivision (b), Arizona Revised Statutes.

E. Notwithstanding any other law, if the qualified electors in the union high school district authorize class B bonds to be issued, the union high school district governing board shall issue bonds within three months of the election and shall expend bond proceeds to repay the total loan amount as provided in the loan agreement with the school facilities board.

F. Notwithstanding any other law, if the qualified electors do not authorize bonds to be issued, the union high school district governing board shall repay the loan with building renewal monies or unrestricted capital outlay monies based on a repayment schedule outlined in the loan agreement.

G. Notwithstanding any other law, if the qualified electors authorize bonds in a subsequent bond election, the union high school district shall expend bond proceeds to repay the remainder of the loan amount.

Sec. 60. Building renewal fund suspension

Notwithstanding section 15-2031, Arizona Revised Statutes, the building renewal fund shall be suspended for fiscal year 2008-2009.

Sec. 61. Retroactivity

Sections 32 and 34 of this act, relating to the school facilities board, are effective retroactively to July 1, 2008.

Sec. 62. Retroactivity

Sections 31 and 33 of this act, relating to the commission for postsecondary education, are effective retroactively to July 1, 2008.

Sec. 63. Task force on the Arizona assessment of achievements test

A. The task force on the Arizona assessment of achievements test is established consisting of the following members from diverse urban and rural areas who shall be appointed by the state board of education:

1. A person with expertise and experience in the academic assessment of pupils.

2. A principal of a high school in this state.

3. A person with expertise in school finance.

4. A person with expertise and experience in high school standards and curriculum.

5. A person with expertise and experience in business or industry.

6. A person with expertise and experience in high school systems and high school resources, including human resources.

7. A person with expertise and experience in the delivery and utilization of technology in high schools.

B. The state board of education shall select one of the appointed members to serve as the task force chairperson.

C. The task force shall:

1. Examine the experiences and outcomes of other states that have adopted tests that are required for the graduation of pupils from high school and that incorporate a national college admission and placement examination.

2. Develop methodologies, models and other recommendations for the initial Arizona assessment of achievements test.

3. Examine whether the Arizona assessment of achievements test should be a high-stakes test that high school pupils must pass in order to graduate from high school.

4. Submit a written report that contains the task force's findings and recommendations by June 30, 2009 to the state board of education, the governor, the speaker of the house of representatives and the president of the senate. The task force shall provide a copy of this report to the secretary of state and the director of the Arizona state library, archives and public records.

D. The task force may use the services and expertise of the staff of the legislature and the staff of the department of education.

Sec. 64. Delayed repeal

Section 58 of this act, relating to the task force on the Arizona assessment of achievements test, is repealed from and after September 15, 2009.

Sec. 65. Duration of contracts for standardized tests

Any contracts executed after June 30, 2008 between the state board of education and a publisher of standardized tests for services provided in connection with the design, modification, administration, scoring or evaluation of the Arizona instrument to measure standards test shall not exceed one year in duration.

Sec. 66. Conforming legislation

The legislative council staff shall prepare proposed legislation conforming the Arizona Revised Statutes to the recommendations of the task force on the Arizona assessment of achievements test for consideration in the forty-ninth legislature, second regular session.

Sec. 67. Debt calculation limit; exemption; reporting

A. Notwithstanding section 15-1683, subsection A, paragraph 1, subdivision (a), Arizona Revised Statutes, monies distributed from the university capital improvement lease-to-own and bond fund, established in section 15-1682.03, Arizona Revised Statutes, shall not be included in the debt calculation limit established in section 15-1683, subsection A, paragraph 1, subdivision (a), Arizona Revised Statutes.

B. Each university shall report separately in its capital improvement plan what the debt calculation established in section 15-1683, subsection A, paragraph 1, subdivision (a), Arizona Revised Statutes, would be with and without the debt service requirements from subsection A of this section.

EMERGENCY NOT ENACTED

Sec. 68. Emergency

This act is an emergency measure that is necessary to preserve the public peace, health or safety and is operative immediately as provided by law.

# AIMS

## Task Force

### Final Report and Recommendations

May 6, 2009

# Report and Recommendations of the AIMS Task Force

May 6, 2009

Presented to

Honorable Jan Brewer, Governor, State of Arizona

Robert Burns, President, Arizona State Senate

Kirk Adams, Speaker, Arizona House of Representatives

Jacob Moore, President, Arizona State Board of Education

The AIMS Task Force established per 2008 Arizona Session Laws, Chapter 287, §63.

## Executive Summary

The AIMS Task Force was charged with the following duties:

- Examine whether the Arizona assessment of achievements test should be a high-stakes test that students must pass in order to graduate from high school.
- Examine the experiences and outcomes in other states that (a) have adopted tests that are required for the graduation of pupils from high school, and (b) incorporate a national college admission and placement examination.
- Develop methodologies, models, and other recommendations for the initial Arizona assessment of achievements test.

The AIMS Task Force recommends the following:

1. The AIMS reading, mathematics and writing tests are maintained as graduation requirements. Future state test development should focus on college and career readiness and no other subject areas added to the current battery of AIMS high school graduation tests (ARS §15-701.01 and §15-741).
2. All 11th grade students must take a college and career readiness test with a provision to opt-out of the test with a written request from a parent or legal guardian. The college and career readiness test would be paid for by the state.
3. Replace the state norm-referenced test (NRT) (currently the TerraNova) administered in 9th grade with a college and career potential test.
4. A future committee composed should consider a high school graduation endorsement that signifies student readiness for college and career.

The proposed recommendations are intended to encourage all students to become college and career ready by providing feedback loops to help students meet their academic objectives.

## Enactment

The AIMS Task Force was enacted per 2008 Arizona Session Laws, Chapter 287, §63.

The Task Force was charged with the following duties:

- Examine the experiences and outcomes of other states that (a) have adopted tests that are required for the graduation of pupils from high school, and (b) incorporate a national college admission and placement examination.
- Develop methodologies, models, and other recommendations for the initial Arizona assessment of achievements test.
- Examine whether the Arizona assessment of achievements test should be a high-stakes test that students must pass in order to graduate from high school.
- Submit a written report that contains the Task Force's findings and recommendations by June 30, 2009 to the state board of education, the governor, the speaker of the state house of representatives and the president of the state senate. The task force shall provide a copy of this report to the secretary of state and the director of the Arizona state library, archives, and public records.

The following Task Force members were selected by the state board of education:

| Member | Sector Represented | Organizational Affiliation |
|---|---|---|
| Dr. Jim Zaharis, Chair | Business/Industry Representative | Greater Phoenix Leadership |
| Dr. Deborah Gonzalez | Standards/Curriculum Representative | Phoenix Union High School District |
| Dr. Chuck Essigs | School Finance Representative | Arizona Association of School Business Officials |
| Dr. Charles Santa Cruz | High School Principal | Gilbert Unified School District |
| Melinda Jensen | High School Technology Representative | Vail Unified School District |
| Dr. Joe O'Reilly | Assessment Representative | Mesa Unified School District |
| Dr. Alan Storm | High School Systems Representative | Pima County JTED |

In addition, the state board of education selected David R. Garcia, Ph.D., Assistant Professor, Arizona State University (ASU) Mary Lou Fulton College of Education, to facilitate the AIMS Task Force. Dr. Garcia was supported by a cohort of graduate students from the Educational Leadership and Policy Studies (ELPS) Division of the ASU Mary Lou Fulton College of Education. The Task Force would like to recognize graduate students Emily Ackman, Victor Diaz, Kim Eversman, Stacey Long-Genovese, Paul Ruiz, Kathy Wiebke, and Eman Yarrow for their support.

The Task Force met in a series of 12 meetings from October 2008 to May 2009. Through the course of its deliberations, the Task Force members considered an extensive body of research on issues relevant to their charge, such as the effects of high-stakes testing, alternative graduation requirements, and the role of college placement tests in other state assessment systems (the research materials are available online at http://www.ade.az.gov/AIMSTaskforce/).

## Introduction

As a committee, our evaluation is that the current AIMS high school tests are essential, initial but limited, and not a measure of college and career readiness.

Essential – AIMS measures critical and basic academic standards. Arizona expects its students to achieve these standards and for schools to instruct students to proficiency according to the state-defined performance levels. It is important to the postsecondary success of Arizona students to demonstrate proficiency on the AIMS test, which measures 10th grade level skills and knowledge.

In addition, AIMS is an essential component of school accountability. For the first time, Arizona has a functioning school accountability system that should be maintained. Schools and districts are held accountable for student mastery of these core state standards, and a consistent system is necessary for schools to focus their efforts and measure their own improvement.

Initial – As stated earlier, AIMS measures skills and knowledge appropriate to the 10th grade level. Many Arizona students will pass AIMS in the 10th grade or shortly thereafter. Approximately 10 percent of the 2008 graduating class, however, did not pass AIMS by the end of the 12th grade, and graduated with assistance from the state augmentation policy. The percentage of students who are able to graduate with the assistance of the state augmentation policy is expected to decline as the degree of allowable augmentation decreases over time. We find that it is part of having a rigorous system that some students may take up to five administrations, or until the end of their senior year, to pass AIMS.

We are concerned about the high school experience of students who require multiple administrations to pass AIMS. Per state statutes and federal regulations, schools and districts have the responsibility to ensure that those students who require multiple administrations to pass

AIMS receive remediation, so they reach proficiency in reading, mathematics and writing. At the same time, schools must ensure that students receive an enriched educational experience while working toward proficiency of the academic standards. For students who do not pass AIMS in $10^{th}$ grade, resources must be redirected to their $11^{th}$ and $12^{th}$ grade years in order to guide them on a path to success.

Limited – AIMS is a measure of $10^{th}$ grade high school achievement, but it does not measure the skills and knowledge necessary to demonstrate college and career readiness. Furthermore, AIMS cannot feasibly become a quality measure of college and career readiness. Certainly, we believe that AIMS measures some skills that are transferrable to college and career settings. But we need a credible, robust test of college and career readiness.

Finally, we are aware of the current realities of the state's fiscal situation. To meet our objectives, we must seek solutions that reallocate existing resources. We have not limited ourselves, however, by the current fiscal situation. Rather, we have created a series of recommendations for a comprehensive assessment system that can guide educational policy for years to come and be implemented in stages.

## Guiding Principles

As a set of guiding principles, we seek to develop an assessment system that allows for differentiation, promotes equity and high standards, and provides opportunities for all students.

Differentiation – No matter what their direction or how skills are learned, all students must develop college and career core competencies. Yet, we acknowledge that all students are different, there are many paths to success, and all academic work is valued as different rather than better. We encourage different interests, different abilities, and different opportunities for

students. There should a common core of outcomes for all students as well as an education system that allows students to make constructive choices.

Equity/Equality – We are conscious of the potential discriminatory practices associated with a single test. We find that AIMS, as an accountability instrument, and its associated policies are focused more on equality (treating all students the same) rather than equity (differentiating outcomes based on student interests and abilities). We aspire to create an assessment system that allows for multiple pathways for learning and maintains quality for all student outcomes.

Provide opportunities – Our goal is to provide opportunities for students that open rather than close doors. For example, tests that provide information to students and parents as they choose their college or career pathway are an incentive that opens doors for future success.

As we raise the rigor and expectations for high school outcomes, it is important that the state board of education examine the assessment system at earlier grades to ensure alignment with these higher expectations. We encourage early warning and intervention in the elementary grades as a resource to prepare students for success at the high school level. The early warnings should yield diagnostic and prescriptive information in the elementary grades that aide student progress.

As a final overarching principle, any proposed recommendations should be evaluated to consider the practicality of implementation at the local level and to determine appropriate alignment with state institutions of higher education.

Our recommendations are additive, expansive and credible.

Additive – With AIMS as an initial test of basic high school skills, we believe it is necessary to implement an advanced test to measure the skills and knowledge that all students

should have by the end of high school. This advanced test should emphasize the required core skills that prepare graduates for, and focus them on, college and career readiness. In keeping with our guiding principles, we believe the advanced test should not have high stakes for students.

Expansive – To provide more complete information to the educators and the public about student academic achievement, we suggest expanding our consideration beyond tests to include other high school indicators. These indicators could include the percentage of students completing Advanced Placement (AP) requirements, honors courses, and Career and Technical Education (CTE) requirements, and the percentage of students exiting English language programs.

Credible - Any proposed solutions should remain mindful that our students, and the state as a whole, compete in a national and international environment. We should benchmark our state tests to national and international standards and assessments, such as the National Assessment of Education Progress (NAEP), the Trends in International Mathematics and Science Study (TIMSS), and the Cambridge Assessment. The results should be used to make continual improvements to our state education and assessment systems. Arizona needs comparable data that measure our schools against the quality of education in other contexts. An assessment system that is aligned with national and international benchmarks will provide these data and maintain credibility over time.

## Recommendations

The AIMS Task Force recommends the following (see Figure 1 for a representation of the recommended state test schedule by grade).

1. We recommend that the AIMS reading, mathematics and writing tests be maintained as graduation requirements. We believe that expanding the number of AIMS high school tests to include other content areas does not further student efforts to be college and career ready. Therefore, future state test development should focus on college and career readiness and no other subject areas added to the current battery of AIMS high school graduation tests (15-701.01 and 15-741).
2. All 11th grade students must take a college and career readiness test with a provision to opt-out through a written request by a parent or legal guardian. The college and career readiness test would be paid for by the state. The purpose of the college and career readiness test is to provide feedback to the student, family, and educators on the extent to which students are college and career ready. College readiness means students possess the knowledge and skills in English and mathematics necessary to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework. Career readiness means a high school graduate has the English and mathematics knowledge and skills needed to qualify for and succeed in the postsecondary job training and/or education necessary for their chosen career.
    a. The college and career readiness test objectives must be consistent with the college and career potential test given in 9$^{th}$ grade in order for students to receive appropriate feedback.
    b. The state board of education, the Arizona Board of Regents and the community college systems should agree on how the college and career readiness test will be used. For example, the college and career readiness test could be used to identify areas of needed remediation while students are still in high school as well as

qualify a student for admission and college course placement. We recommend that, similar to the California Early Assessment Program (EAP), if a student reaches a common threshold score accepted by all state postsecondary institutions, they are exempt from any additional placement tests and can enter postsecondary courses at the college level without remediation.

c. The college and career readiness test must include a writing component.

d. Participation rate of the college and career readiness test should be reported on the school report cards per ARS §15-746, but excluded from the achievement profiles required by ARS §15-241.

3. Replace the state 9th grade norm-referenced test (NRT) (currently the TerraNova) with a college and career potential test. This replacement can fulfill the state statutory testing requirements per ARS §15-755 for a "standardized, nationally-normed written assessment of academic subject matter given in English." The 9th grade TerraNova is not required to meet any federal assessment or accountability requirements, and is not included in the state accountability system. The state board of education can enact this recommendation without legislative action.

4. A future committee composed of representatives from K-12, higher education, and the business community should consider a high school graduation endorsement that signifies student readiness for college and career. The endorsements would be awarded to students who meet the high school graduation requirements and complete additional accomplishments. The endorsements would not be required for high school graduation (see Appendix A for an outline of the potential high school endorsement requirements).

Key feedback and course correction opportunities for students

The proposed recommendations are intended to encourage all students to become college and career ready by providing feedback loops that inform student course-taking decisions, and by allowing multiple opportunities for students to make "course corrections" to meet their academic objectives (see Figure 2).

These recommendations provide multiple feedback loops for students, as they enter into and move through high school, to assess their progress toward graduation and toward meeting their postsecondary goals. The earliest feedback loop is provided to students as they enter high school. The Task Force endorses the implementation of state board-approved Education and Career Action Plan (ECAP). Beginning with the class of 2013 (freshman in fall 2009), all Arizona public and charter high school students in grades 9-12 must complete an ECAP. The ECAP is intended to "evaluate what they (students) are currently doing to connect the relevancy of a student's academic planning to his/her career awareness, skills and interests, educational and career aspirations."

The 10th grade AIMS test remains as a key feedback loop to students about their progress toward meeting the Arizona high school graduation requirements. The Task Force recommends two new feedback loops for students as they progress through high school. First, the introduction of a college and career potential test in 9th grade allows students to learn (1) about their potential to succeed in college and (2) what they need to do in the subsequent grades to become college and career ready. Second, students will be provided a college and career readiness test in 11th grade to begin a successful transition to postsecondary education.

Armed with the information provided by the scheduled feedback loops, students are able to make "course corrections" as they progress through high school. After the initial ECAP, students begin high school with a clear understanding of their path to graduation and beyond.

Students can begin making course decisions based on their interests and ambitions. After the college and career potential test in 9th grade, students can re-assess their course decisions and make the necessary corrections to either stay on their current path or change their goals.

The 10th grade AIMS test remains an important decision point for all students to meet graduation requirements. Students are encouraged to pass AIMS on the first administration in order to be provided maximum flexibility to become college and career ready. For those students who do not pass AIMS in the 10th grade, their course sequence is narrowed toward reaching proficiency on the state standards for graduation. As students progress through high school without passing AIMS, they have fewer opportunities to make course corrections to become college and career ready. Students who neither pass AIMS nor meet the other state graduation requirements before the end of high school will not receive a diploma.

## Cost Analysis

The Task Force considered several options to reduce test costs to implement the aforementioned recommendations. To begin, our recommendation to replace the 9th grade NRT with a college and career potential test is greatly offset given that the current cost of the former test can be used to administer the latter.

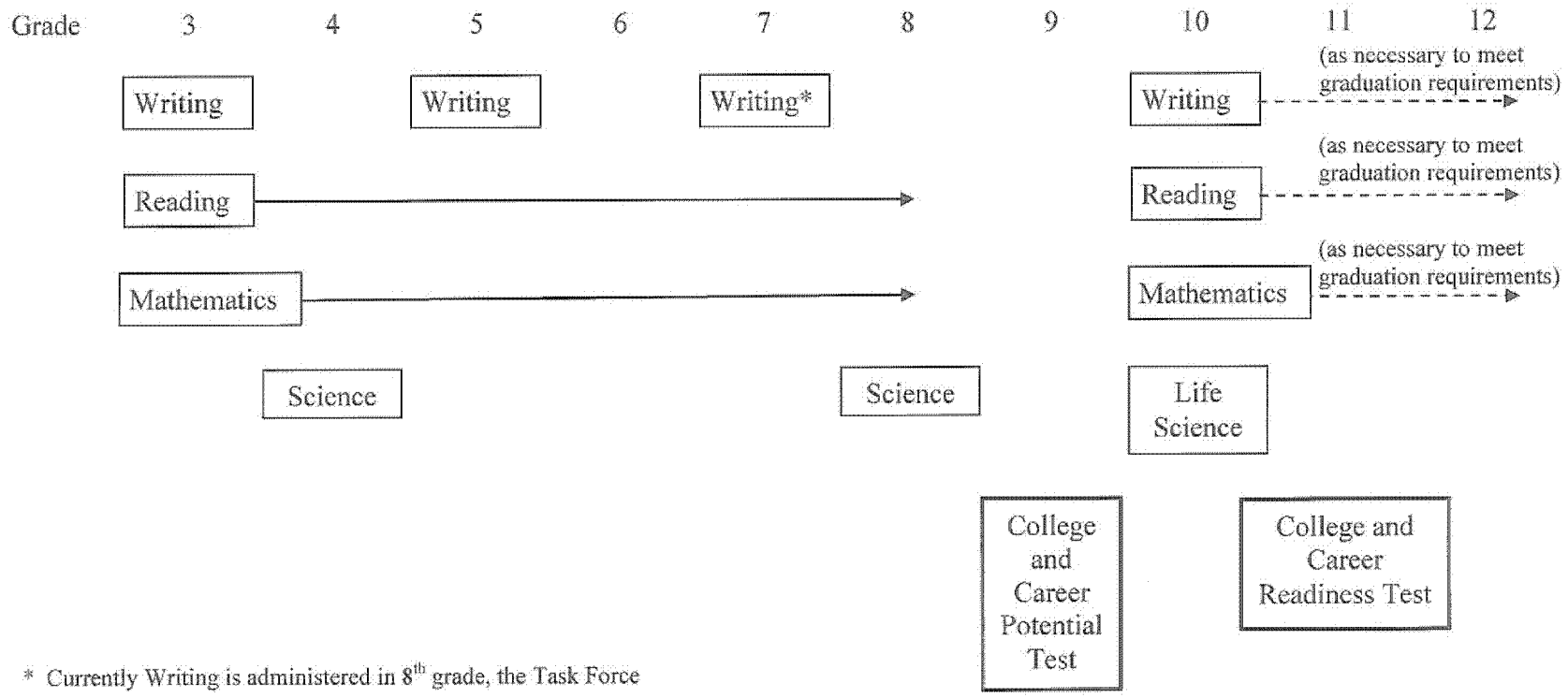
We also recommend a reduction in the number of AIMS Writing administrations in the elementary grades as a cost-savings measure. The number of AIMS Writing administrations in grades three through eight can be reduced from six (6) to three (3) while remaining compliant with state and federal laws.

Finally, as high school graduates become better prepared to enter postsecondary education for college and career, the state will realize a cost savings as the number of remedial classes needed at the college level decreases.

## Closing

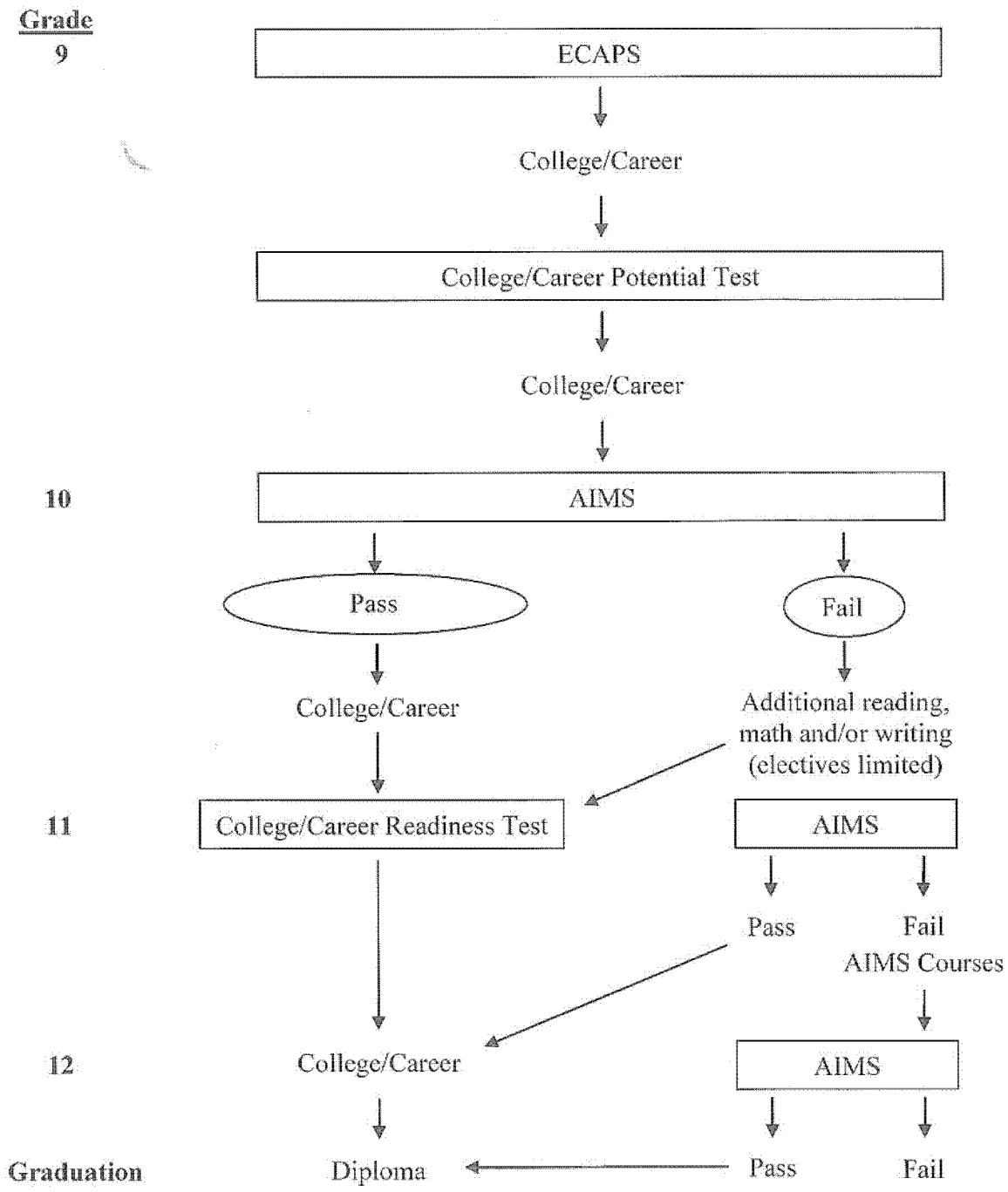
The Task Force respectively submits this report and recommendations in the spirit of encouraging the postsecondary success of all Arizona students.

Figure 1: Recommended State Test Administration Schedule




* Currently Writing is administered in 8th grade, the Task Force recommends that the Writing test be administered in 7th grade.

Figure 2: Student Feedback and Course Correction Opportunities



Appendix A

Outline of Potential College-Career Endorsement Requirements

The requirements for the College/Career-Ready Endorsement could include:

a. Earn a High School Diploma
b. Course-Taking reflects:
    a. College-entry requirements per the Arizona Board of Regents requirements and/or
    b. Completion of a Career & Technical Education program
c. Test-taking reflects:
    a. ACT 22 or higher and/or
    b. SAT Reasoning 1040 and/or
    c. Exceeds AIMS Reading, Math, and Writing
    d. Adequate performance on the college and career readiness test (see recommendation number 1).

Arizona Department of Education

# Student Accountability Information System

# Student Database Transaction Elements

Version 3.0
Last updated: September 23, 2004

Arizona Department of Education
School Finance Division
1535 W. Jefferson Street
Phoenix, Arizona 85007-3209

*For updates to this document, see the SAIS project contact in section* ***Contacts****.*

# Table of Contents

# Revisions

Below is an inventory of the revisions made to this document since publication of version 1.0. (The revisions made while this document was in Draft form are NOT included in this list.) Each time a revision is made the following sections, if included in this document, will also be updated: **Table of Contents, List of Figures, List of Tables, Issues**.

09/23/2004 Version 3.0 PUBLISHED

| ver | new information | old information | source |
|---|---|---|---|
| 3.0 | **All**<br>Removed references to Membership Share | Data element was retired in FY2005 | C. Cree, MIS – Business Analysis |
| 3.0 | **Objective**<br>Added new transaction types<br>• 020<br>• 021<br>• 022 | Previously did not exist | C. Cree, MIS – Business Analysis |
| 3.0 | **SAIS Data Elements by Subject Area**<br>• Added Assessment Score<br>• Added Community College elements<br>• Added Initial IEP elements<br>• Removed Membership Share | Previously did not exist or was retired in FY2005 | C. Cree, MIS – Business Analysis |
| 3.0 | **SAIS Data Elements – Field Names**<br>Added data elements:<br>• Assessment Score<br>• Community college Entity ID<br>• Community College Entry Date<br>• Community College Exit Date<br>• Community College Classes<br>• Initial IEP Date<br>• Proposed Service Initiation Date<br>Removed:<br>• School Membership Share | Previously did not exist or was retired in FY2005 | C. Cree, MIS – Business Analysis |
| 3.0 | **Transaction Data Elements Sorted Alphabetically**<br>• Added Assessment Score<br>• Added Community College elements<br>• Added Initial IEP elements<br>• Removed Membership Share | Previously did not exist or was retired in FY2005 | C. Cree, MIS – Business Analysis |
| 3.0 | **Transaction Data Elements Sorted by Transaction**<br>• Added Assessment Score<br>• Added Community College elements<br>• Added Initial IEP elements<br>• Removed Membership Share | Previously did not exist or was retired in FY2005 | C. Cree, MIS – Business Analysis |

5/1/2003 Version 2.0 published

| ver | new information | old information | source |
|---|---|---|---|
| 2.0 | Revised **Revisions** paragraph to match standard SAIS chapter content | previous version was out of date | Charity Torrez, MIS Technical Writer |
| 2.0 | Revised **About This Document** chapter to match standard SAIS chapter content | previous version was out of date | Janice McGoldrick, MIS Software Development Mgr |

| ver | new information | old information | source |
|---|---|---|---|
| 2.0 | Entire document:<br>• Renamed transaction 015 Support Program Participation; **NOTE: elements changed to match transaction now being implemented for the first time, for FY 2003-04**<br>• Corrected the element name "Responsible Party"; description expanded to "first name of the adult OR PARTY responsible for the student"<br>• added element "Withdrawal Reason" | • previously referred to as "Supplementary" Program Participation; previously published with note that it would be implemented in the future<br>• incorrectly listed in various places as "Responsible adult" and "Mother"<br>• new element to be collected FY 2003-04 not in regular SAIS data transactions but with a separate collection utility to be defined later | Janice McGoldrick, MIS Software Development Mgr |
| 2.0 | **Transaction Data Elements Sorted By Transaction:** Added NOTE that the information shows the elements in each transaction, and it does not imply record layouts. Removed "empty field" place holders. | note did not previously exist | Janice McGoldrick, MIS Software Development Mgr |

6/1/2001 Version 1.5 published

| ver | new information | old information | source |
|---|---|---|---|
| 1.5 | Chapter **About This Document:** Added new section **Document References** identifying location of other SAIS documents referred to in this publication. Synchronized Change Management section with other SAIS documents. | did not exist | standard SAIS chapter content |
| 1.5 | Deleted duplicate entry for Foreign Exchange Indicator in *Transaction Data Elements Sorted Alphabetically* table | Foreign Exchange Indicator entry | eliminated duplicate |
| 1.5 | To the description of Need Entry Date added "For SPED needs, this element will be used solely to determine the school year during which the need occurred" in *Transaction Data Elements Sorted Alphabetically* table | Description read "date the student entered the state of having this Need". | expand description |
| 1.5 | To the description of Need Exit Date added "For SPED needs, this element will not be used" in *Transaction Data Elements Sorted Alphabetically* table | Description read "date the student exited the state of having this Need". | expand description |
| 1.5 | Need Level Code marked as "no longer collected" in all transactions. | description stated "Primary or Secondary Need; relevant only for Need codes in the special education need group; used only for Vouchers System See *Transaction Requirements: Code Values – Need Level.*" | eliminated unnecessary data element |
| 1.5 | Neighborhood School Indicator (and Old … and New …) marked as "no longer collected" in all transactions. | description stated "Shows if this school is the closest school to the student's home within the boundaries of the district in which the school is located." | eliminated unnecessary data element |
| 1.5 | Added "**Recommended values for missing elements**" chapter. | did not exist | defines ADE recommendations for temporary values to be provided for as-yet uncollected elements |

3/12/2001 Version 1.4 published

| ver | new information | old information | source |
|---|---|---|---|
| 1.4 | added section **SAIS Data Elements by Subject Area** | did not exist | clarification |
| 1.4 | added section **Element Optionality** to **Objective** chapter | separate notes were included at the beginning of each section | centralized clarifying information |

3/8/2001 Version 1.3 published

| ver | new information | old information | source |
|---|---|---|---|
| 1.3 | all sections: added note on where to find element optionality designations | did not exist | clarification |
| 1.3 | reordered change notes for element "Operation Code" to be in transaction number order | were listed as transaction number order within membership or needs subject area | enhanced document readability |
| 1.3 | section name changed to **Transaction Data Elements Sorted Alphabetically** to reflect how the elements are specified in each transaction | was named **Data Elements Sorted Alphabetically** | enhanced document readability |
| 1.3 | section name changed to **Transaction Data Elements Sorted by Transaction** to reflect how the elements are specified in each transaction | was named **Data Elements Sorted by Transaction** | enhanced document readability |
| 1.3q | added new section **SAIS Data Elements**, containing just the SAIS data elements, without regard to how they are used in the transactions | did not exist | enhanced document readability |

2/26/2001 Version 1.2 published

| ver | new information | old information | source |
|---|---|---|---|
| 1.2 | **all elements:** descriptions synchronized across all transactions, from the detailed Transaction Requirements documents | some updates to elements' descriptions were not promulgated throughout all transactions | error correction |
| 1.2 | **Contacts:** fixed hyperlink for SAIS project contact | hyperlinked to email address that didn't match the displayed email address | error correction |
| 1.2 | **005 Student Personal Information; Previous School Entity ID:** field length fixed to 9 | previously listed as 12 | error correction |
| 1.2 | **019 Student SPED Service DOR Transfer; Old Neighborhood School Indicator:** abbreviated name fixed to SPEDNEIGHSCHL (the needs-related element) | previously referred to OLDNEIGHSCHL (the membership-related element) | error correction |

1/23/2001 Version 1.1 published

| ver | Transaction or Element | Change | Reason |
|---|---|---|---|
| 1.1 | Assessment Code, Assessment Date, Assessment Result Code | Removed 013 English Acq. Prog. Part. from trans list | Per changes to Needs Requirements English Acquisition Program Participation transaction. |
| 1.1 | Attendance Start Date, Attendance End Date, Attendance Minutes | Removed “Old” and “New” elements and added these | To agree with Enrollment Requirements document |
| 1.1 | First Date of Membership | Changed Date of First Membership to First Date of Membership | To agree with Enrollment Requirements document |
| 1.1 | Enrollment Type | Removed from document | Previously removed from Enrollment Requirements |

| ver | Transaction or Element | Change | Reason |
|---|---|---|---|
| 1.1 | First Name | Changed to First Name on Legal Document | To agree with Enrollment and Needs Requirements |
| 1.1 | Last Name | Changed to Last Name on Legal Document | To agree with Enrollment and Needs Requirements |
| 1.1 | Last Name at Birth | Dropped | Unable to find an occurrence of this element in either Requirements document |
| 1.1 | Last Name Student Goes By | Added | To agree with Enrollment and Needs Requirements |
| 1.1 | Middle Name | Changed to Middle Name on Legal Document | To agree with Enrollment and Needs Requirements |
| 1.1 | Mother's First Name,<br>Mother's Last Name | Added "on Legal Document" | To agree with Enrollment Requirements |
| 1.1 | Name Extension | Added "on Legal Document" | To agree with Enrollment and Needs Requirements |
| 1.1 | Need Code,<br>Need Entry Date,<br>Need Exit Date | Removed 013 English Acq. Prog. Part. from trans list | Per changes to Needs Requirements English Acquisition Program Participation transaction. |
| 1.1 | New Attendance Start Date,<br>New Attendance End Date,<br>New Attendance Minutes | Removed – see Attendance Start Date above | To agree with Enrollment Requirements document |
| 1.1 | New First Name | Added "on Legal Document" | To agree with Enrollment Requirements |
| 1.1 | New FTE End Date | Added missing element | To agree with Enrollment Requirements |
| 1.1 | New FTE Start Date | Added missing element | To agree with Enrollment Requirements |
| 1.1 | New Last Name | Added "on Legal Document" | To agree with Enrollment Requirements |
| 1.1 | New Middle Name | Added "on Legal Document" | To agree with Enrollment Requirements |
| 1.1 | Nickname | Changed to Nickname Student Goes By | To agree with Enrollment Requirements |
| 1.1 | Old Attendance Start Date, Old Attendance End Date,<br>Old Attendance Minutes | Removed – see Attendance Start Date above | To agree with Enrollment Requirements document |
| 1.1 | Old FTE End Date | Added missing element | To agree with Enrollment Requirements |
| 1.1 | Old FTE Start Date | Added missing element | To agree with Enrollment Requirements |
| 1.1 | Track Number | Updated description and added transactions 007, 008, 009, 010, & 017 | To agree with Enrollment Requirements |
| 1.1 | All Transactions | • Changed First Name, Last Name, Middle Name and Name Extension to include "on Legal Document"<br>• Changed Date of First Membership to First Date of Membership<br>• Deleted Enrollment Type<br>• Deleted Last Name at Birth<br>• Added Last Name Student Goes By<br>• Changed Mother's First Name and Mother's last name to include "on Legal Document"<br>• Changed Nickname to Nickname Student Goes By<br>• Updated description of Previous State Code<br>• Updated description of Track Number<br>• Updated description of Tribal Name | To agree with Enrollment Requirements |
| 1.1 | 002 Student Readmission | • Changed Date of First Membership to First Date of Membership<br>• Updated description of Track Number | To agree with Enrollment Requirements |
| 1.1 | 004 Student Absence | • Added Track Number | To agree with Enrollment Requirements |

| ver | Transaction or Element | Change | Reason |
|---|---|---|---|
| 1.1 | 005 Student Personal Info Change | • Changed New First Name, New Last Name, New Middle Name, Old First Name, Old Last Name, Old Middle Name and Name Extension to include "on Legal Document"<br>• Changed Date of First Membership to First Date of Membership<br>• Deleted Last Name at Birth<br>• Added Last Name Student Goes By<br>• Changed Mother's First Name and Mother's last name to include "on Legal Document"<br>• Changed Nickname to Nickname Student Goes By<br>• Updated description of Previous State Code<br>• Changed Effective Date to Capture Date | To agree with Enrollment Requirements |
| 1.1 | 006 Student Membership Change | • Changed Date of First Membership to First Date of Membership<br>• Updated description of Track Number | To agree with Enrollment Requirements |
| 1.1 | 007 Student DOR Transfer | • Added Track Number | To agree with Enrollment Requirements |
| 1.1 | 008 Student FTE & Share | • Added missing elements New FTE End Date, New FTE Start Date, Old FTE End date, Old FTD Start Date<br>• Added Track Number | To agree with Enrollment Requirements |
| 1.1 | 009 Student Grade Transfer | • Added Track Number | To agree with Enrollment Requirements |
| 1.1 | 010 Student Payer Factors | • Added Track Number | To agree with Enrollment Requirements |
| 1.1 | 013 Student Eng. Acq. Prog. Participation | • Removed the following elements: Assessment Code, Assessment Date, Assessment Result Code, Need Code, Need Entry Date, & Need Exit Date | To agree with Needs Requirements |
| 1.1 | 016 Student Status | • Changed Date of First Membership to First Date of Membership | To agree with Enrollment Requirements |
| 1.1 | 017 Student Attendance | • Removed "Old" and "New" from Attendance End Date and Attendance Start Date<br>• Added Track Number | To agree with Enrollment Requirements |

11/17/2000 Version 1.0 published

7/10/2000 First Draft published

# About This Document

## AUTHOR

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Janice McGoldrick, Managing Consultant, Spherion Technology Architects

## CONTACTS

For comments, corrections, or other information about this document, contact the ADE MIS Department at ADEsupport@ade.az.gov. Please provide the following information:

- In the "Subject" line of the email, type "ADE MIS document inquiry."

- In the body of the email:
  - the system name and document name (from the document's header)
  - the document's last updated date (from the document's footer)
  - the purpose of your inquiry
  - your identifying information:
    - your name
    - your district name and CTD, or school name and CTDS, or your company name
    - your contact email address (because the email will be forwarded when it reaches ADE)

## DOCUMENT REFERENCES

The SAIS system is described in detail on ADE's main SAIS website, at http://www.ade.state.az.us/sais/.

Other related information, including those items referred to in this document, can be found at another ADE website at http://www.ade.state.az.us/sais/saisdbdocs.asp.

## DOCUMENT DISTRIBUTION / POSTINGS

Notification of the updated to this document will be made to the following:

- all Student Management System vendors participating in the SAIS project
- all Arizona school district MIS contacts
- all RTCs

The updated document will be posted on ADE's SAIS Design/Requirements Documents website: (http://www.ade.state.az.us/sais/saisdbdocs.asp).

## DOCUMENT FILENAME

This document is stored at ADE with the filename SAIS elements.doc.

# Objective

The Objective of this document is to provide a quick reference tool to find information on each SAIS data element, including its full name, abbreviated name (this relates to the column name in the SAIS database), data types, field length, description, and which SAIS transactions use the element.

The element information is presented twice, in two different formats:

- The first is a list of all elements listed alphabetically by element name.
- The second list is organized by Transaction ID. These transactions are the record layouts by which districts submit these data elements to SAIS.

The transactions referred to in this document are the following:

*Membership-related transactions*

- 001 Student Enrollment
- 002 Student Readmission
- 003 Student Withdrawal
- 004 Student Absence
- 005 Student Personal Information
- 006 Student Membership Change
- 007 Student District of Residence Transfer
- 008 Student FTE & Share
- 009 Student Grade Transfer
- 010 Student Payer Factors
- 016 Student Year End Status
- 017 Student Attendance
- 018 Student Summer Withdrawal
- 020 Community College Classes
- 022 Test Label

*Needs-related transactions*

- 011 Student Need
- 012 Student Assessment
- 013 English Acquisition Program Participation
- 014 SPED Service Participation
- 015 Support Program Participation
- 019 Student SPED Service DOR Transfer
- 021 Initial IEP

A full description of each transaction, the verification and validation logic, and element optionality can be found in the **SAIS Student Database Transaction Requirements: Membership** and in the **SAIS Student Database Transaction Requirements: Needs** documents. Additionally, an overview of each transaction, including only its description, submission elements, and optionality tables can be found in the **SAIS Student Database Transaction Requirements: Transaction Overview** document.

## ELEMENT OPTIONALITY

***Note:*** *Not all elements are required by SAIS. Additionally, in some cases element optionality depends upon the context of the transaction being submitted. For specific element optionality, see the detailed requirements documents,* ***SAIS Student Database Transaction Requirements: Membership*** *and* ***SAIS Student Database Transaction Requirements: Needs****. Optionality information is also included in the synopsis of these two documents, called* ***SAIS Student Database Transaction Requirements: Transaction Overview****.*

# SAIS Data Elements by Subject Area

*See the section on **Element Optionality** in the **Objective** chapter of this document.*

**Student information**
ADE-generated Student Identifier (SAIS ID)
Birth: Date, Country, State (if country of birth is USA)
Capture Date (effective date of change)
Ethnicity Code
Student Names: First, Middle, Last Name & extension (Jr., III, etc.) on Legal Document; First (nickname) & Last Name Student Goes By, Tribal Name
Foreign Exchange Indicator
Gender Code
Home Language Code
Responsible Party: Mother's or father's or guardian's or responsible party's First & Last Name on Legal Document
Normal Graduation Year (cohort group)

**Membership information**
Absence: Date, Amount, Reason
Attendance: Start & End Dates, Minutes (duration)
Concurrent School: Entity ID (school identifier), student identifier
Activity Code: Enrollment, Withdrawal, Readmission, Year-End, Summer Withdrawal
Funded District of Residence
Grade: Grade Level, Register ID
School membership: Entity ID (school identifier), student identifier, Track Number (calendar), Enrollment (or Readmission) & Withdrawal (or Summer Withdrawal) Dates, Type
Previous School: State Code, Entity ID if Arizona school (school identifier), student identifier
Special Enrollment Code (e.g., CEC code)
Student Membership FTE (full or part time status)
Tuition Payer Code (e.g., state-funded or private paid)
Withdrawal Reason
Community College: Entity ID, Entry Date, Exit Date, Classes

**Special needs-related information**
Need: Code, Entry & Exit Dates
Assessment: Date, Code (test type), Result, Score
SPED Service Code, Entity ID (school identifier), Entry & Exit Dates, Grade, Exit Reason, Funded District of Residence, SPED Neighborhood School Indicator
Program Code, Entry & Exit Dates, Exit Reason (for language and support programs)
Initial IEP: Initial IEP Date, Proposed Service Initiation Date

**System processing-related information**
Transaction ID
Operation Code
Vendor-Defined Field

# SAIS Data Elements: Field Names

Following are the elements collected by SAIS, using the field names found on the transaction definitions.

> *See the section on **Element Optionality** in the **Objective** chapter of this document.*

Absence Amount
Absence Date
Absence Reason Code
Assessment Code
Assessment Date
Assessment Result Code
Assessment Score
Attendance End Date
Attendance Minutes
Attendance Start Date
Birth Date
Capture Date (effective date)
Community College Entity ID
Community College Entry Date
Community College Exit Date
Community College Classes
Concurrent School Entity ID
Concurrent School Student ID
Country of Birth Code
Enrollment Activity Code
Entity ID
Ethnicity Code
First Day of Membership
First Name on Legal Document
Foreign Exchange Indicator
Funded District of Residence
Funded SPED Service DOR
Gender Code
Grade Level Code
Home Language Code
Initial IEP Date
Last Name on Legal Document
Last Name Student Goes By
Membership Type
Middle Name on Legal Document
Responsible Party's First Name on Legal Document
Responsible Party's Last Name on Legal Document
*these two elements do not necessarily have to refer to the student's mother: they should simply capture the name of an adult or a party responsible for the student*
Name Extension on Legal Document
Need Code
Need Entry Date
Need Exit Date
Nickname Student Goes By
Normal Graduation Year
Operation Code
Previous School Entity ID
Previous School Student ID
Previous State Code
Program Code
Program Entry Date
Program Exit Date
Program Exit Reason Code
Proposed Service Initiation Date (Initial IEP)
Readmission Activity Code
Readmission Date
Register ID
School Student ID
Special Enrollment Code
SPED Exit Reason Code
SPED Grade
SPED Neighborhood School ID
SPED Service Code
SPED Service Entry Date
SPED Service Exit Date
State of Birth Code
Student ID (SAIS ID)
Student Membership FTE
Summer Withdrawal Activity Code
Summer Withdrawal Date
Track Number
Transaction ID
Tribal Name
Tuition Payer Code
Vendor Defined Field
Withdrawal Activity Code
Withdrawal Date
Withdrawal Reason
Year End Status Code

# Transaction Data Elements Sorted Alphabetically

*See the section on **Element Optionality** in the **Objective** chapter of this document.*

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Absence Amount | ABSAMT | 4 | C | The portion of the day the student was absent<br>*See Code Values – Absence Amount* | 004 Student Absence |
| Absence Date | ABSDT | 10 | D | The date of the absence | 004 Student Absence |
| Absence Reason Code | ABSRSNCD | 2 | C | The reason for the absence<br>*See Code Values – Absence Reason* | 004 Student Absence |
| Assessment Code | ASSMNTCD | 3 | C | Type of assessment conducted<br>*See Transaction Requirements: Code Values – Assessment Methods* | 012 Student Assessment |
| Assessment Date | ASSMNTDT | 10 | D | The date the assessment was finalized | 012 Student Assessment |
| Assessment Result Code | ASSMNTRSCD | 2 | C | The assessment result<br>*See Transaction Requirements: Code Values – Assessment Results* | 012 Student Assessment |
| Assessment Score | ASSMNTSCORE | 3 | I | The scale score. | 012 Student Assessment |
| Attendance End Date | ATTENDDT | 10 | D | The date this reported attendance period ended | 017 Student Attendance |
| Attendance Minutes | ATTMIN | 5 | I | The amount of time, in minutes, that the student received instruction during the reported attendance period | 017 Student Attendance |
| Attendance Start Date | ATTSTARTDT | 10 | D | The date this reported attendance period started | 017 Student Attendance |
| Birth Date | DOB | 10 | D | Student date of birth | 001 Student Enrollment<br>005 Student Personal Information |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Capture Date | EFFDATE | 10 | D | The date this change information was captured. This is sometimes referred to as "effective date". | 005 Student Personal Information |
| Community College Entity ID | CCENTITYID | 9 | S | School identifier; CTDS code of the community college | 020 Community College Classes |
| Community College Entry Date | CCENTRYDT | 10 | D | The date the student's instruction began at the community college. | 020 Community College Classes |
| Community College Exit Date | CCEXITDT | 10 | D | The date the student's instruction ended at the community college. | 020 Community College Classes |
| Community College Classes | CCNUMCLASS | 2 | I | The number of classes counting toward the student's high school graduation requirements. | 020 Community College Classes |
| Concurrent School Entity ID | CNCSCH | 9 | S | other Arizona school attended by the student concurrently; CTDS code | 001 Student Enrollment |
| Concurrent School Student ID | CNCSCHSTUID | 12 | S | School-generated student identifier assigned by Concurrent School Entity ID | 001 Student Enrollment |
| Country of Birth Code | CTRYBRTHCD | 2 | C | Country in which student was born<br>*See Code Values – Country* | 001 Student Enrollment<br>005 Student Personal Information |
| Enrollment Activity Code | ACTVCD | 3 | C | Type of enrollment activity. This is the "E" code.<br>*See Code Values – Activity* | 001 Student Enrollment<br>006 Student Membership Change |
| Entity ID | ENTITYID | 9 | S | School identifier; CTDS code | all transactions |
| Ethnicity Code | ETHNICCD | 3 | C | Student ethnic origin<br>*See Code Values – Ethnicity* | 001 Student Enrollment<br>005 Student Personal Information |
| First Day of Membership | ENRDATE | 10 | D | The day this membership started; the date the student first received instruction for this enrollment. **NOTE: In SAIS, the terms "First Day of Membership" and "Enrollment Date" are used interchangeably.** | 001 Student Enrollment<br>003 Student Withdrawal<br>006 Student Membership Change<br>016 Student Year End Status<br>018 Student Summer Withdrawal |
| First Name on Legal Document | FIRSTNM | 30 | S | Student first name as it appears on the legal document provided for registration | all transactions<br>005 Student Personal Information: "New First Name on Legal Document" |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Foreign Exchange Indicator | FORGNXCHG | 1 | L | Indication that student is in the USA via a foreign exchange program | 001 Student Enrollment<br>005 Student Personal Information |
| Funded District of Residence | DISTRESID | 9 | S | School district in which student resides or to which student's residence is assigned; CTDS code | 001 Student Enrollment<br>002 Student Readmission |
| Funded SPED Service DOR | SPEDDORID | 9 | S | The school district in which student resides or to which student's residence is assigned for this SPED Service; CTDS code | 014 SPED Service Participation |
| Gender Code | GENDERCD | 1 | C | Student gender<br>*See Code Values – Gender* | 001 Student Enrollment<br>005 Student Personal Information |
| Grade Level Code | GDLVLCD | 3 | C | The grade to which the student is assigned<br>*See Code Values – Grade* | 001 Student Enrollment<br>002 Student Readmission |
| Home Language Code | HMLANGCD | 2 | C | The language spoken at home<br>*See Code Values – Home Language* | 001 Student Enrollment<br>005 Student Personal Information |
| Initial IEP Date | INITIEPDT | 10 | D | The date of the initial IEP meeting that ensures FAPE. | 021 Initial IEP |
| Last Name on Legal Document | LASTNM | 40 | S | Student last name as it appears on the legal document provided for registration | all transactions |
| Last Name Student Goes By | LASTNMGOESBY | 40 | S | The last name the student goes by. This may be the same as Last Name on Legal Document. | 001 Student Enrollment<br>005 Student Personal Information |
| Membership Type | MEMTYPE | 1 | C | Indicates whether this is the main or ancillary enrollment for this student<br>*See Code Values – Membership Type* | 001 Student Enrollment<br>002 Student Readmission<br>006 Student Membership Change |
| Middle Name on Legal Document | MIDDLENM | 30 | S | Student middle name as it appears on the legal document provided for registration | all transactions |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Responsible Party's First Name on Legal Document | MOMFIRSTNM | 30 | S | The first name of the adult or party responsible for the student (mother, father, guardian, responsible party, or the student himself if he is emancipated) as it appears on a legal document used for registration. This is used for matching purposes only. | 001 Student Enrollment<br>005 Student Personal Information |
| Responsible Party's Last Name on Legal Document | MOMLASTNM | 40 | S | The first name of the adult or party responsible for the student (mother, father, guardian, responsible party, or the student himself if he is emancipated) as it appears on a legal document used for registration. This is used for matching purposes only. | 001 Student Enrollment<br>005 Student Personal Information |
| Name Extension on Legal Document | EXTNNM | 3 | S | Suffix to Student Last Name on Legal Document, e.g., Jr., Sr., III | 001 Student Enrollment<br>005 Student Personal Information |
| Need Code | NEEDCD | 5 | C | Need code in the relevant need group *See Code Values – Need* | 011 Student Need<br>014 SPED Service Participation<br>015 Support Program Participation |
| Need Entry Date | NEEDENTRDT | 10 | D | The date the student entered the state of having this Need. *For SPED needs, this element will be used solely to determine the school year during which the need occurred.* | 011 Student Need<br>014 SPED Service Participation<br>015 Support Program Participation |
| Need Exit Date | NEEDEXITDT | 10 | D | The date the student exited the state of having this Need. *For SPED needs, this element will not be used.* | 011 Student Need<br>014 SPED Service Participation |
| *empty field (formerly Need Level Code: element no longer collected)* | *empty field: formerly NEEDLVLCD* | *2* | *C* | *This element will not be needed in SAIS at this time and **any value submitted will be ignored**. It is used only for the Vouchers System, which is not included in SAIS at this time.* | *this field is no longer used in any transaction; it was formerly in:*<br>*011 Student Need and*<br>*014 SPED Service Participation* |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| *empty field (formerly Neighborhood School Indicator: element no longer collected.* | *empty field: formerly NEIGHSCHL* | *1* | *L* | *This element will not be needed in SAIS at this time and **any value submitted here will be ignored**. It is used only for the Needs area, and is specifically included there,* | *this field is no longer used in any transaction; it was formerly in:*<br>*001 Student Enrollment*<br>*002 Student Readmission*<br>*006 Student Membership Change* |
| New First Name on Legal Document | FIRSTNM | 30 | S | The student's new first name as it appears on the legal document provided for registration. For an add, this should be identical to the correlating old information above. For a change, this is the information that should be updated to SAIS. | 005 Student Personal Information |
| New FTE End Date | NEWFTEENDDT | 10 | D | The date this FTE value ceased | 008 Student FTE & Share |
| New FTE Start Date | NEWFTESTRTDT | 10 | D | The effective date of this FTE value | 008 Student FTE & Share |
| New Funded District of Residence | NEWDISTRESID | 9 | S | School district in which student resides or to which student's residence is assigned; funded DOR; CTDS code | 007 Student District of Residence Transfer |
| New Funded DOR End Date | NEWDOREND | 10 | D | The date this CTDS ceased being the student's funded district of residence | 007 Student District of Residence Transfer |
| New Funded DOR Start Date | NEWDORSTRTDT | 10 | D | The date this CTDS became the student's funded district of residence | 007 Student District of Residence Transfer |
| New Grade Exit Code | NEWGDEXITCD | 2 | C | The reason this student exited the New Grade Level Code.<br>*See Code Values – Grade Exit Code.* | 009 Student Grade Transfer |
| New Grade Exit Date | NEWGDEXITDT | 10 | D | The date the student last attended the New Grade Level Code. | 009 Student Grade Transfer |
| New Grade Level Code | NEWGDLVLCD | 3 | C | The new grade to which the student is assigned.<br>*See Code Values – Grade* | 009 Student Grade Transfer |
| New Grade Register ID | NEWREGISTERID | 4 | I | Identifier allocated by the district for the attendance reporting unit to which this student is assigned by this school for the New Grade Level Code. | 009 Student Grade Transfer |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| New Grade Start Date | NEWGDSTARTDT | 10 | D | The date the student started in the New Grade Level Code. | 009 Student Grade Transfer |
| New Last Name on Legal Document | LASTNM | 40 | S | The student's new last name as it appears on the legal document provided for registration. For an add, this should be identical to the correlating old information above. For a change, this is the information that should be updated to SAIS. | 005 Student Personal Information |
| New Middle Name on Legal Document | MIDDLENM | 30 | S | The student's new middle name as it appears on the legal document provided for registration. For an add, this should be identical to the correlating old information above. For a change, this is the information that should be updated to SAIS. | 005 Student Personal Information |
| New SPED Neighborhood School Indicator | NEWSPEDNEIGHSCHL | 1 | L | Shows if this school for this SPED Service is the closest school to the student's home within the boundaries of the district in which the school is located | 019 Student SPED Service DOR Transfer |
| New School Membership Share | NEWMBRSHR | 4 | C | The portion of state aid this school is claiming for the overall timeframe covered by this membership. This is the incoming information. *See Code Values – School Membership Share* | 008 Student FTE & Share |
| New Share End Date | NEWSHRENDDT | 10 | D | The date this Share value ceased | 008 Student FTE & Share |
| New Share Start Date | NEWSHRSTRTDT | 10 | D | The effective date of this Share value | 008 Student FTE & Share |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| New Special Enrollment Code | NEWSPECENRCD | 2 | C | Special dispensation granted for a single enrollment (e.g., CEC-B) allowing the student to attend this school, which is outside his normal funded district of residence *See Code Values – Special Enrollment* | 010 Student Payer Factors |
| New Special Enrollment End Date | NEWSPECENREND | 10 | D | The date the special dispensation was terminated | 010 Student Payer Factors |
| New Special Enrollment Start Date | NEWSPECENRSTRTDT | 10 | D | The date the special dispensation took effect | 010 Student Payer Factors |
| New SPED Service DOR | NEWSPEDDORID | 9 | S | School district in which student resides or to which student's residence is assigned; Funded DOR; CTDS code | 019 Student SPED Service DOR Transfer |
| New SPED Service DOR End Date | NEWSPEDDOREND | 10 | D | The date this New SPED Service DOR ceased being the student's district of residence | 019 Student SPED Service DOR Transfer |
| New SPED Service DOR Start Date | NEWSPEDDORSTR | 10 | D | The date this New SPED Service DOR became the student's district of residence | 019 Student SPED Service DOR Transfer |
| New Student Membership FTE | NEWMBRFTE | 4 | C | The full-time equivalency of the student's participation in the school regular program for this membership. This is the new information. *See Code Values – Student Membership FTE* | 008 Student FTE & Share |
| New Tuition Payer Code | NEWTUITPAYRCD | 2 | C | Individual or organization responsible for the tuition *See Code Values – Tuition Payer* | 010 Student Payer Factors |
| New Tuition Payer End Date | NEWTUITPAYREND | 10 | D | The last date the tuition payer was responsible for this student's tuition | 010 Student Payer Factors |
| New Tuition Payer Start Date | NEWTUITPAYRSTRT | 10 | D | The date the tuition payer became responsible for this student's tuition | 010 Student Payer Factors |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Nickname Student Goes By | NICKNM | 30 | S | A familiar form of a name given instead of or in addition to the student's first, middle, and/or last name. This may be the same as First Name on Legal Document. | 001 Student Enrollment<br>005 Student Personal Information |
| Normal Graduation Year | NORMGRADYR | 4 | I | The student's class affiliation, defined by Arizona as 4 years after student's first enrollment in 9th grade or its equivalent. | 001 Student Enrollment<br>005 Student Personal Information |
| Old First Name on Legal Document | OLDFIRSTNM | 30 | S | Student first name as it appears on the legal document provided for registration. For an add, this should be identical to "new" information below. For a change, this is the information already on SAIS. | 005 Student Personal Information |
| Old FTE End Date | OLDFTEENDDT | 10 | D | The date this FTE value ceased | 008 Student FTE & Share |
| Old FTE Start Date | OLDFTESTRTDT | 10 | D | The effective date of this FTE value | 008 Student FTE & Share |
| Old Funded District of Residence | OLDDISTRESID | 9 | S | School district in which student resides or to which student's residence is assigned; funded DOR; CTDS code | 007 Student District of Residence Transfer |
| Old Funded DOR End Date | OLDDORENDD | 10 | D | The date this CTDS ceased being the student's funded district of residence | 007 Student District of Residence Transfer |
| Old Funded DOR Start Date | OLDDORSTRTDT | 10 | D | The date this CTDS became the student's funded district of residence | 007 Student District of Residence Transfer |
| Old Grade Exit Code | OLDGDEXITCD | 2 | C | The reason this student exited the grade that is on SAIS.<br>*See Code Values – Grade Exit Code.* | 009 Student Grade Transfer |
| Old Grade Exit Date | OLDGDEXITDT | 10 | D | The date the student last attended the grade that is on SAIS. | 009 Student Grade Transfer |
| Old Grade Level Code | OLDGDLVLCD | 3 | C | The grade on SAIS that this student exited.<br>*See Code Values – Grade* | 009 Student Grade Transfer |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Old Grade Register ID | OLDREGISTERID | 4 | I | Identifier allocated by the district for the attendance reporting unit to which this student is assigned by this school for the grade that is on SAIS. An example of a reporting unit might be grade level within a school, or a classroom within a grade level. (Taken from ADM reporting bubble sheet, form ADE 41-006B Rev. 7/96.) | 009 Student Grade Transfer |
| Old Grade Start Date | OLDGDSTARTDT | 10 | D | The date during this school year when the student started in the grade that is on SAIS. | 009 Student Grade Transfer |
| Old Last Name on Legal Document | OLDLASTNM | 40 | S | Student last name as it appears on the legal document provided for registration. For an add, this should be identical to "new" information below. For a change, this is the information already on SAIS. | 005 Student Personal Information |
| Old Middle Name on Legal Document | OLDMIDDLENM | 30 | S | Student middle name as it appears on the legal document provided for registration. For an add, this should be identical to "new" information below. For a change, this is the information already on SAIS. | 005 Student Personal Information |
| Old SPED Neighborhood School Indicator | OLDSPEDNEIGHSCHL | 1 | L | Shows if the school for this SPED Service is the closest school to the student's home within the boundaries of the district in which the school is located | 019 Student SPED Service DOR Transfer |
| Old School Membership Share | OLDMBRSHR | 4 | C | The portion of state aid this school is claiming for the overall timeframe covered by this membership. *See Code Values – School Membership Share* | 008 Student FTE & Share |
| Old Share End Date | OLDSHRENDDT | 10 | D | The date this Share value ceased | 008 Student FTE & Share |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Old Share Start Date | OLDSHRSTRTDT | 10 | D | The effective date of this Share value | 008 Student FTE & Share |
| Old Special Enrollment Code | SPECENRCD | 2 | C | Special dispensation granted for a single enrollment (e.g., CEC-B) allowing the student to attend this school, which is outside his normal funded district of residence *See Code Values – Special Enrollment* | 010 Student Payer Factors |
| Old Special Enrollment End Date | OLDSPECENREND | 10 | D | The date the special dispensation was terminated | 010 Student Payer Factors |
| Old Special Enrollment Start Date | OLDSPECENRSTRTDT | 10 | D | The date the special dispensation took effect | 010 Student Payer Factors |
| Old SPED Service DOR | OLDSPEDDORID | 9 | S | School district in which student resides or to which student's residence is assigned; Funded DOR; CTDS code | 019 Student SPED Service DOR Transfer |
| Old SPED Service DOR End Date | OLDSPEDDOREND | 10 | D | The date this CTDS ceased being the student's district of residence | 019 Student SPED Service DOR Transfer |
| Old SPED Service DOR Start Date | OLDSPEDDORSTRT | 10 | D | The date this CTDS became the student's district of residence | 019 Student SPED Service DOR Transfer |
| Old Student Membership FTE | OLDMBRFTE | 4 | C | The full-time equivalency of the student's participation in the school regular program for this membership. *See Code Values – Student Membership FTE* | 008 Student FTE & Share |
| Old Tuition Payer Code | OLDTUITPAYRCD | 2 | C | Individual or organization responsible for the tuition *See Code Values – Tuition Payer* | 010 Student Payer Factors |
| Old Tuition Payer End Date | OLDTUITPAYREND | 10 | D | The last date the tuition payer was responsible for this student's tuition | 010 Student Payer Factors |
| Old Tuition Payer Start Date | OLDTUITPAYRSTRT | 10 | D | The date the tuition payer became responsible for this student's tuition | 010 Student Payer Factors |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Operation Code | OPRCD | 1 | S | **001 Student Enrollment**<br>A = Add a new or continuing enrollment<br>D = Delete an existing enrollment<br>**002 Student Readmission**<br>A = Add a new readmission<br>D = Delete an existing readmission<br>**003 Student Withdrawal**<br>A = Add a new withdrawal<br>C = Change an existing withdrawal<br>D = Delete an existing withdrawal<br>**004 Student Absence**<br>A = Add new absence<br>C = Change an existing absence<br>D = Delete an existing absence<br>**005 Student Personal Information**<br>A = Add only a student's characteristics to SAIS<br>C = Change student's existing characteristics<br>**006 Student Membership Change**<br>C = Change existing membership details | all transactions |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Operation Code (continued) | OPRCD | 1 | S | **007 Student District of Residence Transfer**<br>A = Add a new DOR<br>C = Change an existing DOR<br>D = Delete an existing DOR<br>**008 Student FTE & Share**<br>A = Open a new FTE and/or Share value<br>C = Change an existing FTE and/or Share value or end date<br>D= Delete an existing FTE and/or Share<br>**009 Student Grade Transfer**<br>A = Add a new grade transfer<br>C = Change an existing grade placement<br>D = Delete an existing grade placement<br>**010 Student Payer Factors**<br>A = Add new tuition factor(s): special enrollment **and/or** tuition payer<br>C = Change existing tuition factor(s)<br>D = Delete existing payer factor(s)<br>**011 Student Need**<br>A = Add new Program Participation<br>C = Change existing Assessment Result Code, Need Exit Date, Program Exit Date, Program Exit Reason Code<br>D = Delete Program Participation<br>**012 Student Assessment**<br>A = Add new Assessment<br>C = Change Assessment Result Code<br>D = Delete Assessment<br>**013 English Acquisition Program Participation**<br>A = Add new Program Participation<br>C = Change existing Assessment Result Code, Need Exit Date, Program Exit Date, Program Exit Reason Code<br>D = Delete Program Participation | all transactions (continued) |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Operation Code (continued) | OPRCD | 1 | S | **014 SPED Service Participation**<br>A = Add new SPED Service and, possibly, Need<br>C = Change Need Exit Date, SPED Exit Date, SPED Exit Reason Code, SPED Grade<br>D = Delete a SPED Service Participation<br>**015 Support Program Participation**<br>A = Add new Support Program Participation and, possibly, Need<br>D = Delete a Support Program Participation<br>**016 Student Year End Status**<br>A = Add a new Student Year End Status Code<br>C = Change an existing Student Year End Status Code<br>D = Delete an existing Student Year End Status Code<br>**017 Student Attendance**<br>A = Add a new attendance<br>C = Change an existing attendance<br>D = Delete an existing attendance<br>**018 Student Summer Withdrawal**<br>A = Add a new Summer Withdrawal Activity Code<br>C = Change an existing Summer Withdrawal Activity Code<br>D = Delete an existing Summer Withdrawal Activity Code<br>**019 Student SPED Service DOR Transfer**<br>A = Add a new Funded SPED Service DOR<br>C = Change an existing Funded SPED Service DOR<br>D = Delete an existing Funded SPED Service DOR | all transactions (continued) |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Operation Code (continued) | OPRCD | 1 | S | **020 Community College Classes**<br>A = Add new Community College classes<br>C = Change an existing Community College classes<br>D = Delete existing Community College classes<br><br>**Initial IEP**<br>A = Add new Initial IEP<br>C = Change an existing Initial IEP<br>D = Delete an existing Initial IEP | all transactions (continued) |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Previous School Entity ID | PREVSCHLID | 9 | S | School identifier of school attended prior to this school; CTDS code **if** Arizona school, blank if a non-Arizona school. This information is required only for students who transferred from another Arizona school. | 001 Student Enrollment<br>005 Student Personal Information |
| Previous School Student ID | PREVSTUID | 12 | S | Student identifier in Previous School Entity ID; School-generated student identifier **if** Previous School Entity ID is Arizona school, blank if a non-Arizona school. This information is required only for students who transferred from another Arizona school. | 001 Student Enrollment<br>005 Student Personal Information |
| Previous State Code | PREVSTATE | 2 | C | State in which school attended prior to this school dwells. This information is required only for students who transferred from a school in the United States.<br>*See Code Values - States* | 001 Student Enrollment<br>005 Student Personal Information |
| Program Code | PROGSVCCD | 2 | C | Type of program or service<br>*See Data Transaction Code Values – Language Programs, Support Programs* | 013 English Acquisition Program Participation<br>015 Support Program Participation |
| Program Entry Date | PSENTRDT | 10 | D | The date the student entered the program/service | 013 English Acquisition Program Participation<br>015 Support Program Participation |
| Program Exit Date | PSEXITDT | 10 | D | The date the student exited the program/service | 013 English Acquisition Program Participation |
| Program Exit Reason Code | PSEXITRSNCD | 5 | C | Reason for exiting the English Acquisition program<br>*See Transaction Requirements: Code Values – Program/Service Exit Reason* | 013 English Acquisition Program Participation |
| Proposed Service Initiation Date | SVCINITDT | 10 | D | The proposed date for the initiation of services. | 021 Initial IEP |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Readmission Activity Code | ACTVCD | 3 | C | Type of readmission. This is the "R" code.<br>*See Code Values – Activity* | 002 Student Readmission |
| Readmission Date | READMDATE | 10 | D | The date this activity occurred | 002 Student Readmission |
| Register ID | REGISTERID | 4 | I | Identifier allocated by the district for the attendance reporting unit to which this student is assigned by this school. An example of a reporting unit might be grade level within a school, or a classroom within a grade level. (Taken from ADM reporting bubble sheet, form ADE 41-006B Rev. 7/96.) | 001 Student Enrollment<br>002 Student Readmission |
| School Membership Share | MBRSHR | 4 | C | The portion of state aid this school is claiming for the overall timeframe covered by this membership<br>*See Code Values – School Membership Share* | 001 Student Enrollment<br>002 Student Readmission |
| School Student ID | SCHLSTUID | 12 | S | School-generated student identifier | all transactions |
| Special Enrollment Code | SPECENRCD | 2 | C | Special dispensation granted for a single enrollment (e.g., CEC-B) allowing the student to attend this school, which is outside his normal funded district of residence<br>*See Code Values – Special Enrollment* | 001 Student Enrollment<br>002 Student Readmission |
| SPED Exit Reason Code | SPEDEXRSNCD | 2 | C | Reason for exiting the SPED service<br>*See Transaction Requirements: Code Values – Program/Service Exit Reason* | 014 SPED Service Participation |
| SPED Grade | SPEDGRADE | 3 | C | The grade level of the Special Education services provided<br>*See Transaction Requirements: Code Values – Grade* | 014 SPED Service Participation |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| SPED Neighborhood School ID | SPEDNEIGHSCHL | 1 | L | Shows if the school for this SPED Service is the closest school to the student's home within the boundaries of the district in which the school is located | 014 SPED Service Participation |
| SPED Service Code | SPEDPROGSVCCD | 2 | C | Type of special education service *See Transaction Requirements: Code Values – Special Education Service* | 014 SPED Service Participation |
| SPED Service Entry Date | SPEDENTRDT | 10 | D | The date the student entered the program/service | 014 SPED Service Participation |
| SPED Service Exit Date | SPEDEXITDT | 10 | D | The date the student exited the program/service | 014 SPED Service Participation |
| State of Birth Code | STATBRTHCD | 2 | C | State in USA or its territories in which student was born *See Code Values – States* | 001 Student Enrollment<br>005 Student Personal Information |
| Student ID | STUDENTID | 10 | I | ADE-generated student identifier | all transactions |
| Student Membership FTE | MBRFTE | 4 | C | The full-time equivalency of the student's participation in the school regular program for this membership *See Code Values – Student Membership FTE* | 001 Student Enrollment<br>002 Student Readmission |
| Summer Withdrawal Activity Code | ACTVCD | 3 | C | Type of withdrawal activity that occurred during the summer break *See Code Values – Activity (Summer Withdrawal Activity only)* | 018 Student Summer Withdrawal |
| Summer Withdrawal Date | SUMWDDATE | 10 | D | The date during the summer break that the student's summer withdrawal occurred. | 018 Student Summer Withdrawal |
| Track Number | TRACK | 4 | I | For schools or districts with multiple tracks, identifies the track to which this enrollment applies. (If the school does not have its own calendar, it will use the district's calendar.) | all transactions *except*<br>*005 Student Personal Information*<br>*011 Need*<br>*012 Assessment*<br>*020 Community College Classes*<br>*021 Initial IEP*<br>*022 Test Label* |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Transaction ID | TRANSID | 3 | I | ID value to distinguish the transaction type; this is the three-digit number at the beginning of the transaction name | all transactions |
| Tribal Name | TRIBALNM | 20 | S | A name borne in common by members of a tribe or clan. This is used for matching purposes only. | 001 Student Enrollment<br>005 Student Personal Information |
| Tuition Payer Code | TUITPAYRCD | 2 | C | Individual or organization responsible for the tuition<br>*See Code Values – Tuition Payer* | 001 Student Enrollment<br>002 Student Readmission |
| Vendor Defined Field | VENDORFLD | 50 | S | Free field to be used for any purpose defined by the vendor or submitter (e.g., to hold a vendor-generated submission record identifier); this information will not be stored in SAIS, but will be sent back to the submitter with any system-generated error or warning message | all transactions |
| Withdrawal Activity Code | ACTVCD | 3 | C | Type of withdrawal. This is the "W" code.<br>*See Code Values – Activity* | 003 Student Withdrawal |
| Withdrawal Date | WDDATE | 10 | D | The withdrawal activity date. This is the last day of attendance. | 003 Student Withdrawal |
| Withdrawal Reason | | | | The reason for the student's withdrawal activity. The reasons being collected for FY2003-04 are:<br>• withdrawal due to school choice: individual transfer option<br>• withdrawal due to school choice: underperforming school<br>• withdrawal due to school choice: school labeled as persistently dangerous | *For FY2003-04, this element is not being collected with the regular SAIS data transactions, but with a separate data collection utility to be identified by SAIS in the early FY2003-04.* |

| field name | abbreviated name | length | data type | description | Transaction ID value and transaction name |
|---|---|---|---|---|---|
| Year End Status Code | YEARENDSTAT | 3 | C | Student's academic status at the end of the school year<br>*See Code Values – Activity (Year End Status only)* | 016 Student Year End Status |

# Transaction Data Elements Sorted By Transaction

*NOTE: The information in this table reflects the existence of elements in each transaction. It does not imply record layouts (the elements are not necessarily in order, empty fields are not noted here, etc.)*

*See the section on **Element Optionality** in the **Objective** chapter of this document.*

| Transaction ID value and transaction name | field name |
|---|---|
| 001 Student Enrollment | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Day of Membership |
| | Track Number |
| | Membership Type |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Name Extension on Legal Document |
| | Nickname Student Goes By |
| | Last Name Student Goes By |
| | Gender Code |
| | Ethnicity Code |
| | Birth Date |
| | Country of Birth Code |
| | State of Birth Code |
| | Foreign Exchange Indicator |
| | Normal Graduation Year |
| | Funded District of Residence |
| | Home Language Code |
| | Responsible Party's First Name on Legal Document |
| | Responsible Party's Last Name on Legal Document |
| | Tribal Name |
| | Enrollment Activity Code |
| | Student Membership FTE |
| | School Membership Share |
| | Special Enrollment Code |
| | Tuition Payer Code |
| | Grade Level Code |
| | Concurrent School Entity ID |
| | Concurrent School Student ID |

| Transaction ID value and transaction name | field name |
|---|---|
| | Previous School Entity ID |
| | Previous School Student ID |
| | Previous State Code |
| | Register ID |
| 002 Student Readmission | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Readmission Date |
| | Track Number |
| | Membership Type |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Funded District of Residence |
| | Readmission Activity Code |
| | Student Membership FTE |
| | Special Enrollment Code |
| | Tuition Payer Code |
| | Grade Level Code |
| | Register ID |
| 003 Student Withdrawal | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Day of Membership |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Withdrawal Activity Code |
| | Withdrawal Date |

| Transaction ID value and transaction name | field name |
|---|---|
| 004 Student Absence | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Absence Date |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Absence Amount |
| | Absence Reason Code |
| 005 Student Personal Information | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Capture Date |
| | Old First Name on Legal Document |
| | Old Middle Name on Legal Document |
| | Old Last Name on Legal Document |
| | New First Name on Legal Document |
| | New Middle Name on Legal Document |
| | New Last Name on Legal Document |
| | Name Extension on Legal Document |
| | Nickname Student Goes By |
| | Last Name Student Goes By |
| | Gender Code |
| | Ethnicity Code |
| | Birth Date |
| | Country of Birth Code |
| | State of Birth Code |
| | Foreign Exchange Indicator |
| | Normal Graduation Year |
| | Home Language Code |
| | Responsible Party's First Name on Legal Document |
| | Responsible Party's Last Name on Legal Document |
| | Tribal Name |
| | Previous School Entity ID |
| | Previous School Student ID |
| | Previous State Code |

| Transaction ID value and transaction name | field name |
|---|---|
| 006 Student Membership Change | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Day of Membership |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Enrollment Activity Code |
| | Membership Type |
| | Track Number |
| 007 Student District of Residence Transfer | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Old Funded District of Residence |
| | Old Funded DOR Start Date |
| | Old Funded DOR End Date |
| | New Funded District of Residence |
| | New Funded DOR Start Date |
| | New Funded DOR End Date |

| Transaction ID value and transaction name | field name |
|---|---|
| 008 Student FTE | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Old Student Membership FTE |
| | Old FTE Start Date |
| | Old FTE End Date |
| | New Student Membership FTE |
| | New FTE Start Date |
| | New FTE End Date |
| 009 Student Grade Transfer | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Old Grade Level Code |
| | Old Grade Start Date |
| | Old Grade Register ID |
| | Old Grade Exit Date |
| | Old Grade Exit Code |
| | New Grade Level Code |
| | New Grade Start Date |
| | New Grade Register ID |
| | New Grade Exit Date |
| | New Grade Exit Code |

| Transaction ID value and transaction name | field name |
|---|---|
| 010 Student Payer Factors | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Old Special Enrollment Code |
| | Old Special Enrollment Start Date |
| | Old Special Enrollment End Date |
| | New Special Enrollment Code |
| | New Special Enrollment Start Date |
| | New Special Enrollment End Date |
| | Old Tuition Payer Code |
| | Old Tuition Payer Start Date |
| | Old Tuition Payer End Date |
| | New Tuition Payer Code |
| | New Tuition Payer Start Date |
| | New Tuition Payer End Date |
| 011 Student Need | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Need Code |
| | Need Entry Date |
| | Need Exit Date |

| Transaction ID value and transaction name | field name |
|---|---|
| 012 Student Assessment | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Assessment Code |
| | Assessment Result Code |
| | Assessment Date |
| | Assessment Score |
| 013 English Acquisition Program Participation | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Program Code |
| | Program Entry Date |
| | Program Exit Date |
| | Program Exit Reason Code |
| 014 SPED Service Participation | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Need Code |
| | Need Entry Date |
| | Need Exit Date |
| | SPED Service Code |
| | SPED Service Entry Date |
| | SPED Service Exit Date |
| | SPED Exit Reason Code |
| | SPED Grade |
| | Funded SPED Service DOR |

| Transaction ID value and transaction name | field name |
|---|---|
| | SPED Neighborhood School ID |
| 015 Support Program Participation | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Need Code |
| | Need Entry Date |
| | Program Code |
| | Program Entry Date |
| 016 Student Year End Status | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Day of Membership |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Year End Status Code |
| 017 Student Attendance | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Attendance Start Date |
| | Attendance End Date |
| | Attendance Minutes |

| Transaction ID value and transaction name | field name |
|---|---|
| 018 Student Summer Withdrawal | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Day of Membership |
| | Track Number |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Summer Withdrawal Activity Code |
| | Summer Withdrawal Date |
| 019 Student SPED Service DOR Transfer | Transaction ID |
| | Vendor Defined Field |
| | Operation Code |
| | Entity ID |
| | School Student ID |
| | Student ID |
| | First Name on Legal Document |
| | Middle Name on Legal Document |
| | Last Name on Legal Document |
| | Old SPED Service DOR |
| | Old SPED Service DOR Start Date |
| | Old SPED Service DOR End Date |
| | Old SPED Neighborhood School Indicator |
| | New SPED Service DOR |
| | New SPED Service DOR Start Date |
| | New SPED Service DOR End Date |
| | New SPED Neighborhood School Indicator |

# Recommended values for missing elements

SAIS requires collection of some data elements that were not previously collected by schools and their districts. Recognizing that it places an undue burden on the districts to collect every piece of this information at initial implementation, ADE has identified default values that may be used by the districts for the first year of implementation only. After the first year, each instance of the following values must be replaced with accurate information. The following table shows interim values that ADE recommends for the districts to use. Elements not included in this table must contain accurate data.

Other possible values:

- "not available"
- "emancipated" (in place of Responsible Party's First/Last Name on Legal Document if child is an emancipated minor)
- "refused " (if parent refuses to supply the information)
- "unknown"
- "not collected"

> ***NOTE:*** *This is a system solution only. Districts should instruct their data entry clerks to leave missing information blank, and use their SMS system to supply the defaults specified here only when the data file is being prepared for submission to ADE. In this way, it will remain obvious to the person collecting the information that the data element is missing a value and must still be collected eventually.*

| field name | length | data type | value if information is not yet collected in first year of SAIS |
|---|---|---|---|
| Country of Birth Code | 2 | C | code value for “unknown or unspecified country” |
| Home Language Code | 2 | C | code value for either “Other Indian” or “Other Non-Indian” language |
| Last Name Student Goes By | 40 | S | default to the value in **Last Name on Legal Document** for the submission file only |
| Responsible Party's First Name on Legal Document | 30 | S | "unknown" |
| Responsible Party's Last Name on Legal Document | 40 | S | "unknown" |
| Need Level Code | 2 | C | this element is not being collected by SAIS: whether blank or not, any value submitted will be ignored |
| Neighborhood School Indicator, as well as its counterparts in the Student DOR Transfer transaction: New (and Old) Neighborhood School Indicator<br><br>*do not confuse this with* ***SPED Neighborhood School Indicator*** | 1 | L | these elements are not being collected by SAIS: whether blank or not, any value submitted will be ignored |
| Nickname Student Goes By | 30 | S | leave blank |
| Previous State Code | 2 | C | SAIS's acceptable code values do not include a value for an unknown state; however, for the first year of SAIS, this value is required only for mid-year transfer students |
| State of Birth Code | 2 | C | SAIS's acceptable code values do not include a value for an unknown state; however, this value is required only when **Country of Birth Code** is blank or contains the code for the United States |
| Tribal Name | 20 | S | Leave blank |

## Appendix (C)(1)-2 - EduID Process

EduId : An unique 16 digit number for every educational stakeholder(teacher, student etc.). The logic for creation of the id is within a web service.

The web service generates 15 individual digits using a cryptographic Random Number Generator provided by Microsoft. Then it masks each of these digits using a number array to reduce the probability of repeating to almost zero. Finally a $16^{th}$ digit is generated as a checksum digit and appended at the end of the existing 15 digits to make the 16 digit Educational stakeholder id.

All the generated Eduids are stored in a centralized SQL Server 2008 database. The web service does a final check in that database for duplicate id before releasing it.

# Arizona Department of Education

# FY 2010 SAIS Changes Overview

# Business Requirements

Version: 0.09
Last updated: 5/28/2010
Arizona Department of Education
Information Technologies Department
Business Analysis

## Revision Log

All revisions to this requirements document will be documented in this log. The initial draft document will be numbered v0.01 and incremented when revisions are made. The final document will be v1.0.

| Version | Date | Revision Description | Name |
|---|---|---|---|
| .01 | 6/24/2009 | Initial Draft Document | WTrudell |
| .02 | 7/6/2009 | Updated 2.1.1 Table 1 to include all Transaction 14 elements and to indicate placement of SPED Concurrency Type | WTrudell |
| .03 | 7/20/2009 | • Modified Error message in Scenarios 5 and 6 of Table 3 and 2.1.4.2.<br>• Added 2.1.9.1.<br>• Clarified text in 2.1.3 and 2.1.3.1<br>• Updated project status of 3.2 and 5.1 | WTrudell |
| .04 | 7/30/2009 | • Added all requirements to section 1.1<br>• Reminder note added under Table 1<br>• Added all requirements to section 4.1 | WTrudell |
| .05 | 8/5/2009 | • Table 1: Updated 1st column name<br>• Added need code numbers to 1.1.3.2 through 1.1.3.5<br>• Added need code numbers to 1.1.4.2.2.1<br>• Added section 5.2<br>• Changed blue text color to black in 2.1<br>• Added 4.1.2.2.8 | WTrudell |
| .06 | 8/7/2009 | Added section 2.2 | WTrudell |
| .07 | 8/19/2009 | Added requirements to section 2.2 | WTrudell |
| .08 | 8/24/2009 | • Added requirements 2.2.1.2.1, 2.2.2.1.1<br>• Modified Exit Code in the Note area of 2.2.1.4.2.2<br>• Added Appendix | WTrudell |
| .09 | 9/24/2009 | Added the DD Need reporting requirements ( 2.2.9 through 2.2.10.3.2.3.7) | WTrudell |

| Version | Date | Revision Description | Name |
|---|---|---|---|
| 1.0 | | | |

# Table of Contents

# 1 ACADEMIC ACHIEVEMENT

## *1.1 FY 2010 Title I Support Program Transaction Code Modifications*

### 1.1.1 Change Support Program Transaction Codes

#### *1.1.1.1 Code 29, description "Title I Other". Change short description to "Title I Other Instructional Services"*

| | Code in transaction | Short Description | Description | Source | Needs to which this applies |
|---|---|---|---|---|---|
| EXISTING SAIS TRANSACTION | 29 | Title I Other | Student participates in Title I services for Other Academic Services | NCLB | Other Academic Services |
| MODIFIED SAIS TRANSACTION | 29 | Title I Other Instructional Services | Student participates in Title I services for Other Academic Services | NCLB | Other Academic Services |

#### *1.1.1.2 Code 30, description "Title I Reading". Change short description to "Title I Reading/Language Arts"*

| | Code in transaction | Short Description | Description | Source | Needs to which this applies |
|---|---|---|---|---|---|
| EXISTING SAIS TRANSACTION | 30 | Title I Reading | Student participates in Title I services for Reading | NCLB | Reading/ Language Arts |
| MODIFIED SAIS TRANSACTION | 30 | Title I Reading/Language Arts | Student participates in Title I services for Reading | NCLB | Reading/ Language Arts |

#### *1.1.1.3 No other information has changed for these codes.*

### 1.1.2 New Support Program Transaction Codes

*1.1.2.1 To meet EDFacts reporting requirements the following new SAIS Support Program Transaction Codes and Definitions need to be added, as documented in the EDFacts SY 2008-09 036 File Spec.*

*1.1.2.2 New Code 38, short description "Title I Vocational/Career"*

*1.1.2.3 New Code 39, short description "Title I Health, Dental and Eye Care"*

*1.1.2.4 New Code 40, short description "Title I Supporting Guidance/Advocacy" New Code 41, short description "Title I Other Support Services"*

1.1.3 New Need Codes

*1.1.3.1 For the new program codes listed in 1.2, new corresponding Need Codes must be created. See Table 1 for code correlation.*

*1.1.3.2 New need code: 22 - Vocational/Career*

*1.1.3.3 New need code: 23 - Health, Dental and Eye Care*

*1.1.3.4 New need code: 24 - Supporting Guidance/ Advocacy*

*1.1.3.5 New need code: 25 - Other Support Services*

**Table 1: New Codes**

| Support Program Code in transaction | Short Description | Description | Source | Needs to which this applies | Need Group | Effective Dates |
|---|---|---|---|---|---|---|
| 38 | Title I Vocational/Career | Student participates in Title I services for Vocational/Career | NCLB | Vocational/ Career | Economic Disadvantage | FY 2010 to present |
| 39 | Title I Health, Dental and Eye Care | Student participates in Title I services for Health, Dental and Eye Care | NCLB | Health, Dental and Eye Care | Economic Disadvantage | FY 2010 to present |
| 40 | Title I Supporting Guidance/Advocacy | Student participates in Title I services for Supporting Guidance/Advocacy | NCLB | Supporting Guidance/ Advocacy | Economic Disadvantage | FY 2010 to present |
| 41 | Title I Other Support Services | Student participates in Title I services for Other Support Services | NCLB | Other Support Services | Economic Disadvantage | FY 2010 to present |

### 1.1.4 Support Program Validations for New Support Program Transaction Codes

*1.1.4.1 There are program validations associated with the existing Support Program Codes that need to be set up in the same manner for the new codes.*

*1.1.4.2 From the Integrity Checking Processes document: Support Programs, Existing Support Program validations*

1.1.4.2.1 SD-INT-SUP-001:

| Support Program Name (Short Description) | Validation | Type of Error / handling |
|---|---|---|
| Title I Mathematics | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Other Instructional Services | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Reading/Language Arts | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Science | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Social Studies | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |

*1.1.4.2.1.1 New Validations for SD-INT-SUP-001*

| Support Program Name (Short Description) | Validation | Type of Error / handling |
|---|---|---|
| Title I Vocational/Career | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Health, Dental and Eye Care | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Supporting Guidance/Advocacy | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |
| Title I Other Support Services | LEA must be receiving Title I funds – qualifying grant: Title I-A LEA | WARNING: this participation won't be counted for reporting |

*1.1.4.2.1.2 Errors for Validations*

| | |
|---|---|
| WARNING: LEA not receiving Title I funds – qualifying grant: Title I-A LEA. This participation won't be counted for reporting. | 5 Integrity Checking Processes: Support Programs |

1.1.4.2.2 SD-INT-SUP-008.1

| | |
|---|---|
| If a student's support program transaction is for the following Title I program(s), validate that the following Needs are in SAIS<br>• Title I Mathematics Support Program Transaction requires a Math Need Code (13);<br>• Title I Other Instructional Service Support Program Transaction requires an Other Academic Services Need Code (19);<br>• Title I Reading/Language Arts Support Program Transaction requires a Language Arts (reading and/or writing) Need Code (14);<br>• Title I Science Support Program Transaction requires a Science Need Code (15);<br>• Title I Social Studies Support Program Transaction requires a Social Studies Need Code (18);<br>**Integrity failure:**<br>• Support Program | **ERROR** message -24016<br><br>Support Program {support program code} requires the following Need {need code}. SAIS not updated. |

#### *1.1.4.2.2.1 New Validations for SD-INT-SUP-008*

| | |
|---|---|
| If a student's support program transaction is for the following Title I program(s), validate that the following Needs are in SAIS<br>• Title I Vocational/Career Support Program Transaction requires a Vocational/Career Need Code (22);<br>• Title I Health, Dental and Eye Care Support Program Transaction requires a Health, Dental and Eye Care Need Code (23);<br>• Title I Supporting Guidance/Advocacy Support Program Transaction requires a Supporting Guidance/Advocacy Need Code (24);<br>• Title I Other Support Services Support Program Transaction requires an Other Support Services Need Code (25);<br>**Integrity failure:**<br>• Support Program | **ERROR** message -24016<br><br>Support Program {support program code} requires the following Need {need code}. SAIS not updated. |

### *1.1.4.3 Support Program Participation Transaction Element Optionality*

| | | |
|---|---|---|
| SD-TX015-SUP-002.2A.2 | **Validate Need and Program**<br>*Make sure that the Program can be offered for this submitted Need, according to the information in the **Data Transaction Code Values** document, table "**Support Programs.***<br>If this Program Code cannot be offered for this Need Code then *the Need is not appropriate for this Program.* Report the discrepancy. DO NOT CONTINUE | **ERROR** message -24014<br><br>The need is not appropriate for this program |

# 2 EXCEPTIONAL STUDENT SERVICES

## *2.1 SPED Concurrency Type*

2.1.1 Transaction 14 (SPED Service Participation): Add a new field, SPED Concurrency Type. This element identifies the school's role in providing SPED services to the student. The characteristics of this element are:

**Primary**: the school is responsible for determining and case managing the student's SPED needs and curriculum.

**Secondary**: the school provides some services to the student, but is not responsible for determining or case managing the student's SPED needs and curriculum.

### Table 2: Transaction 14 Element Addition

**Note:** The new field is highlighted in blue.

**Reminder:** All Transaction XML schemas can be found at **http://www.ade.az.gov/schemas/sdetail/SDTransactions.xsd** .

| Field Name | length | data type | Description |
|---|---|---|---|
| Transaction ID | 3 | I | ID value = 014 |
| Vendor Defined Field | 50 | S | Free field to be used for any purpose defined by the vendor or submitter (e.g., to hold a vendor-generated submission record identifier); this information will not be stored in SAIS |
| Operation Code | 1 | S | A = Add new SPED Service and, possibly, Need<br>C = Change Special Education Service information<br>D = Delete a SPED Service Participation |
| Entity ID | 9 | S | School identifier; CTDS code |
| School Student ID | 12 | S | School-generated student identifier |
| Student ID | 10 | I | ADE-generated student identifier |
| Track Number | 4 | I | For schools or districts with multiple tracks, identifies the track to which this enrollment applies. (If the school does not have its own calendar, it will use the district's calendar.) |
| First Name on Legal Document | 30 | S | Student first name as it appears on the legal document provided for registration |
| Middle Name on Legal Document | 30 | S | Student middle name as it appears on the legal document provided for registration |
| Last Name on Legal Document | 40 | S | Student last name as it appears on the legal document provided for registration |

| Field Name | length | data type | Description |
|---|---|---|---|
| Need Code | 5 | C | Category of special education Need<br>*See Transaction Requirements: Code Values – Need* |
| *empty field* | *2* | *C* | *This element is no longer collected. Properly formatted values (length and data type) in these fields will be ignored. For SDF files, no characters in the field is preferred. For XML files, no submittal of the element is preferred.* |
| Need Entry Date | 10 | D | The date the student entered the state of having this Need. *Note: This element will be used by SAIS only to determine the fiscal year in which the student receives services for this Need.* |
| *empty field* | *10* | *D* | *This element is no longer collected. Properly formatted values (length and data type) in these fields will be ignored. For SDF files, no characters in the field is preferred. For XML files, no submittal of the element is preferred.* |
| SPED Service Code | 2 | C | Type of special education service<br>*See Transaction Requirements: Code Values – Special Education Service* |
| SPED Service Entry Date | 10 | D | The date the student entered the program/service |
| SPED Service Exit Date | 10 | D | The date the student exited the program/service |
| SPED Exit Reason Code | 2 | C | Reason for exiting the SPED service<br>*See Transaction Requirements: Code Values – Special Education Service Exit Reason* |
| SPED Grade | 3 | C | The student's grade placement. (*The SPED grade must be the same as the grade for the student's membership transaction.*)<br>*See Transaction Requirements: Code Values – Grade* |
| Funded SPED Service DOR | 9 | S | The Funded school district in which student resides or to which student's residence is assigned for this SPED Service; CTDS code. The Funded SPED Service DOR can be changed using a 'change' operation beginning in FY06. |

| Field Name | length | data type | Description |
|---|---|---|---|
| *empty field: formerly SPED Neighborhood School Indicator: element no longer collected.* | 1 | L | *This element is no longer collected. Properly formatted values (length and data type) in these fields will be ignored. For SDF files, no characters in the field is preferred. For XML files, no submittal of the element is preferred.* |
| SPED Special Enrollment Code | 2 | C | Special dispensation (e.g., CEC-B) granted for a single enrollment (or program/service) allowing the student to attend this school, which is outside his normal district of residence<br>*See Code Values – Special Enrollment* |
| SPED Federal Primary Indicator | 1 | L | Indicates if the SPED Need being serviced is the Primary Federal Need. If the student is found eligible in one or more disability category, it means the disability category that has the greatest adverse impact on the students' ability to access and progress through the general curriculum. This information should be found in the current multidisciplinary evaluation team report. |
| SPED Concurrency Type | 1 | C | Identifies the school's role in providing SPED services to the student. The 'P' (primary) and 'S' (secondary) indicators identify the extent of the school's responsibility for determining and case managing the student's SPED needs and curriculum. |

2.1.2 All references to Integrity for this new field refer to Integrity for Fed SPED only, not Integrity for SPED.

2.1.3 At any given time, a school that is providing services to a student shall have only one SPED Concurrency Type designation for that student. See Table 4: Integrity Rules using "Integrity for Fed SPED" for additional clarification and scenario examples.

*2.1.3.1 If multiple transactions are submitted by one school for varying concurrent SPED need participations and the SPED Concurrency Type is not identical for each, then a failure should occur on the most recent transaction with the following ERROR message:*

"The SPED Concurrency Type must be identical for each need participation for this student."

2.1.4 Only one school can be identified as the 'primary' SPED Concurrency Type. See Table 4: Integrity Rules using "Integrity for Fed SPED" for additional clarification and scenario examples.

*2.1.4.1 At any given time, a student can have only one school identifying themselves as a 'primary' SPED Concurrency Type.*

*2.1.4.2 If multiple schools submit transactions identifying themselves as the 'primary' SPED Concurrency Type, then fail each of these schools with the following ERROR Message:*

> *"Only one primary school is allowed. The following school(s) also identified themselves as the primary school: {list of other 'p' schools}. Please collaborate with the school(s) to determine the correct SPED Concurrency Type designation."*

2.1.4.2.1 Upon a school modifying their SPED Concurrency Type designation from 'primary' to 'secondary', leaving only one school designated as 'primary', remove the remaining 'primary' school's error message.

2.1.4.2.2 If the resubmitted transaction does not pass integrity due to an unrelated reason, then for the SPED Concurrency Type processing, accept the resubmitted transaction's SPED Concurrency Type.

2.1.5 Multiple schools can be identified as a 'secondary' SPED Concurrency Type. See Table 4: Integrity Rules using "Integrity for Fed SPED" for additional clarification and scenario examples.

2.1.6 After the submittal of a new transaction for a particular student, all schools that have a current need participation (program) for the student should be reviewed and their SPED Concurrency Type ERROR messages updated according to the business requirements. See Table 4: Integrity Rules using "Integrity for Fed SPED" for additional clarification.

2.1.7 Transaction Validations

*2.1.7.1 SPED Concurrency Type is a required element when performing add and change operations. For a delete operation, the element will be ignored. See Table 3.*

**Table 3: SPED Service Participation Transaction New Element Optionality**

| *Element* | *add* | *change* | *delete* |
|---|---|---|---|
| SPED Concurrency Type | R | R | X |

| | |
|---|---|
| R: | the element is required |
| X: | any value in the incoming element will be ignored |
| {blank}: | the element is optional; a valid value will be captured in SAIS |

**Table 4: Integrity Rules using "Integrity for Fed SPED"**

| Scenario | Existing Concurrency Type | | Submitted Concurrency Type | | Action to be Taken | Message |
|---|---|---|---|---|---|---|
| 1 | | | School A | P | Upon School A submitting a 'P', the element passes integrity | No SPED Concurrency Type message should exist |
| 2 | | | School A | S | Upon School A submitting an 'S', the element passes integrity | No SPED Concurrency Type message should exist |
| 3 | School A | S | School B | S | Upon School B submitting an 'S', the element passes integrity | No SPED Concurrency Type message should exist |
| 4 | School A | S | School B | P | Upon School B submitting a 'P', the element passes integrity | No SPED Concurrency Type message should exist |
| 5 | School A | P | School B | P | Upon School B submitting a 'P', for School A and School B (and any additional schools with a 'P' designation) generate an **Error** message and cause a failure | "Only one primary school is allowed. The following school(s) also identified themselves as the primary school: {list of other 'p' schools}. Please collaborate with the school(s) to determine the correct SPED Concurrency Type designation." |
| 6 | School A<br>School B | P<br>S | School C | P | Upon School C submitting a 'P', for | "Only one primary school |

| Scenario | Existing Concurrency Type | | Submitted Concurrency Type | | Action to be Taken | Message |
|---|---|---|---|---|---|---|
| | | | | | School A and School C (and any additional schools with a 'P' designation) generate an **Error** message and cause a failure | is allowed. The following school(s) also identified themselves as the primary school: {list of other 'p' schools}. Please collaborate with the school(s) to determine the correct SPED Concurrency Type designation." |
| 7 | School A | P | School B | S | Upon School B submitting an 'S', the element passes integrity | No SPED Concurrency Type message should exist |
| 8 | School A | P | School A | S | Upon School A submitting a second program, this time with an 'S', generate an **Error** message and cause a failure | "The SPED Concurrency Type must be identical for each need participation for this student." |
| 9 | School A | P | School A | P | Upon School A submitting a second program with a 'P', the element passes integrity | No SPED Concurrency Type message should exist |

2.1.8 Add SPED Concurrency Type data to the SDSPED71 report.

*2.1.8.1 Add a new column called "School" to the SDSPED71 report between the "Spec. Enroll." and "Srvc Entry" columns.*

*2.1.8.2 Display the codes, "P" for Primary and "S" for Secondary as the data.*

*2.1.8.3 This column will appear in each of the "Integrity Results" sections of the report.*

2.1.9 The SPED Concurrency Type data shall appear in SDSPED72-1 (SPED By DOA Report) and SDSPED72-2 (SPED By DOR Report).

*2.1.9.1 As the layout for these reports is identical to the SDSPED71 report, make the same modifications to the SDSPED 72-1 and SDSPED72-2 reports as made to the SDSPED71 report, as identified in 2.1.8.*

## *2.2 New Developmental Delay (DD) Need Category and Related Changes*

Effective Fiscal Year 2010, Senate Bill 1196 (signed July 10, 2009) requires modifications to SPecial EDucation (SPED) needs.

2.2.1 Developmental Delay (DD) need category replaces Preschool Moderate Delay (PMD) need category.

*2.2.1.1 DD is a new need for FY 2010. It will be effective FY 2010 and forward.*

*2.2.1.2 PMD will not be used FY2010 and beyond.*

2.2.1.2.1 There shall be a transaction validation check (Transactions 11 and 14) to ensure that PMD is not entered for FY 2010 and beyond. Error message shall be: -23010 Unallowed value in element: Need Code

*2.2.1.3 DD qualifying ages: Preschool up to 10 years old (Three years minus 90 days through the day prior to 10th birthday)*

2.2.1.3.1 Preschool age is as defined in statute. There are no changes to the definition for this project. In summary, this includes a student who has a grade of PS and has a minimum age of three years minus 90 days.

2.2.1.3.2 School age is defined as a student whose grade is a minimum of Kindergarten and has a maximum age of 9.

*2.2.1.4 Funding for students with a DD service participation varies based on their grade and age.*

2.2.1.4.1 Preschool age funding for DD is the same as the former PMD need category

*2.2.1.4.1.1 State Aid: base preschooler with disability funding*

*2.2.1.4.1.2 Federal Aid: preschool entitlement grant monies for IDEA-Section 619.*

2.2.1.4.2 School age funding for DD is the same as ED, MIMR, SLD, SLI, OHI.

*2.2.1.4.2.1 State Aid: Support level weight = 0.003*

*2.2.1.4.2.2 A student whose age is greater than 10 year minus one day will not receive funding for the DD need.*

***Note:*** *Upon a student turning 10 years of age, it is expected that the LEA/school shall initiate the exit of the student from the DD SPED service, using* ***Exit Code 9****. Immediately upon exiting the service, the LEA/school should re-assign a new need category.*

2.2.2 Speech/Language Impairment (SLI) need category has absorbed Preschool Speech Language (PSL) need category.

*2.2.2.1 PSL will not be used FY2010 and beyond.*

2.2.2.1.1 There shall be a transaction validation check (Transactions 11 and 14) to ensure that PSL is not entered for FY 2010 and beyond. Error message shall be: -23010 Unallowed value in element: Need Code

*2.2.2.2 SLI need category has been changed to now include preschool students.*

*2.2.2.3 SLI qualifying ages: Preschool up through 21 years old. (Three years minus 90 days through the day prior to 22nd birthday except as noted in 2.2.2.4.2.2)*

*2.2.2.4 Funding for the students with an SLI service participation varies based on their grade and age.*

2.2.2.4.1 Preschool age funding for SLI is the same as the former PSL need category

*2.2.2.4.1.1 State Aid: base preschooler with disability funding*

*2.2.2.4.1.2 Federal Aid: preschool entitlement grant monies for IDEA-Section 619.*

2.2.2.4.2 School age funding for SLI remains the same.

*2.2.2.4.2.1 State Aid: Support level weight = 0.003*

*2.2.2.4.2.2 State Aid: ADM and SPED funding remain the same; a student who is 21 when a SPED service participation is initiated and turns 22 while still receiving that service will generate both ADM and SPED Add-On funding through the end of the fiscal year.*

2.2.3 Need Code Modifications

*2.2.3.1 Add Developmental Delay (DD) need code and associate with the Need Group 'Special Education'*

*2.2.3.2 Preschool – Speech/Language Delay (PSL) need code is effective through FY 2009.*

*2.2.3.3 Preschool – Moderate Delay (PMD) need code is effective through FY 2009.*

**Table 5 Need Codes and Need Group**

| Code in transaction | Description | Need Group | Effective Dates |
|---|---|---|---|
| A | Autism | Special Education | |
| ED | Emotional Disability | Special Education | |
| EDP | Emotional Disability (separate facility, private school) | Special Education | |
| HI | Hearing Impairment | Special Education | |
| MD | Multiple Disabilities | Special Education | |
| MDSSI | Multiple Disabilities - Severe Sensory Impairment | Special Education | |
| MIMR | Mild Mental Retardation | Special Education | |
| MOMR | Moderate Mental Retardation | Special Education | |
| OHI | Other Health Impairment | Special Education | |
| OI | Orthopedic Impairment | Special Education | |
| PSL | Preschool - Speech/Language Delay | Special Education | thru FY2009 |
| PMD | Preschool - Moderate Delay | Special Education | thru FY2009 |
| PSD | Preschool - Severe Delay | Special Education | |
| SLD | Specific Learning Disability | Special Education | |
| SLI | Speech/Language Impairment | Special Education | |
| SMR | Severe Mental Retardation | Special Education | |

| Code in transaction | Description | Need Group | Effective Dates |
|---|---|---|---|
| TBI | Traumatic Brain Injury | Special Education | |
| VI | Visual Impairment | Special Education | |
| DD | Developmental Delay | Special Education | FY2010 to present |

## 2.2.4 Validations

### *2.2.4.1 Transaction 11: Existing Validations that apply to the need changes*

| BR ID | Rule Description | Message(s) |
|---|---|---|
| SDTX011ND-001.1 | ***Allowed Code Values***<br>*Some elements have a set of pre-defined allowed values. For these defined elements, SAIS cannot accept a value not listed in the document.* If any element with predefined allowed code values contains an unallowed value, then report the discrepancy. | -**19005**: Unallowed value in element: Need Code<br><br>**Solution:** Resubmit this transaction with only allowed code values in the appropriate fields |

### *2.2.4.2 Transaction 14: Existing Validations that apply to the need changes*

| BR ID | Rule Description | Message(s) |
|---|---|---|
| SD-TX014-SPD-001.1 | ***Allowed Code Values***<br>If any element with predefined allowed code values contains an unallowed value, then report the discrepancy | -**23010**: Unallowed value in element: Need Code<br>-**23011**: Unallowed value in element: SPED Code<br>-**23014**: Unallowed value in element: Entity ID – SPED Grade combination |
| SD-TX014-SPD-002.3A.9.2 | If this Need does not already exist on the SdStudentNeeds table for this student for the **Fiscal Year**, then:<br>*add the need for this student.* Set SdStudentNeeds StudentID from Student ID<br>Set SdStudentNeeds NeedID from Need Code<br>Set SdStudentNeeds Start Dtm from Need Entry Date<br>Set a flag stating that a new need must be added to SAIS | |
| SD-TX014-SPD-002.3D.1 | **Delete operation: SPED Service**<br>Retrieve the row from the program services participation table whose identifiers match those in the submitted transaction. If (Entity ID + Student ID + Need Code + SPED Service Code + SPED Service Entry Date) is **not** found in program services participation table, then *this service does not exist on the* | **ERROR** message - 23020<br><br>**Solution**: None |

| BR ID | Rule Description | Message(s) |
|---|---|---|
| | *database*. Report the discrepancy. If this edit ended successfully (no severity level of WARNING or ERROR), then:<br>Set a flag stating that the existing program services participation record must be deleted | |
| SD-TX014-SPD-002.3D.2 | **Need**<br>If there was no WARNING or ERROR in the above validation<br>AND there are no other programs or services attached to this need for this student in this **Fiscal Year**, then: *delete the need; nothing else exists for the need for this student.* Retrieve the row from the SdStudentNeeds table whose identifiers match those in the submitted transaction.<br>Set a flag stating that the existing SdStudentNeed must be deleted | |

### 2.2.5 State and Federal SPED Integrity Checks

*2.2.5.1* *SC-INT-SPD-001.11.2:* *Preschool needs are included in the Concurrent Need matrix found within SC-INT-SPD-001.11.5. Integrity check 001.11.2 is redundant and is not to be used FY 2010 forward.*

*2.2.5.2* *SC-INT-SPD-001.11.3:* *Remove PSL and PMD need codes.*

*2.2.5.3* *SC-INT-SPD-001.11.4:* *New matrix, effective FY2010, is present; yellow highlighted items are new/modified; PMD and PSL need codes are removed.*

*2.2.5.4* *SC-INT-SPD-001.11.5:* *Wording in rule description changed to match the placement of the matrix. Only change to this rule is the matrix. New matrix, effective FY2010, is present; yellow highlighted items are new/modified; PMD and PSL need codes are removed.*

*2.2.5.5* *SC-INT-SPD-001.11.7:* *PMD and PSL codes replaced by DD and SLI.*

*2.2.5.6* *SC-INT –SPD-@@:* *New integrity check that restricts the age qualification for the DD need code to a maximum of 9 years of age. New error message created. Integrity check and error message are effective FY 2010 forward.*

| Integrity Check Rule | Rule Description | Message(s) | Effective Dates | Existing / Change / New? |
|---|---|---|---|---|

| Integrity Check Rule | Rule Description | Message(s) | Effective Dates | Existing / Change / New? |
|---|---|---|---|---|
| ~~SC-INT-SPD-001.11.2~~ | ~~If the Need Code = PSL, then there cannot be a concurrent (overlapping entry/withdrawal dates, or an earlier entry date with an open withdrawal date) SPED service for the same student with a Need Code of PSD or PMD. And vice-versa (if PSD or PMD, cannot have concurrency with PSL).~~<br>~~**Integrity failure:**~~<br>~~• State SPED~~<br>~~• Federal SPED (12/1)~~ | ~~**ERROR** message - 44331~~ | Thru FY2009 | C |
| SC-INT-SPD-001.11.3 | If the Need Code on the transaction record is PSD~~, PSL, or PMD~~, then the grade must be PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED | **ERROR** message - 44332 | FY 2010 - present | C |
| SC-INT-SPD-001.11.4 | **SPED Need/Service/Grade Relationship**<br>The matrix attached below summarizes the relationship of grades, SPED service codes, and SPED needs. Where there is a discrepancy between verbal validation descriptions, and the matrix, the matrix should rule.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED<br>  <br>FY10<br>Need-Grade-Service ( | Existing messages | FY 2010 – present | C |

| Integrity Check Rule | Rule Description | Message(s) | Effective Dates | Existing / Change / New? |
|---|---|---|---|---|
| SC-INT-SPD-001.11.5 | **Concurrent Needs**<br>The ~~following table~~ matrix attached below defines the validation rules for concurrent SPED needs. If a combination of Need codes submitted for a student do not comply with the matrix ~~above~~ below:<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED<br>  <br>FY10 Concurrent Need Eligibility Matrix | **ERROR** message - 44362: The combination of SPED Need categories that are concurrent for this student is either incorrect or incomplete {additional error information follows}<br><br>**ERROR** message – 44344: SPED Need categories that must exist for MD to be valid are: Two or more of HI, MOMR, OI, VI, **OR** One of HI, MOMR, OI, VI, **and** at least one of ED, EDP, MIMR, SLD.<br><br>**ERROR** message – 44346: SPED Need categories that must exist for MDSSI to be valid are: Both HI and VI **OR** either HI or VI, **and** at least one of A, EDP, MOMR, OI, SMR. | FY 2010 – present | C |
| SC-INT-SPD-001.11.7 | From 3.4.1.23 Grade:<br>If the grade = PS, then the Need Code must be ~~HI, PMD, PSD, PSL, or VI.~~ HI, DD, PSD, SLI or VI.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED | **ERROR** message - 44333 | FY 2010 – present | C |
| SC-INT – SPD-@@ | **DD Need Age Limit**<br>Student with DD need must be less than 10 years of age.<br><br>**Integrity failure:**<br>• State SPED<br>• Federal SPED | **ERROR** Message - @@:<br>This need cannot be used for a student aged 10 or above. | FY 2010 - present | N |

### 2.2.6 System Messages

*2.2.6.1 -44331: Error message not to be used FY 2010 forward.*

*2.2.6.2 @@: New error message to be used with the DD Need Age Limit integrity check.*

| Message ID | Message Description | Effective Dates | Existing / Change / New? |
|---|---|---|---|
| -44331 | PSL service cannot be concurrent with PSD or PMD. | Thru FY 2009 | C |
| -@@ | This need cannot be used for a student aged 10 or above. | FY 2010 - present | N |

### 2.2.7 Aggregation

*2.2.7.1 ADM and ADA calculations for preschool children shall include only preschool children who meet one of the following conditions:*

2.2.7.1.1 Hearing Impairment
2.2.7.1.2 Visual Impairment
2.2.7.1.3 Developmental Delay (replaces PMD)
2.2.7.1.4 Preschool Severe Delay
2.2.7.1.5 Speech/Language Impairment (replaces PSL)

### 2.2.8 Data Push

*2.2.8.1 PMD and PSL will no longer be used; DD and SLI for preschool students will be used in their place.*

## Reporting Modifications

**Note**: All reporting changes will be effective FY 2010 forward. FY 2009 and prior years will use the existing reports.

### 2.2.9 Student Detail Data Interchange (SDDI) Reporting

*2.2.9.1 SdSPED71 (or SdSPED71-1 and SdSPED71-2 after the SPED Count project is implemented)*

2.2.9.1.1 A student with a DD need whose age is greater than 9 shall appear on the State SPED failure, Fed SPED failure page of the report.

### 2.2.10 Student Counts Reporting

*2.2.10.1 SPED28*

**NOTE:** See Figure 1 for a mock-up of the revised SPED28 report.

2.2.10.1.1 The needs category of 'ED, MIMR, SLD, SLI and OHI' shall be replaced with 'DD[1], ED, MIMR, SLD, SLI[1] and OHI'.

*2.2.10.1.1.1 The underlying logic of this need category shall be modified to include non-preschool DD student counts and to limit the SLI student counts to non-preschool only.*

2.2.10.1.2 Add a footnote to the bottom of the report that reads '[1] School aged students only'.

**Figure 1 SPED28 Report**

SAIS SPED28

ARIZONA DEPARTMENT OF EDUCATION
STUDENT COUNTS FOR USE IN BUDGET PREPARATION

Page : 1
Report Date : 05/27/2009

District 07-02-80 CHANDLER UNIFIED DISTRICT

| 2008 - 2009 Student Counts | AS OF 10/30/2008 | AS OF 01/31/2009 |
|---|---|---|
| Hearing Impairment | 36.975 | 35.050 |
| MD-Resourced, A-Resourced, SMR-Resourced | 142.938 | 147.675 |
| MD-SelfContained, A-SelfContained AND SMR-SelfContained | 159.750 | 158.550 |
| Multiple Disabilities Severe Sensory Impairment | 18.750 | 19.350 |
| Orthopedic Impairment Resourced | 13.500 | 13.500 |
| Orthopedic Impairment SelfContained | 49.425 | 49.675 |
| PreSchool Severe Delayed | 48.938 | 52.975 |
| DD[1], ED, MIMR, SLD, SLI[1] and OHI | 3199.063 + | 3221.800 + |
| Emotionally Disabled Private | 69.750 | 64.950 |
| Moderate Mental Retardation | 55.500 | 56.000 |
| Visual Impairment | 20.125 | 20.500 |

[1] School aged students only

ADE 4242

*2.2.10.2 APOR55-1*

**NOTE:** See Figure 2 for a mock-up of the revised APOR55-1 report. The mock-up is reflective of FY 2010 data.

2.2.10.2.1 Preschool needs from prior fiscal years shall be associated with the new DD and SLI needs in the following way:

| Pre - FY 2010 | FY 2010 - present |
|---|---|
| PMD | DD (preschool aged students only) |
| PSL | SLI ( preschool aged students only) |

2.2.10.2.2 All text changes to this report shall match the font and size of the existing sections except where noted below.

2.2.10.2.3 Modify the Add-ons section in the following way:

*2.2.10.2.3.1 Within the ED,MIMR,SLD,SLI,OHI grouping, change the text to read: DD*, ED,MIMR,SLD,SLI*,OHI*

2.2.10.2.3.1.1 The underlying logic of this need category shall be modified to include non-preschool DD student counts and to limit the SLI student counts to non-preschool only.

*2.2.10.2.3.2 Add a footnote at the bottom of the section that reads '* School aged students only'. This text shall be a smaller font size.*

2.2.10.2.4 For easier readability of this report, modify the following text labels. The data itself will not change, only the text labels so that it is easier to understand what each piece of data represents. The labels to be changed are:

*2.2.10.2.4.1 Title of Report:*

2.2.10.2.4.1.1 Modify the current fiscal year within the third line; truncate to the last two digits of the year.

*2.2.10.2.4.2 Student Counts section:*

2.2.10.2.4.2.1 Remove the text '{year} Average Daily Membership (ADM)'

2.2.10.2.4.2.2 'Actual Student Count' shall be replaced with 'Student Count (FY {current fiscal year - 2}-{(last two digits of) current fiscal year -1} ADM)'. The parentheses and the text between them shall be a smaller font size.

2.2.10.2.4.2.3 Append '(FY {current fiscal year – 3}-{(last two digits of) current fiscal year - 2} ADM)' to the end of 'PY Student Count'. This shall be a smaller font size.

*2.2.10.2.4.3 Section to the right of the Student Counts section:*

2.2.10.2.4.3.1 Replace '{year} Average Daily Membership (ADM)' with 'FY {current fiscal year – 3}-{(last two digits of) current fiscal year -2} ADM'

*2.2.10.2.4.4 Charter section:*

2.2.10.2.4.4.1 'Charter Counts' shall be replaced with 'Charter FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'

*2.2.10.2.4.5 District section:*

2.2.10.2.4.5.1 'District Counts' shall be replaced with 'District FY {current fiscal year – 1}-{(last two digits of) current fiscal year } ADM'

*2.2.10.2.4.6 Weighted Student Counts section:*

2.2.10.2.4.6.1 To the left of the district and charter grade categories, add two headings 'FY {current fiscal year - 2}-{(last two digits of) current fiscal year -1} ADM:' and 'FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'. The first heading should line up with the first District grade category and the second heading should line up with the first Charter grade category.

*2.2.10.2.4.7 Add-Ons section*

2.2.10.2.4.7.1 Modify the following need labels so that they mimic statute A.R.S. § 15-943 (2)(b):

*2.2.10.2.4.7.1.1 MDSSI shall read MD-SSI*

*2.2.10.2.4.7.1.2 PS D shall read P-SD*

*2.2.10.2.4.7.1.3 EDP shall read ED-P*

2.2.10.2.4.7.2 Replace 'CY District Unweighted 40th Day' with 'District 40th Day FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'

2.2.10.2.4.7.3 Replace 'CY District Unweighted 100$^{th}$ Day' with 'District 100$^{th}$ Day FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'

2.2.10.2.4.7.4 Replace 'District ACT Unwtd Student Count' with 'District Student Count (FY {current fiscal year - 2}-{(last two digits of) current fiscal year -1} ADM)'. The parentheses and the text between them shall be a smaller font size.

2.2.10.2.4.7.5 Replace 'CY DSCS Act Unwtd Student Count' with 'DSCS Student Count (FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM)'. The parentheses and the text between them shall be a smaller font size.

2.2.10.2.4.7.6 Replace 'Total Actual Unweighted Student Count' with 'Total Student Count'.

2.2.10.2.4.7.7 Replace 'Add-On Total Weighted Student Count' with 'Total Student Count Add-On'.

**Figure 2 APOR55-1 Report**

SAIS APOR55-1 — Arizona Department Of Education — Apportionment Date: 06/15/2009
Basic Calculations For Equalization Assistance — Run Date: 06/09/2009
09-02-25 Cedar Unified District — FY 2009-10 — District Page: 1 of 4

| Student Counts | PSD | K-8 | 9-12 | Total |
|---|---|---|---|---|
| Student Count (FY 2008-09 ADM) | 0.000 | 236.285 | 115.826 | 352.111 |
| PY Student Count (FY 2007-08 ADM) | | 288.779 | 122.822 | 411.601 |
| *Not Eligible For Rapid Decline* | | | | |
| Rapid Decline Count | | 0.000 | 0.000 | 0.000 |

| Charter FY 2009-10 ADM | K-8 | 9-12 | Total |
|---|---|---|---|
| Estimated | 0.000 | 0.000 | 0.000 |
| 40th Day | 0.000 | 0.000 | 0.000 |
| 100th Day | 0.000 | 0.000 | 0.000 |

| FY 2007-08 ADM | PSD | K-8 | 9-12 | Total |
|---|---|---|---|---|
| | 2.505 | 269.497 | 122.822 | 394.824 |

| District FY 2009-10 ADM | PSD | K-8 | 9-12 | Total |
|---|---|---|---|---|
| 40th Day | 1.027 | 208.576 | 88.616 | 298.219 |
| 100th Day | 4.025 | 212.919 | 91.929 | 308.873 |

| Weighted Student Counts | | Student Count | | Support Level Weight | | Weighted Student Count |
|---|---|---|---|---|---|---|
| FY 2008-09 ADM: | District PSD | 0.000 | x | 0.000 | = | 0.000 |
| | District K-8 | 236.285 | x | 1.357 | = | 320.639 |
| | District 9-12 | 115.826 | x | 1.660 | = | 192.271 |
| FY 2009-10 ADM: | Charter K-8 | 0.000 | x | 0.000 | = | 0.000 |
| | Charter 9-12 | 0.000 | x | 0.000 | = | 0.000 |
| SubTotal | | 352.111 | | | | 512.910 |

| Add-Ons | District 40th Day FY 2009-10 ADM | District 100th Day FY 2009-10 ADM | District Student Count (FY 2008-09 ADM) | | DSCS Student Count (FY 2009-10 ADM) | | Total Student Count | | Support Level Weight | | Total Student Count Add-On |
|---|---|---|---|---|---|---|---|---|---|---|---|
| K | 11.416 | 12.516 | 9.101 | + | 0.000 | = | 9.101 | x | 1.352 | = | 12.306 |
| K-3 | 72.293 | 73.764 | 95.351 | + | 0.000 | = | 95.351 | x | 0.060 | = | 5.721 |
| ELL | | 0.000 | 3.0 | + | 0.000 | = | 3.000 | x | 0.115 | = | 0.345 |
| HI | 0.313 | 0.425 | 1.000 | + | 0.000 | = | 1.000 | x | 4.771 | = | 4.771 |
| MD-R,A-R,SMR-R | 0.000 | 0.000 | 0.000 | + | 0.000 | = | 0.000 | x | 6.024 | = | 0.000 |
| MD-SC,A-SC,SMR-SC | 1.000 | 1.000 | 1.000 | + | 0.000 | = | 1.000 | x | 5.833 | = | 5.833 |
| **MD-SSI** | 1.000 | 1.000 | 1.000 | + | 0.000 | = | 1.000 | x | 7.947 | = | 7.947 |
| **OI-R** | 0.000 | 0.000 | 0.000 | + | 0.000 | = | 0.000 | x | 3.158 | = | 0.000 |
| **OI-SC** | 1.000 | 0.800 | 3.000 | + | 0.000 | = | 3.000 | x | 6.773 | = | 20.319 |
| **P-SD** | 0.375 | 0.450 | 0.000 | + | 0.000 | = | 0.000 | x | 3.595 | = | 0.000 |
| **DD*,ED,MIMR,SLD,SLI*,OHI** | 54.125 | 52.800 | 64.200 | + | 0.000 | = | 64.200 | x | 0.003 | = | 0.193 |
| **ED-P** | 0.000 | 0.000 | 0.000 | + | 0.000 | = | 0.000 | x | 4.822 | = | 0.000 |
| MOMR | 2.000 | 1.800 | 2.000 | + | 0.000 | = | 2.000 | x | 4.421 | = | 8.842 |
| VI | 0.000 | 0.000 | 1.500 | + | 0.000 | = | 1.500 | x | 4.806 | = | 7.209 |
| Total Weighted Student Count Add-Ons | | | | | | | | | | | 73.485 |

*School aged students only

ADE 4395

*2.2.10.3 CHAR55-1*

**NOTE:** See Figure 3 for a mock-up of the revised CHAR55-1 report. The mock-up is reflective of FY 2010 data.

2.2.10.3.1 Modify the needs in the Add-ons section in the following way:

*2.2.10.3.1.1 Within the ED,MIMR,SLD,SLI,OHI grouping, change the text to read: DD, ED,MIMR,SLD,SLI,OHI*

2.2.10.3.1.1.1 Modify the underlying logic to include the new DD need.

2.2.10.3.2 For easier readability of this report, modify the following text labels. The data itself will not change, only the text labels so that it is easier to understand what each piece of data represents. The labels to be changed are:

*2.2.10.3.2.1 Title of Report:*

2.2.10.3.2.1.1 Modify the current fiscal year within the fourth line; truncate to the last two digits of the year.

*2.2.10.3.2.2 Student Counts section:*

2.2.10.3.2.2.1 Append '(100th Day)' to the end of 'FY xxxx-xx Average Daily Membership'.

*2.2.10.3.2.3 Add-Ons section*

2.2.10.3.2.3.1 Replace 'Current Year Unweighted Estimated' with 'Estimated 40th Day FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'.

2.2.10.3.2.3.2 Replace 'Current Year * Unweighted 40th Day' with '40th Day* FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'

2.2.10.3.2.3.3 Replace 'Current Year Unweighted 100th Day' with '100th Day FY {current fiscal year – 1}-{(last two digits of) current fiscal year} ADM'.

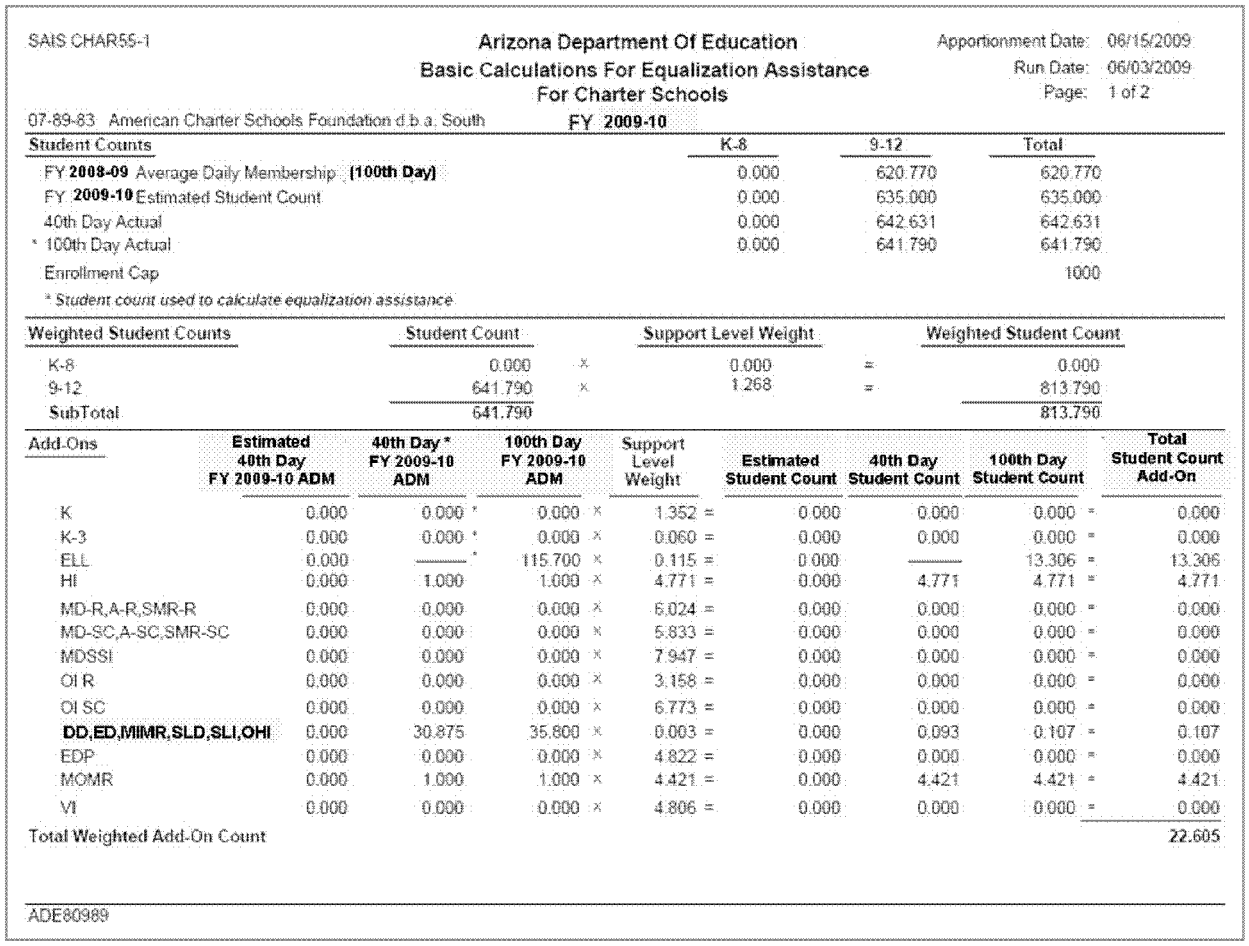
2.2.10.3.2.3.4 Replace 'Current Year Weighted Estimated' with 'Estimated Student Count'.

2.2.10.3.2.3.5 Replace 'Current Year Weighted 40th Day' with '40th Day Student Count'.

2.2.10.3.2.3.6 Replace 'Current Year Weighted 100th Day' with '100th Day Student Count'.

2.2.10.3.2.3.7 Replace 'Total Weighted Student Count' with 'Total Student Count Add-On'.

**Figure 3 CHAR55-1 Report**



SAIS CHAR55-1

Arizona Department Of Education
Basic Calculations For Equalization Assistance
For Charter Schools

Apportionment Date: 06/15/2009
Run Date: 06/03/2009
Page: 1 of 2

07-89-83 American Charter Schools Foundation d.b.a. South — FY 2009-10

| Student Counts | K-8 | 9-12 | Total |
|---|---|---|---|
| FY 2008-09 Average Daily Membership (100th Day) | 0.000 | 620.770 | 620.770 |
| FY 2009-10 Estimated Student Count | 0.000 | 635.000 | 635.000 |
| 40th Day Actual | 0.000 | 642.631 | 642.631 |
| * 100th Day Actual | 0.000 | 641.790 | 641.790 |
| Enrollment Cap | | | 1000 |

* Student count used to calculate equalization assistance

| Weighted Student Counts | Student Count | | Support Level Weight | | Weighted Student Count |
|---|---|---|---|---|---|
| K-8 | 0.000 | x | 0.000 | = | 0.000 |
| 9-12 | 641.790 | x | 1.268 | = | 813.790 |
| SubTotal | 641.790 | | | | 813.790 |

| Add-Ons | Estimated 40th Day FY 2009-10 ADM | | 40th Day * FY 2009-10 ADM | | 100th Day FY 2009-10 ADM | | Support Level Weight | | Estimated Student Count | 40th Day Student Count | 100th Day Student Count | | Total Student Count Add-On |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K | 0.000 | | 0.000 | * | 0.000 | x | 1.352 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| K-3 | 0.000 | | 0.000 | * | 0.000 | x | 0.060 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| ELL | 0.000 | | ——— | * | 115.700 | x | 0.115 | = | 0.000 | ——— | 13.306 | = | 13.306 |
| HI | 0.000 | | 1.000 | | 1.000 | x | 4.771 | = | 0.000 | 4.771 | 4.771 | = | 4.771 |
| MD-R,A-R,SMR-R | 0.000 | | 0.000 | | 0.000 | x | 6.024 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| MD-SC,A-SC,SMR-SC | 0.000 | | 0.000 | | 0.000 | x | 5.833 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| MDSSI | 0.000 | | 0.000 | | 0.000 | x | 7.947 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| OI R | 0.000 | | 0.000 | | 0.000 | x | 3.158 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| OI SC | 0.000 | | 0.000 | | 0.000 | x | 6.773 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| DD,ED,MIMR,SLD,SLI,OHI | 0.000 | | 30.875 | | 35.800 | x | 0.003 | = | 0.000 | 0.093 | 0.107 | = | 0.107 |
| EDP | 0.000 | | 0.000 | | 0.000 | x | 4.822 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| MOMR | 0.000 | | 1.000 | | 1.000 | x | 4.421 | = | 0.000 | 4.421 | 4.421 | = | 4.421 |
| VI | 0.000 | | 0.000 | | 0.000 | x | 4.806 | = | 0.000 | 0.000 | 0.000 | = | 0.000 |
| Total Weighted Add-On Count | | | | | | | | | | | | | 22.605 |

ADE80989

# 3 OFFICE OF ENGLISH LANGUAGE ACQUISITION SERVICES (OELAS)

## *3.1 Concurrent ELL Program Enrollments*

3.1.1 It is common that a student in an ELL program will enroll at a new school and the previous school may not withdraw the student expediently. If the concurrent enrollment overlaps with a funding date, this will cause issues with ELL funding, generating over-payments for Group B and Title III funding. ELL funding is not to be divided among multiple schools, only the main school that the student attends should get the funding.

*3.1.1.1 ADE cannot determine which is the primary and correct school for program funding purposes, so it was decided that any instances of multiple ELL program enrollments would fail.*

3.1.2 The integrity rule will be created as such that if a student has more than 1 active ELL program participation (i.e. program participation with no exit date, or exit date is after the submission date at another school) with different schools, it will fail for all schools that the student is showing membership within.

3.1.3 Transaction 13

*3.1.3.1 Rule: When a transaction 13 is submitted, the following checks will be made:*

3.1.3.1.1 Is there another transaction 13 recorded for this student in the current fiscal year from a different school than the new transaction?

*3.1.3.1.1.1 If there is no Program Exit Date, fail that transaction and the new transaction.*

*3.1.3.1.1.2 If the Program Exit Date of the other transaction is after the Program Entry Date of the new transaction, fail that transaction and the new transaction.*

*3.1.3.2 Error message, upon failure of this integrity rule, should read "ELL Program Participation is allowed for 1 school only. More than one school has submitted participation for this student for this time period."*

## *3.2 SAIS ELL S10-1 Student Detail Report*

Final requirements are to be determined and will be posted once they are complete.

UPDATE: This change will not be implemented. The report will remain as is.

# 4 RESEARCH AND EVALUATION

## *4.1 SAIS "NGY" to "Cohort" Change*

4.1.1 Change all instances of "NGY" to use the "Cohort" field

*4.1.1.1 Display "Cohort Year" in lieu of "Normal Graduation Year" (NGY) on all SAIS screens and SDDI reports. The field Normal Graduation Year is obsolete as it is no longer being used by the ADE or the Districts/Charters. It has been replaced by Cohort, but not all of the screens and reports in SaisOnline have been updated. This is a change in what field data is used, not just a change in display text.*

*4.1.1.2 The Cohort Year, previously NGY, is the original expected graduation year calculated within SAIS once a student enters 9th grade for the first time.*

*4.1.1.3 The Cohort field is to be read-only; no changes can be made by districts/charters/schools.*

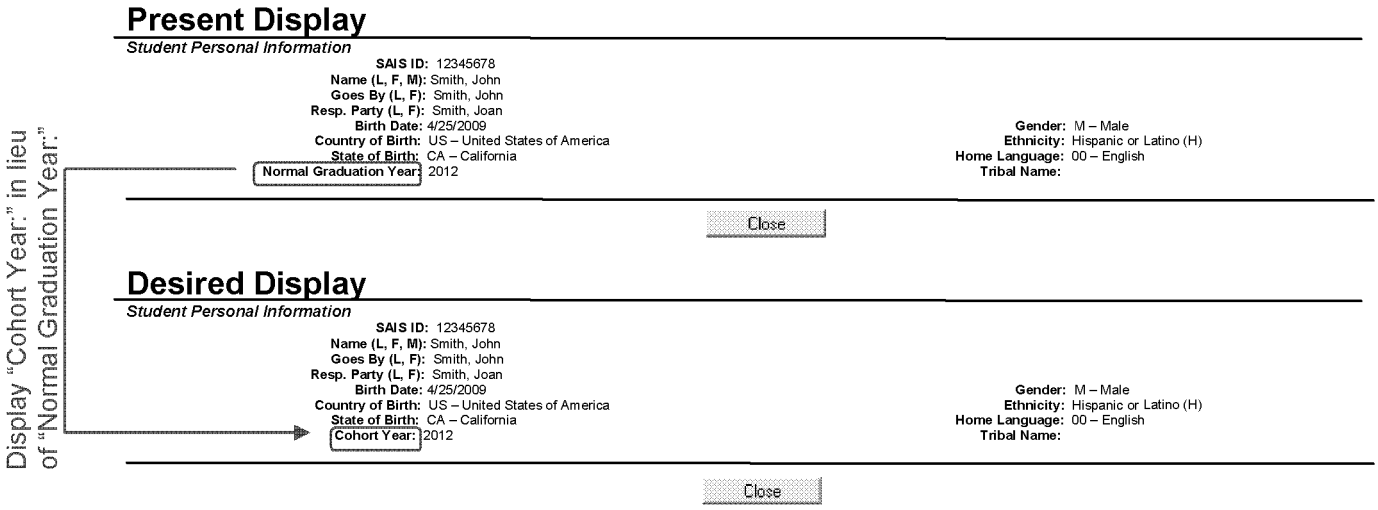
4.1.1.3.1 This change applies to all previous fiscal years, data available back to FY05.

4.1.2 "Student Personal Information" Display Changes

*4.1.2.1 Display "Cohort Year:" in lieu of "Normal Graduation Year:" for SAIS Online Common Logon application "Student Personal Information" results.*

4.1.2.1.1 If no Cohort Year is available (null or blank value), then do not display a value.

4.1.2.1.2 Following is a sample mock up of desired "Student Personal Information" results display.




*4.1.2.2 Display "Cohort Year" in lieu of "Normal Graduation Year" for the following Student Details Reports available via SDDI (Student Detail Data Interchange):*

4.1.2.2.1 SdADMS71-1 Student Membership by DOA Report

4.1.2.2.2 SdADMS71-2 Student Membership by DOR Report

4.1.2.2.3 SDADMS73 Student Personal Information Report (School level report.)

4.1.2.2.4 SDTEST01-1 HS Student Test History Report

4.1.2.2.5 SDTEST01-2 All HS Student Test History Report

4.1.2.2.6 SDTEST01-1 G3-8 Student Test History Report

4.1.2.2.7 SDTEST01-2 G3-8 All Student Test History Report

4.1.2.2.8 SDELL70 Student Detail ELL Assessment Search Report

4.1.3 Transaction Element Optional for Normal Graduation Year

*4.1.3.1 Element no longer collected: Normal Graduation Year. Properly formatted values (length and data type) in these fields will be ignored. For SDF files, no characters in the field is preferred. For XML files, no submittal of the element is preferred.*

*4.1.3.2 This change affects Transactions 1 and 5.*

4.1.4 Changes in Transaction Rules: Disable the following failures and warnings

4.1.4.1.1 Transaction 01 – Enrollment validations against Normal Graduation Year.

*4.1.4.1.1.1 Failure: -11056 "Normal graduation year is required for all high school students."*

*4.1.4.1.1.2 Warning: -211014 "Normal Graduation Year is greater than SAIS calculated graduation year."*

*4.1.4.1.1.3 Warning: -211010 "Normal graduation year is less than SAIS calculated year."*

4.1.4.1.2 Transaction 05 – Personal Information validations against NGY.

*4.1.4.1.2.1 Failure: -14033 "Normal Graduation Year is less than 5 years or more than 20 years from Fiscal Year."*

*4.1.4.2 Disable the following ADM integrity failure*

4.1.4.2.1 Failure: -434006 "The student's normal graduation year is missing from the database."

4.1.5 Cohort Data Updates

*4.1.5.1 AYP AZL Cohort Year updates/jobs to be done automatically on a monthly basis.*

*4.1.5.2 AYP AZL Cohort Year updates/jobs to retroactively update Cohort Year figures four years from current Fiscal Year (FY) e.g. if FY09, then go back to FY05.*

**NOTE:** Cohort year is calculated based on post-Integrity data, so there is a chance that cohort will not be available even after the cohort refresh job completes. This mostly affects new HS students.

# 5 SCHOOL FINANCE

## *5.1 Limit TAPBI Enrollment to an Increase of 100% of the Last Fiscal Year*

Final requirements are complete, but are now waiting on pending legislation to see if this enrollment cap will be removed.
UPDATE: This change will not be implemented. Legislation removed the TAPBI enrollment cap for FY2010.

## *5.2 SPED Count Process*

Final requirements are to be determined and will be posted once they are complete.

# 6 APPENDIX

## Figure 4 Concurrent Need Eligibility Matrix

| Concurrent Needs | A | DD | ED | EDP | HI | MD* | MDSSI* | MIMR | MOMR | OHI | OI | PSD | SLD | SLI | SMR | TBI | VI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | no | no | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| DD | no | | no | no | yes | no | no | no | no | no | yes | no | no | no | no | yes | yes |
| ED | no | no | | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| EDP | no | no | no | | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| HI | yes | yes | yes | yes | | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| MD* | yes | no | yes | yes | yes | | no | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| MDSSI* | yes | no | yes | yes | yes | no | | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| MIMR | yes | no | yes | yes | yes | yes | yes | | no | yes | yes | no | no | yes | no | yes | yes |
| MOMR | yes | no | yes | yes | yes | yes | yes | no | | yes | yes | no | no | yes | no | yes | yes |
| OHI | yes | no | yes | yes | yes | yes | yes | yes | yes | | yes | no | yes | yes | yes | yes | yes |
| OI | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | | no | yes | yes | yes | yes | yes |
| PSD | no | no | no | no | yes | no | no | no | no | no | no | | no | no | no | no | yes |
| SLD | yes | no | yes | yes | yes | yes | yes | no | no | yes | yes | no | | yes | no | yes | yes |
| SLI | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | | yes | yes | yes |
| SMR | yes | no | yes | yes | yes | yes | yes | no | no | yes | yes | no | no | yes | | yes | yes |
| TBI | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | | yes |
| VI | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | |

*MD requires the following categories to co-exist: two or more of HI, MOMR, OI, VI or one of HI, MOMR, OI, VI and one of ED, EDP, MIMR, SLD.
*MDSSI requires the following categories to co-exist: severe HI and severe VI or one of severe HI, severe VI and another severe disability (group B): A, EDP, MOMR, OI, SMR.

# APPENDIX (cont.)

## Figure 5 Need-Grade-Service Code Eligibility Matrix

| Grade | Service Code | A | DD | ED | EDP | HI | MD | MDSSI | MIMR | MOMR | OHI | OI | PSD | SLD | SLI | SMR | TBI | VI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| all but PS | A | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | B | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | C | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | D | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | E | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | EA | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | EB | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | EC | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | FA | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | FB | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | FC | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | H | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |
| all but PS | I | yes | no | no | no | no | yes | no | no | no | no | yes | no | no | no | yes | no | no |
| all but PS | J | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | yes |

Need code ED permitted for svc codes EA,EB,EC only if DOA is type 21

Other need codes can be reported with svc code I if student is also A, MD, OI, SMR

| Grade | Service Code | A | DD | ED | EDP | HI | MD | MDSSI | MIMR | MOMR | OHI | OI | PSD | SLD | SLI | SMR | TBI | VI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PS | PA | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PB | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PC | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PD | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PE | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PG | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PH | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PJ | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |
| PS | PS | no | yes | no | no | yes | no | no | no | no | no | no | yes | no | yes | no | no | yes |

| FIELD NAME | DESCRIPTION |
|---|---|
| **SAISID** | SAISID. The first time a student is ever reported to Arizona's SAIS system, SAIS will generate a student identifier number for that student and send it back to the school or district that submitted the data. This number will remain valid for the life of the student. The initial enrollment record submitted for this student will also necessarily be forced to leave the SAIS-generated student identifier field empty. |
| **First Name** | Student first name as it appears on the legal document provided for registration. (*Required field) |
| **Last Name** | Student last name as it appears on the legal document provided for registration. (*Required field) |
| **Birth Date** | Student date of birth. (*Required field) |
| **Middle Name** | Student middle name or initial as it appears on the legal document provided for registration. |
| **Last Name at Birth** | Last name the student goes by. This may be the same as Last Name on the legal document. |
| **Responsible Party's Last Name** | The last name of the adult responsible for the student (mother, father, guardian, responsible party, or the student himself if he is emancipated) as it appears on a legal document used for registration. |
| **Responsible Party's First Name** | The first name of the adult responsible for the student (mother, father, guardian, responsible party, or the student himself if he is emancipated) as it appears on a legal document used for registration. |
| **Extension Name** | Suffix (name extension) to student last name on legal document, e.g., Jr., Sr., III. |
| **Nick Name** | Student nickname. |
| **Tribal Name** | A name borne in common by members of a tribe or clan. |
| **Gender** | Student gender. |
| **Ethnicity** | Student ethnic origin. |
| **Foreign Exchange** | Indication that student is in the U.S. via a foreign exchange program. |
| **Previous School Entity ID (CTDS)** | School identifier of the school attended prior to this school. This is a CTDS code of an Arizona school. |
| **Previous School Name** | Name of the school attended prior to this school |
| **Previous School Student ID** | Student identifier in Previous School Entity ID; school-generated student identifier if Previous School Entity ID is Arizona school. |
| **University Student ID** | Student identifier in the University |
| **Error Message** | If inadequate details were provided on the data record, one of the following messages appears. Enough details must be provided so that only one match is located. Multiple records will not be shown when more than one possible match is found. |

Arizona Department of Education

# Student Accountability Information System

# Student Database Transaction Requirements

# Integrity Checking Processes Fiscal Year 2007

Version 7.0

Last updated: November 30, 2006

Arizona Department of Education
School Finance Division
1535 W. Jefferson Street
Phoenix, Arizona 85007-3209

*For updates to this document, see the SAIS project contact in section* ***Contacts****.*

# TABLE OF CONTENTS

# REVISIONS

Below is an inventory of the revisions made to this document since publication of version 1.0. (The revisions made while this document was in Draft form are not included in this list.) Each time a revision is made the following sections, if included in this document, will also be updated: **Table of Contents, List of Figures, List of Tables, Issues**.

11/30/2006 VERSON 7.0 **PUBLISHED**

| ver | New information | Old information | source |
|---|---|---|---|
| 7.0 | **Entire Document**<br>Modified the table format containing Integrity rules such that a "Y" or "N" will be contained in the column "New / change this yr?" to indicate if the rule is new or has been changed since FY06. | Columns previously specified rules applicable to fiscal years FY05 and FY06. | Carol Cree, Business Analyst, Information Technology |
| 7.0 | **Membership**<br>• Added new rule SD-INT-MEM-008.3.1 that specifies a student may not have a full day absence on the first day of membership unless the absence fall on the first day of school as defined in the calendar track to which the student is assigned<br>• Revised rules SD-INT-MEM-008.4.10, that specifies a student can only have a Year End Status of 'G' (Graduated at year end) if student is either in grade 11 or 12.<br>• Added new rule SD-INT-MEM-008.4.11 that specifies a student can only have a Year End Status of P (Promoted) or R (Retained) in grades PS – 10, including UE.<br>• Added new rule SD-INT-MEM-008.4.12 that specifies a Student can only have Withdrawal Activity code of W7 (Graduated) if student is in either grade 11 or 12.<br>• Revised rule SD-INT-MEM-014.2 to allow for full-day absence on 1st day of Membership; new error message(s) text specified.<br>• Added new rule SD-INT-MEM-014.2.1 that specifies a student may not have a full-day absence on the first day of membership of a mid-year track change.<br>• Added new rule SD-INT-MEM-017.1.1 to specify treatment of first day enrollment with ten-day consecutive absences.<br>• Added new rule SD-INT-MEM-017.2.6 to specify attendance reporting gap with first day of membership absence combination.<br>• | | Mardy Cruz, Business Analyst, Information Technology;<br>Carol Cree, Business Analyst, Information Technology |
| 7.0 | **SPED**<br>Added rule(s)<br>• SC-INT-SPD-001.19.1,<br>• SC-INT-SPD-001.19.2,<br>• SC-INT-SPD-001.17.5 | | Jim Whelan, Business Analyst, Information Technology<br>Carol Cree, Business Analyst, Information Technology |
| 7.0 | **Support Programs**<br>Added rule SD-INT-SUP-009.5 to specify where a student has been identified as Immigrant for 3 or more prior fiscal years. | | Carol Cree, Business Analyst, Information Technology |

07/31/2006 Version 6.6 **PUBLISHED**

| ver | New information | Old information | source |
|---|---|---|---|
| 6.6 | **Membership**<br>Added message number(s): 43126. 11066, 243601, | Previously assigned to @@ | Carol Cree, Business Analyst, Information Technology |
| 6.6 | **SPED**<br>• Added message(s): 44343, 44344, 44346<br>• Corrected error message number(s): 44348<br>• Clarified text of error message number(s): 44357 | Previously unassigned or inaccurately enumerated | Carol Cree, Business Analyst, Information Technology |
| 6.6 | **Support Programs**<br>Corrected error message number(s): 44501, 44509, | Numbers previously did not correspond to System Messages document | Carol Cree, Business Analyst, Information Technology |

TBD Version 6.5 **In Progress**

| ver | New information | Old information | source |
|---|---|---|---|
| 6.5 | **Section 3 – SPED Integrity – Private/SPED**<br>Added 'PRIVATE/SPED" to the following rule:<br>Only PUBLIC, CHARTER, and PRIVATE/SPED schools (DOA's) may have "self-contained" SPED services. | Previously did not allow Private/SPED DOA to have self-contained SPED services (only Public and Charter previously allowed). | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |
| 6.5 | **Section 3 SPED Integrity**<br>SC-INT-SPD-001.10.2<br>If the DOA = HEAD START, then the Service Code must be A, B, H, or S | Documentation previously sated service codes C and J were also allowed in the scenario described. | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |
| 6.5 | **Section 3 SPED Integrity**<br>SC-INT-SPD-001.10.3<br>If the DOA county is AZ Department of Corrections and all county type 21, then the Service Code must be A, B, C, or S. | Documentation previously sated service code I was also allowed in the scenario described. | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |
| 6.5 | **Section 3 SPED Integrity**<br>SC-INT-SPD-001.10.12<br>Error message id now = -44365. This is to keep in line with typical error ID numbers for SPED Integrity. | Previous error ID was -23037 | Jim Whelan, IT Business Analyst<br>Scott Kersey, IT Software Developer |
| 6.5 | **Section 3 SPED Integrity**<br>SC-INT-SPD-001.10.14<br>For Need Code EDP, if DOA = ACCOMMODATION, Service Code must be D. | Documentation previously stated service code G was also allowed in the scenario described. | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |
| 6.5 | **Section 3 SPED Integrity**<br>SC-INT-SPD-001.10.16<br>If the Need Code = EDP the Service Code must be equal to C, D, E, F, G, or V. Exceptions: DOA county = Arizona Department of Corrections (21). | Documentation previously stated service code I was also allowed in the scenario described. | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |

12/9/2005 Version 6.4 **PUBLISHED**

| ver | New information | Old information | source |
|---|---|---|---|
| 6.4 | **Section 2 – Membership – Graduated cannot receive ADM rules**<br>Disabled the following three Integrity validation rules associated with not allowing ADM for students identified as already graduated.<br>• SD-INT-MEM-008.4.10<br>• SD-INT-MEM-008.4.11<br>• SD-INT-MEM-008.4.12 | Newly implemented rules for FY06. | Katherine vanMourik, School Finance;<br>Jim Whelan, IT Business Analyst |

| ver | New information | Old information | source |
|---|---|---|---|
| 6.4 | **Section 3 – Federal SPED Integrity**<br>Added Federal SPED Integrity flag validations. There are now two Integrity flags in SPED, State (SPED) and Federal (Federal SPED) | Previously, Federal SPED Integrity flag did not exist | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |
| 6.4 | **Section 3 - Initial IEP Integrity validation**<br>SC-INT-SPD-001.16<br>PS age or younger student must have a submitted Initial IEP in SAIS to be eligible for SPED Service Participation. (*This will be validated if the first time a child enters PS SPED in Arizona is in FY 2006 or greater.)* | Previously did not exist | Jim Whelan, IT Business Analyst<br>Lynn Busenbark, ESS |
| 6.4 | **Section 4 – Language Integrity – Assessments**<br>SD-INT-LNG-003.7<br>modified definition of "below KG age to be:<br>For purposes of this rule, *"Below KG age"* = *Student is < 5 years old on Jan. 1st of the FY when the most recent assessment was given.*<br>If the student is below KG age when the ELL assessment is given - fail ELL integrity | Previously defined below KG age as < 5 before Sept. 1st of the FY when the most current assessment was given | Jim Whelan, IT Business Analyst |
| 6.4 | **Section 4 – Language Integrity – Assessments**<br>SD-INT-LNG-003.4<br>Added validation - At least one of the 3 Arizona Language Assessment sub-tests must contain an assessment result:<br>1. *for FY05 or FY06 - validate if the latest assessments occurred in FY05*<br>2. *FY06 - do not perform this validation if the latest assessments occurred in FY06 – due to change in FY06 assessment transaction 012, which now collects only one overall assessment result. Validation occurs at import.* | Previous FY assessment transactions had different elements collected, including individual sub-test assessment results. | Jim Whelan, IT Business Analyst<br>Helen Hugo, IT BA/QA Director<br>Micky Gutier, EAS |
| 6.4 | **Section 4 – Language Integrity – Assessments**<br>SD-INT-LNG-003.6<br>Added validation - If the Assessment Result for any of the 3 Arizona Language Assessment sub-tests is Continuing FEP, fail the language program participation based on the following:<br>1. *FY05 or FY06 - validate if the latest assessments occurred in the current -1 fiscal year.*<br>2. *FY06 - validate if the latest assessment occurred in the current fiscal year. Only validate based on the overall assessment result, which is the only captured assessment result from FY06 forward.* | Previous FY assessment transactions had different elements collected, including individual sub-test assessment results. | Jim Whelan, IT Business Analyst<br>Helen Hugo, IT BA/QA Director<br>Micky Gutier, EAS |
| 6.4 | **Section 4 – Language Integrity – Assessments**<br>SD-INT-LNG-003.8<br>Added validation - Effective for FY 2006 only:<br>If the student is KG age when the assessment is given:<br>Check that Reading and Writing are reported with scores of 998<br>AND that the Proficiency Levels for these two areas are PE - otherwise fail ELL integrity. | Previously did not exist | Jim Whelan, IT Business Analyst<br>Helen Hugo, IT BA/QA Director<br>Micky Gutier, EAS |

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| 6.4 | **Section 4 – Language Integrity – Assessments**<br>SD-INT-LNG-003.9<br>Added validation - If ANY assessment score is reported as 998 the corresponding Proficiency Level MUST be PE - otherwise fail ELL Integrity | Previously did not exist | Jim Whelan, IT Business Analyst<br>Helen Hugo, IT BA/QA Director<br>Micky Gutier, EAS |
| 6.4 | **Section 5 – Support Programs Integrity – Evacuee**<br>SD-INT-SUP-009.4<br>Added the rule that a Student submitted with an Evacuee Need cannot have a membership in Arizona prior to 8/26/2005 | Previously did not exist | Helen Hugo, IT BA/QA Director |
| | **Section 3 – SPED Integrity – Private/SPED**<br>Added 'PRIVATE/SPED" to the following rule:<br>Only PUBLIC, CHARTER, and PRIVATE/SPED schools (DOA's) may have "self-contained" SPED services. | Previously did not exist | Jim Whelan, IT Business Analyst<br>Peggy Staples, ESS |

02/04/2005 Version 4.8 **PUBLISHED**

| ver | New information | Old information | Source |
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| 4.8 | **Section 2.8 – Synchronize Grade/Age**<br>Added rule to bypass grade/age validations if tuition payer code indicates privately paid.. | Previously did not exist. | Ticket # 18958<br>Mardy Cruz – SD Lead;<br>C. Cree, MIS – Business Analysis |
| 4.8 | **SPED Needs**<br>Added decision matrix governing valid relationships between Grade, SPED service codes, and SPED Needs. | Previously did not exist | Peggy Staples, ESS;<br>C. Cree, MIS – Business Analysis |
| 4.8 | **SPED Other Entity / Service Code Rules**<br>Replaced previously published decision matrix. | Headstart entity type previously allowed "C", "G", and "R "service codes. | Peggy Staples, ESS;<br>C. Cree, MIS – Business Analysis |
| 4.8 | **Mid-Year Track Change**<br>• Added rule that EK must be preceded by WK in order to avoid concurrent enrollment.<br>• Modified wording in the summary paragraph indicating that a grade change is permissible for the EK enrollment.<br>• Removed "Language / Group B" business process from mid-year track change rules. | Previously did not exist. | C. Cree, MIS – Business Analysis |
| 4.8 | **Section 4.3 Language Needs**<br>Revised error message numbers related to language participation Integrity checks. | Numbers previously assigned had already been used for other business processes. | C. Cree, MIS – Business Analysis |
| 4.8 | **Section 4.9 Language program exit validation**<br>Previously published rule removed. Rule will be implemented in FY06. | | C. Cree, MIS – Business Analysis |

11/02/2004 Version 4.7 **PUBLISHED**

| ver | New information | Old information | source |
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| 4.7 | **Section 2.3 – Synchronize DOR, Tuition Payer, and Special Enrollment**<br>Added note to Tuition Payer subsection indicating overlaps or gaps should not exist for tuition payer 3 to be consistent with rules applied to other tuition payer values. | | Ticket # 20164<br>Mardy Cruz – SD Lead;<br>C. Cree, MIS – Business Analysis |
| 4.7 | **Language Needs**<br>Clarified validation for transfer to different track mid-year. | | C. Cree, MIS – Business Analysis |

10/04/2004 Version 4.6 **PUBLISHED**

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| 4.6 | **Chapter 4, Sec. 4.2 Missing Membership for a Language Program**<br>Clarified rule that language participation must have corresponding membership. | | SAIS Business Rules;<br>C. Cree, MIS – Business Analysis |
| 4.6 | **Chapter 4, Sec. 4.9 Language Program Exit Validation**<br>Added validation to synchronize language exit date with membership / track exit date. | Previously did not exist | SAIS Business Rules;<br>C. Cree, MIS – Business Analysis |
| 4.6 | **Chapter 5, Support Programs Validations Table**<br>Removed edit for Transportation / School Choice | Previously to be implemented in FY05. Now deferred to a future fiscal year. | Ticket # 174<br>Nancy Konitzer, AAD;<br>Helen Hugo, MIS – Student Details Manager;<br>C. Cree, MIS – Business Analysis |

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| 4.6 | **Chapter 5, Sec. 5.1 Support Programs– Transportation / School Choice**<br>Added note to this section indicating that validations will not be implemented in FY05, but in a future fiscal year. | Previously were to be implemented in FY05. | Ticket # 174<br>Nancy Konitzer, AAD;<br>Helen Hugo, MIS – Student Details Manager;<br>C. Cree, MIS – Business Analysis |
| 4.6 | **Chapter 5, Sec. 5.2 Support Programs-Validate Support Program / Student**<br>• Added validations for Title I Academic Disadvantage transactions.<br>• Added validation eliminating duplicate support program participation<br>• Added validation against federal designation of "In School Improvement" for Supplemental Education Services | Previously did not exist | SAIS Business Rules<br>C. Cree, MIS – Business Analysis |
| 4.6 | **Chapter 5, Sec. 5.3 Membership Validations for a Support Program**<br>• Modified the heading label from "Missing Membership..".<br>• Added membership validations to synchronize with Support Program transactions. | Previously did not exist | SAIS Business Rules<br>C. Cree, MIS – Business Analysis |

09/23/2004 Version 4.5 **PUBLISHED**

| ver | New information | Old information | source |
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| 4.5 | **Synchronize SPED/Membership Grade**<br>Added warning message<br>• 223002 | Previously did not exist | Ticket #18244<br>Peggy Staples, ESS;<br>C. Cree, MIS – Business Analysis |
| 4.5 | **Students on Attendance Reporting**<br>Added 3 validation rules for absence failures to make rules consistent. | Previously not included in this section. | Ticket # 23387<br>Katherine Van Mourik, School Finance;<br>Raphaela Conner, School Finance;<br>Mardy Cruz, QA Lead;<br>C. Cree, MIS – Business Analysis |
| 4.5 | **SPED Service Codes**<br>Added error message<br>• 23037 | Previously did not exist | Ticket #23378<br>Peggy Staples, ESS;<br>Mardy Cruz, QA<br>C. Cree, MIS – Business Analysis |
| 4.5 | **SPED Concurrent Needs**<br>Added decision matrix governing valid combinations of SPED Needs. | Previous edits were not consistently applied. | Peggy Staples, ESS;<br>Mardy Cruz, QA<br>C. Cree, MIS – Business Analysis |
| 4.5 | **Other Entity/Service Code Rules**<br>Added decision matrix governing valid combinations of entities and SPED Service Codes | Previous edits were not consistently applied. | Peggy Staples, ESS;<br>Mardy Cruz, QA<br>C. Cree, MIS – Business Analysis |
| 4.5 | **Concurrent Language Participation**<br>New section added to warn where more than one ELL Service is being provided concurrently. | Previously did not exist | Kathie Mooney, EAS;<br>Katherine Van Mourik, School Finance;<br>C. Cree, MIS – Business Analysis |

09/16/2004 Version 4.4 **PUBLISHED**

| ver | New information | Old information | source |
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| 4.4 | **Language Needs – Missing Membership for a Language Program**<br>Added validation that Grade Membership must be at same LEA as language participation. | Previously did not exist | Kathie Mooney, EAS;<br>Mardy Cruz, QA<br>C. Cree, MIS – Business Analysis |
| 4.4 | **2.5 Synchronize Activity Codes**<br>Modified validations of Enrollment (E), Withdrawal (W), and Readmission (R) codes -43201, -43202, -43203 to be validated in ADM, October Enrollment, and Year End Integrity | Previously, these validations only occurred in Year End Integrity | Jim Whelan, MIS - Business Analyst<br>Ginny Nordstrom, Developer |
| 4.4 | **2.5.6 – 2.5.9 Synchronize Activity Codes**<br>Moved all Mid-Year track change validations from 2.20 to section 2.5.6 – 2.5.9 | Previously published in another section | Jim Whelan, MIS - Business Analyst<br>Ginny Nordstrom, Developer |
| 4.4 | **Students on Attendance Reporting**<br>Modified section to include validation for missing attendance as well as attendance gaps. | Previously did not specify missing attendance in validation rule. | Ticket #18601 / 63<br>Helen Hugo, MIS – Student Details Manager,<br>Mardy Cruz, QA Lead<br>C. Cree, MIS – Business Analysis |
| 4.4 | **Membership (DOR/DOA/CEC Combinations)**<br>Added rule to section 19.6 for CEC-A/DOR combination, such that CTD meets specific criteria. | This new rule was included in version 4.0 of this document but was not flagged as a revision. | Ticket # 14040<br>Jim Whelan, Business Analyst |
| 4.4 | **Student Membership FTE**<br>Modified rule regarding Absence amounts and FTE to failure. | Previously was a warning message. | Ticket # 16194<br>Buell Brown, QA;<br>Mardy Cruz, QA;<br>C. Cree, MIS – Business Analysis |

09/09/2004 Version 4.3 PUBLISHED

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| 4.3 | **Special Education Needs**<br>Removed Integrity validation on Sped Exit Reason Code 8 being valid only in FY 2005 and beyond | FY validation will now be checked at the transaction level instead of being implemented in Integrity | Jim Whelan, MIS – Business Analyst |
| 4.3 | **Withdrawal Reason Codes**<br>Modified the integrity rule for combinations of withdrawal codes and withdrawal reason codes from an Error to a Warning. | Previously, incompatible withdrawal reason codes were treated as an Error. | C. Cree, MIS – Business Analysis |
| 4.3 | **Transfer to Different Grade or Track for Language Participants**<br>Added validation to ensure that an exit reason requiring subsequent re-enrollment in a different grade or track is enforced. | Previously did not exist | Ticket(s) 18798 / 25<br>C. Cree, MIS – Business Analysis |
| 4.3 | **Charter / Public Non-charter Concurrency Validation**<br>Inserted rule in calculation of Membership FTE whereby validation of concurrent memberships will force auto-integrity to be executed. | Previously did not exist | Tickets(s) 19770 / 80<br>Buell Brown, QA Analyst;<br>C. Cree, MIS – Business Analysis |
| 4.3 | **Special Education Needs**<br>Added -44351 SPED Need Categories ED, EDP and A that are concurrent for a student is not allowed | Validation previously existed, but was only documented in the Codes Values doc. | Jim Whelan, MIS – Business Analyst |
| 4.3 | **Special Education Needs**<br>Added -44353 SPED Need Categories MIMR, MOMR and SMR that are concurrent for a student is not allowed | Validation previously existed, but was only documented in the Codes Values doc. | Jim Whelan, MIS – Business Analyst |

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| 4.3 | **Withdrawal Reason Codes**<br>Removed warnings<br>• –215002. Message: Student should not use the School Choice option to transfer from one Underperforming school to another {CTDS of receiving school}.<br>• –215004. Message: Student should not use the School Choice option to transfer from one Persistently Dangerous school to another {CTDS of receiving school}. | Warnings previously attempted to return future school information, which is not readily captured by the LEAs. SAIS withdrawal and summer withdrawal do not have fields that capture a school transferred to (receiving school). | Jim Whelan, MIS – Business Analyst |
| 4.3 | **Withdrawal Reason Codes**<br>Modified warning messages -215001 and -215003 to state "…should not…" | Previously, message was intended to be a failure and stated "…cannot…" | Jim Whelan, MIS – Business Analyst |
| 4.3 | **Withdrawal Reason Codes**<br>Added note to the validation table of Withdrawal Reason Codes for WT/ST. Notes states: "This activity is accomplished now using the Student Grade Transfer transaction. SAIS will translate the Grade Transfers into WT/ET activities when creating the Year End Enrollment report." | Explanation of withdrawal reason codes WT/ST for Integrity documentation purposes was not previously available as in other documents. | Jim Whelan, MIS – Business Analyst |
| 4.3 | **Mid-Year Track Change**<br>2.20 Added business rules associated with mid-year track change (WK/EK) | Previously did not exist | Jim Whelan, MIS – Business Analyst |

08/02/2004 Version 4.2 **Published**

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| 4.2 | Special Education Needs<br>Added the following error message numbers:<br>• -44315<br>• -44349<br>• -44332 | Previously reported as @@ | Michael Lyczywek, MIS – Software Development<br>Ticket # 21421<br>Carol Cree, MIS – Business Analysis |
| 4.2 | Special Education Needs – ASDB:<br>Added validation and error message -@@<br>Students attending ASDB must be receiving HI or VI Need services at ASDB to be eligible for any other Need at ASDB. | Validation did not previously exist | Peggy Staples, ESS Sped Program Specialist<br>Jim Whelan, Business Analyst, MIS |
| 4.2 | **Reference Information, new sub-section 1.4**<br>Indicates that all business process Integrity checks will be performed whenever an LEA calendar is changed. | Previously did not exist. | Tickets 17706 / 18591<br>Raphaela Conner, School Finance;<br>John Eickman, MIS – Enterprise;<br>Carol Cree, MIS – Business Analysis |

07/02/2004 Version 4.1 **Published**

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| 4.1 | **Withdrawal Reason Codes**<br>Modified Integrity from fatal (ERROR) messages to WARNING to be consistent with SAIS Membership requirements. | WR1 and WR2 validations previously failed transactions where the school designation was not consistent with the withdrawal reason. | Nancy Konitzer, AAD;<br>Helen Hugo, MIS Student Details Manager<br>Carol Cree, MIS – Business Analysis |
| 4.1 | **3.5 Initial IEP**<br>Remove Integrity Warnings | Previously were going to be validated in Integrity, but now will only be validated at the transaction level. | Jim Whelan, MIS – Business Analyst |

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| 4.1 | **Reference Information**<br>1.2 – Removed reference to Language EOY business process. | To make consistent with removal of corresponding validations section 4 – Language Needs in version 4.0 | Kathie Mooney, EAS; Rolanda Bell, R&E; Helen Hugo, MIS Student Details Manager;<br>Carol Cree, MIS – Business Analysis |
| 4.1 | **District and School Types**<br>Added note indicating that the table will be synchronous between Integrity Checking, Aggregating Student Details, and Student Counts System documents. | Note did not previously exist. | Janice McGoldrick, AIF (Ticket # 49)<br>Carol Cree, MIS – Business Analysis |
| 4.1 | **Students on Attendance Reporting:**<br>Added warning for attendance gaps that fall in 40th Day, 100th Day, or EOY periods. | | Steve Murosky, School Finance; Janice McGoldrick, MIS; Mardy Cruz, MIS – QA;<br>Carol Cree, MIS – Business Analysis;<br>Footprints ticket: 18957 |
| 4.1 | **Support Programs**<br>• Added new validation for Johnson O'Malley program support to be consistent with SAIS Business Rules.<br>• Removed references to Migrant program. | • Did not previously exist.<br>• Migrant student data will be populated in SAIS from COEStar. | Nancy Konitzer, AAD; Jeff Stowe, AAD; Janice McGoldrick; Carol Cree, MIS – Business Analysis |

6/10/2004 Version 4.0 Published

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| 4.0 | **3.5 Initial IEP for 3 year olds not yet in membership:** Message number not yet assigned.) Message text changed to " Student is not 3 years old on Initial IEP Date; Initial IEP will not count toward FAPE." Displays student birthdate and submitted Initial IEP Date. | • Originally read " Student less than 3; Initial IEP will not count toward FAPE."<br>• Originally didn't show the IEP Date or birthdate. | Janice McGoldrick, Randy Morter, 3/8/2004 |
| 4.0 | **3.1 SPED Integrity; Student Counts Needs Rules:** Birth Date/ SPED Grade integrity message changed to match revised SPED integrity validation that a child must not have reached 5 years of age *before* September 1 to be eligible for PS funding. | Previous rule stated that child must not have reached 5 years of age ***by*** September 1. | Peggy Staples, SPED Program Specialist per ticket 17372<br>Modified by C. Cree, BA 4/7/04 |
| 4.0 | **Whole Document – Sped Integrity:** Replaced Sped Integrity flags (If service is within the **State Funding Reporting Period**: SPED State Funding and If service is on the **SPED Census Reporting Date**: SPED Census.) with one flag = SPED. | Previously listed as two separate Integrity flags | Jim Whelan, Business Analyst, MIS |
| 4.0 | **Whole Document – Age validation:** Added note to various Age/Grade areas of the document: *Note* 'by' includes the designated date (eg. by Jan 1st includes Jan 1st) | Did not previously exist | Helen Hugo, Student Details Project Manager, MIS |
| 4.0 | **Whole Document – Internal Table references:** Modified various ADE internal database table references to correct names | Previously some table names where erroneously using a designation of "St…" instead of "Sd…" | Jim Whelan, Business Analyst, MIS |

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| 4.0 | **DOA/DOR/CEC combinations 2.19.1-3:**<br>• Removing "Charter" as an eligible DOA or DOA type for CEC-A or CEC-B<br>• Updated sequence # 19.3<br>• Replaced DOREntityID and DOAEntityid with DOREntityCTDS and DOAEntityCTDS | Previously, Charter erroneously documented as allowed to have a CEC | Lyle Friesen, ADE School Finance<br>Maggie SIngler. ADE School Finance<br>Mardy Cruz, SAIS Test Lead |
| 4.0 | **Synchronize grade/age 2.8:** Added Footnote to Age/Grade table: * 'by' includes the designated date (eg. by Jan 1st includes Jan 1st) | Footnote previously did not exist | Ticket 19947<br>Steve Murosky, School Finance<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Synchronize grade/age 2.8:** Added error message - 44345 Change membership/SPED grade to KG or submit a Group B SPED service for each day of UE membership for a 5 year old. ;SchoolCTDS= | -44345 previously did not exist | Ticket 19491<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Special Education Needs**<br>**DOA/DOR/CEC combinations 3.6:** Removing "Charter" as an eligible DOA or DOA type for CEC-A or CEC-B | Previously, Charter erroneously documented as allowed to have a CEC | Lyle Friesen, ADE School Finance<br>Maggie SIngler. ADE School Finance<br>Mardy Cruz, SAIS Test Lead |
| 4.0 | **Special Education Needs: MD and MDSSI:** Modified MD and MDSSI descriptions and error messages - 44344 and -44346 to include the phrase "…with a valid program service participation…" | Previous error messages needed clarification | Tickets 20945 & 19856<br>Peggy Staples, ESS Sped Program Specialist<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Special Education Needs: MD and MDSSI:** Added validation and associated failure **-44352 SPED Need Categories MD and MDSSI that are concurrent for a student is not allowed.** | Validation previously not documented | Peggy Staples, ESS Sped Program Specialist<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Special Education Needs 3.1.17:** Added Sped failure -44503; **Student must be 5 years old by Jan 1st to generate funding for KG/UE. ARS 15-821c** | -44503 previously did not exist | Ticket 19947<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Special Education Needs 3.1.17:** Modified error messages -44337 and -44503 to include a reference to ARS 15-821C and clarify by Jan 1st | • ARS was not included in previous error messages<br>• Previous messages indicated before Jan 1st | Ticket 19947<br>Helen Hugo, Student Details Project Manager, MIS<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Special Education Needs - Age/Grade combinations:** Added validation rules to SPED Integrity section relating to SPED and ADM grades of UE and KG with Group B SPED services | Validation previously not documented | Tickets 19491 & 19947<br>Peggy Staples, ESS Sped Program Specialist<br>Jim Whelan, Business Analyst, MIS |
| 4.0 | **Language Needs**<br>• Inserted the stipulation that an assessment supporting a language program participation may be found at any public or charter school in the State for the current or previous fiscal year.<br>• Inserted one new warning (after 2/1), and one new error (prior to 2/1) for language participation that must have a corresponding grade membership.<br>• Removed note that indicated a student receiving language training can be enrolled in an LEA other than the one providing the language instruction.<br>• Added edits where 3 most recent assessments are used to validate language program participation. | New language validations for FY05 | Kathie Mooney, EAS; Rolanda Bell, R&E; Helen Hugo, MIS – SAIS Student Details Manager; Mardy Cruz, MIS – QA; Carol Cree, MIS – Business Analysis; Jim Whelan, MIS – Business Analysis; Ticket #16438 |

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| 4.0 | **End of Year Language Validations**<br>Removed the following validations:<br>• If there is no language program participation on SAIS for this student after that Assessment Date<br>• Each student in a language program must have an assessment each fiscal year | End of year edits are not timely information for LEAs. | Kathie Mooney, EAS; Rolanda Bell, R&E; Helen Hugo, MIS – SAIS Student Details Manager; Carol Cree, MIS – Business Analysis |

2/16/2004 Version 3 published.

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| 3 | **FY2005 changes** | | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **1.2 How Integrity works:** Added additional Integrity flags for Language: EOY, Support Programs, Support Programs: Free/Reduced Special Handling, Test Labels. Noted ADM 200th day flag is planned for FY2006. | did not previously exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Whole document:**<br>• Removed references to deleted element School Membership Share<br>• Removed references to deleted element Foreign Exchange Indicator. | | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Membership: Rule section** District of Residence (DOR): Rule 3, message 43104 message corrected | previously listed two versions; removed the one not implemented | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Membership: Rule section Tuition Payer:** Added validations for gaps or overlaps. | previously did not exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **2.8 Synchronize grade/age:** Added explanation and table for new combined (all funding related subject areas) grade/age validation | previously just referred to Membership Requirements document, which had separate validation for ADM than what was listed for SPED in Needs Requirements | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **2.9 Validate FTE**<br>• New section name.<br>• Added validations for gaps or overlaps of FTE.<br>• Fixed note to say that rules are current as of publication of the version 3.0 edition.<br>• Updated description of concurrency limits and processing. Added sub-sections Concurrent Enrollment Limits: By Valid Combinations, Charter / Public Non-Charter Concurrency Validation, Entities subject to the new allocation rules | • section name changed from 2.9 Synchronize FTE & Share;<br>• validations did not exist previously.<br>• Previously said rules were current as of version 1.0.<br>• Previous version was somewhat cumbersome, lacked detail required from new legislation governing new concurrency allocation rules | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **2.11 Absence dates outside enrollment period:** Added note that system warning messages due to orphaned absences and attendances are a result of SMS products that do not submit deletes as they should. | note did not previously exist; users reported that they thought the warning messages were a bug in SAIS | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Students on Absence Reporting:** Separated validations into pre-FY2005 and FY2005 and later. | previous validations were not fiscal year dependent | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Students on Attendance Reporting:** Corrected error message for 10 or more days consecutive attendance missing. | previously was stated as though SAIS recognized that this was 10 or more days consecutive unexcused absence | Janice McGoldrick, MIS SW Dev Mgr |

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| 3 | **2.17 Community College Classes:** Note added that no Integrity validations are required. | previously did not exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | 2.18 Temporary values still being used. Added validation to fail when invalid temporary values are found on SAIS. | validation previously did not exist; SAIS allowed temporary values in some fields on SAIS to allow LEA's to collect the information gradually over the first two years operating SAIS. | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **2.19 Withdrawal Reason Codes:** Added validations for new element Withdrawal Reason Code | previously did not exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **SPED Rules: Rule 11. SPED Service Code:**<br>• Removed table of service codes/resourced or self-contained settings, referred reader to the full table in the Code Values document.<br>• Added new validation that Service Code must be valid for given Fiscal Year.<br>• sub-section **MD and MDSSI:** For MD group validation, added need EDP. | • abbreviated table was only valid for non-PS, and it offered little value<br>• validation previously did not exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **SPED Rules: Rule 17. Age:**<br>• Added note for reader to see sections **3.6 SPED Exit Reason/Age/Grade validation** and **3.7 Synchronize SPED Grade / Membership Grade** for further information on Age- and Grade-related validations<br>• 3.6 SPED Exit Reason/Age/Grade validation: new section added, splitting validations by fiscal year<br>• 3.7 Synchronize SPED Grade / Membership Grade: new section added | • note did not previously exist<br>• section did not previously exist; rules were not fiscal year dependent<br>• new section did not previously exist<br>• new section did not previously exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **3.2.1 Multiple concurrent DORs:** Message 243102 changed 243302. Message 244103 changed to 244301 | previous information at left. | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **3.5 Initial IEP for 3 year olds not yet in membership:** Added section for new elements | elements were not previously collected in SAIS | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Assessment/Language:** Added and expanded validations.<br>• 4.3 Missing or Invalid Assessment for a Language Program: new section<br>• 4.4 Invalid Grade for a Language Program: new section<br>• 4.5 Invalid District for a Language Program: new section<br>• 4.6 End of year language validations: new section | validations did not previously exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Chapter 5 Integrity Checking Processes: Support Programs:** Added and expanded all validations | chapter did not previously exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **6 Integrity Checking Processes: Test Label Information:** Added note that Integrity for this new transaction is still under construction | previously did not exist | Janice McGoldrick, MIS SW Dev Mgr |
| 3 | **Issues:** updated list of issues with this material or this document unresolved as of publication of this document | Open issues as of last publication date were that some system messages marked with "@@" were not yet included in the document | Janice McGoldrick, MIS SW Dev Mgr |

10/27/2003 Version 2.3 published.

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| 2.3 | **2.12 Attendance dates:**<br>• Removed section "Attendance dates outside 1-week boundaries" (just added in version 2.2). This validation is done in transaction processing, not in Integrity. | added in version 2.2, but never implemented in SAIS | Randy Morter, SW Developer, Janice McGoldrick, MIS Software Devt Mgr, Ticket 15171 |
| 2.3 | **2.13 Display candidates for withdrawal for excessive absence:**<br>• **Students on Absence Reporting:** Message 444001 changed to error message 44001.<br>• **Students on Attendance Reporting:** Message 444002 changed to " Ten days or more of attendance missing. Submit attendance for this time if appropriate. If these days are unexcused absences, withdraw this student for excessive unexcused absence." | • previous message was informational<br>• previous message did not allow that the missing attendance days might not imply unexcused absences | • Buell Brown, ADE Tester 10-15-2003, ticket 14718<br>• Vikki Gibbons, TUSD, ticket 16200 (JMcG 8-12-03 |
| 2.3 | **3.1 Student Counts Needs Rules**, section **12 Valid Need Code characteristics:** Added EDP to list of Need codes possibly required for MD. | previous validation did not include EDP | Peggy Staples, ESS; Janice McGoldrick MIS PMO; ticket 17339 10/27/2003 |
| 2.3 | **5 Integrity Checking Processes: Support Programs:** Added new chapter for validating the Support Program subject area. | transaction did not exist prior to FY2003-04 | Academic Achievement Dept team: Nancy Konitzer, Richard Valdivia, Jeff Stowe, Carrie Larson; (JMcG 8/8/2003) |

8/7/2003 Version 2.2 published.

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| 2.2 | **2.5 Synchronize Activity Codes:**<br>• Rule 1. Added that validation must be done only within a single track when checking that the first enrollment of the year must be an "E" code for that student/school/grade.<br>• New rule 4.c: Withdrawal cannot occur on the last day of school UNLESS the withdrawal code is W8. This validation will be done beginning with the 2003-04 school year. | • previously did not specify that validation shouldn't be across all tracks<br>• previously did not enforce this | • Brian Owin, Research & Policy<br>• Janice McGoldrick, MIS Software Devt Mgr |
| 2.2 | **2.7 Validate Grade Exit Status:** Added table to identify all possible combinations of grade transfers and exit statuses, and whether each is valid or invalid. Reworded message 44305 to: Previous Grade {Old Grade Level Code} exited {Old Grade Exit Code} effective on {Old Grade Exit Date}; New Grade {New Grade Level Code} effective on {New Grade Start Date}. | previous listing was not explicit enough; message 44305 stated the same information but was organized poorly, causing confusion | Buell Brown, MIS QA, Janice McGoldrick MIS Software Devt Mgr, ticket 13909 |
| 2.2 | **2.12 Attendance dates:**<br>• Section renamed and split into two subsections: "Attendance dates outside enrollment period" and "Attendance dates outside 1-week boundaries".<br>• Added validation to validate that attendance can be submitted in a maximum length of 1 week and only within a single Sunday-through-Saturday boundary. | • previously named 2.12 Attendance dates outside enrollment period<br>• This rule has been stated since the inception of SAIS, but is being enforcd beginning with FY2003-04 | Buell Brown, MIS QA, Janice McGoldrick, MIS Software Devt Mgr, Ticket 15171 |
| 2.2 | **3.1 Student Counts Needs Rules**, section **17. Age:** Rule 8, error message 44335 says "Student under 33 months cannot receive SPED services." | previously stated "Student under 3 cannot receive SPED services | Peggy Staples, ESS; Rose Whelihan, SF; ticket 14267 |

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| 2.2 | **3.1 Student Counts Needs Rules**, section **5. District of Residence (DOR):**<br>• Rule 5.3 Valid types for DOR are Public, Compact, State Institute, Charter, Unorganized.<br>• Rule 5.11 Removed rule stating that DOR cannot be Unorganized territory; removed message 44308.<br>• Rule 6.6 Added new sub-rule (3) showing that only DOR of Unorganized or Public may be CEC-A.<br>• Rule 8 Removed rule stating that Unorganized territories are not valid DORs.<br>• Expanded previous note in Rule 5 (DOR) to include exception for service code: "NOTE: Grade and Service Code validations do not have to be performed on the DOR if the DOR is ELEM NOT IN HS or COMPACT or STATE INSTITUTION." Added expanded note to Rule 11 (SPED Service Code) and Rule 17 Age / Grade. | • previously did not include Unorganized<br>• previously failed DORs of unorganized<br>• previously did not validate specifically for CEC-A's.<br>• Unorganized territories used to be considered invalid DORs<br>• Previous message did not state that service code validations do not have to be done for the listed entity types; previous message not posted in all relevant places in the document | • all bullets except last: Juan Reza, MIS Developer; Mardy Cruz, MIS QA, ticket 14040 5/29/2003<br>• Ginny Nordstrom, MIS Developer, Janice McGoldrick, MIS Software Devt Mgr, 5/28/2003 ticket 12595 |

5/1/2003 Version 2.1 published.

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| 2.1 | **Entire document:** Split Integrity processing into discrete failure points for ADM, SPED, Year End Enrollment, etc, . For each ERROR condition, noted which failure point that ERROR should trigger. Added new section 1.2 How Integrity Works to explain the process. | Integrity had a single failure point; i.e., an Integrity problem with a Year End Status would cause the student to fail Integrity for all SAIS processes (ADM, etc.). | Janice McGoldrick, MIS PMO; Venkat Maddipatla, Developer; Juan Reza, Developer |
| 2.1 | **1.3 District and School Types:** Changed section number (used to be 1.2). Updated list of DOA Exceptions for FY 2003 (these identify which Accommodation entities may be listed as a DOR. | list had not been updated for FY 2003 exceptions. | Bruce Schmitz, School Finance; Jim Whelan, MIS QA; Janice McGoldrick, MIS PMO; ticket 11453 1/9/2003 |
| 2.1 | **2.2 Ensure full coverage for required elements:** Fixed wording: If Attendance method is being used to report instructional time received, and a period of time exists for which there is no attendance record reported, SAIS will assume that the student's attendance during that period was zero. | previously said SAIS "may" assume zero | Janice McGoldrick, MIS PMO |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; General rules for districts in SAIS:** Changed error message 9017 to 43133. | previous message number was shown in error | Janice McGoldrick, MIS PMO |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; District of Residence (DOR), rule 3 DOR dates cannot have a gap:** Expanded error message 43104 to say "No DOR for dates {start} to {end} OR DOR assignment is missing for all or part of this membership." | previous message only said no DOR existed for the gap dates | Janice McGoldrick, MIS PMO |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; Rule 18.8:** Added note to advise that DOA Exceptions change from one fiscal year to the next, and sometimes there might not be any DOA Exceptions in effect. | did not explicitly state this | Janice McGoldrick, MIS PMO |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; Rule 18.10 DOR State Institute exceptions, rule 18.10.5:** New exception for student with physical DOR of Ft. Grant, funded DOR of Ft. Thomas, DOA Dan Hinton Accommodation (tuitioned here). | situation did not previously exist | Mario Salinas, School Finance; Mardy Cruz, MIS QA; Janice McGoldrick, MIS PMO; ticket 10502, 12/2/2002 |

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| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; Rule 18.13.a:** Expanded error message 43127 to "School is not approved for this grade OR the DOA (district) is not approved for this grade." *The message text depends on the error.* | previously only advised if school was not approved for the grade | Janice McGoldrick, MIS PMO |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; Rule 18.13.f:** Expanded error message to "This Private / Special Education school is not approved for the grade submitted." *The message text depends on the error.* | previously did not state the type of school. | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; section DOA / DOR / CEC combination:** rules 19.1, 19.2, and new rule: Charters (DOA or DOR) may not have CEC's. Changed wording of message 43123. | previously allowed Charters to have CEC's. | Rose Whelihan, School Finance; Mardy Cruz, MIS QA; Janice McGoldrick, MIS PMO; ticket 10688, 2/24/2003 |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; section DOA / DOR / CEC combination:** rules 19.7, 19.8, 19.9: Removed "Charter" from further validations for CEC's. Removed exceptions. Changed message from 43123 to 43138, When CEC, DOA or DOR must be public but not both. | previously allowed Public and Charters to have CEC's, hence Charters were included in the validations. | Rose Whelihan, School Finance; Mardy Cruz, MIS QA; Janice McGoldrick, MIS PMO; ticket 10688, 2/24/2003 |
| 2.1 | **2.3 Synchronize DOA, DOR, Tuition Payer, and Special Enrollment; DOA / DOR / Open Enrollment combination:** Added new edit that if Tuition Payer is Open Enrollment, then DOA and DOR cannot be the same. Added error message 43137. | new section, edit, and message did not exist | Charity Torrez, Technical Writer (Footprints ticket 10152) |
| 2.1 | **2.5 Synchronize Activity Codes: Rule 4:** Added the rule that a lag period is allowed before SAIS will perform the validation that every student must end the school year with a year end status OR a withdrawal. Clarified that this withdrawal cannot be followed by a readmission | previously implied that this edit would be performed as soon as the school year ended | Karen Jones, TUSD, ticket 14581. |
| 2.1 | **2.5 Synchronize Activity Codes: Rule 5:** Added a note that for a student having a summer withdrawal and a year end status, the two events can take place at different schools. | previous wording implied that the two events had to have taken place at the same school | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **2.7 Validate Grade Exit Status:** When checking the LAST GradeMembership, if there's no grade for the membership, change message to "Exit Status and/or Grade Exit Date is missing", change error 43404 to 43402. | previous message said the grade was exited but no subsequent grade (illogical) | Venkat Maddipatla, software developer 11/14/2002 |
| 2.1 | **2.7 Validate Grade Exit Status:** When checking the LAST GradeMembership, if there's an exit status BUT there's no student withdrawal, change message to Grade assignment is missing for all or part of this membership, change error 43404 to 43401. | previous message said the grade was exited but no subsequent grade (illogical) | Janice McGoldrick, MIS PMO; Venkat Maddipatla, software developer; 2/9/2003 ticket 7968 |
| 2.1 | **2.7 Validate Grade Exit Status:** When the grade exit reason doesn't jive with the movement between grades, change error to 43412 to 43405. | previous message said @@ | Janice McGoldrick, MIS PMO |
| 2.1 | **2.7 Validate Grade Exit Status:** Changed message from @@ to 43407. | previous message number not listed in the document | Juan Reza, software developer 3/28/2003 |
| 2.1 | **2.8 Synchronize Grade/Age:** Allow that a student meeting the kindergarden age requirements and receiving SPED Group B services may be graded as UE. The impact is that this child will generate full funding rather than half, as statute requires for all kindergarden students. Added full explanation and a sample senario of this new interpretation of 15-901.A.2.b.i. | previously, all kindergarden-age students could only generate funding (at the half-funding rate) if they were graded as KG | Vicki Salazar, SF; Mario Salinas, SF; Steve Mishlove, ESS; Janice McGoldrick, MIS PMO; ticket 12511, 3/4/2003; based on input from TUSD and Creighton. |

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| 2.1 | **2.9 Synchronize FTE & Share Rule 4:** Added a note that rules governing aggregation can be found in the Aggregating Student Detail document. | document for internal ADE use in designing the aggregation component was not previously mentioned | Janice McGoldrick, MIS PMO |
| 2.1 | **2.9 Synchronize FTE & Share,** section **Student Membership FTE:** changed message 443701 to 244102. | invalid error message number assigned to informational message. | Janice McGoldrick, MIS PMO |
| 2.1 | **2.9 Synchronize FTE & Share:** Removed section **School Membership Share**, because this element is not used in SAIS any longer. | previously was used to calculate ADM when LEAs shared a concurrently enrolled student, but data from LEAs shows that this feature is almost never used; previous text still exists, but has been marked as hidden | Randy Morter, software developer, 10/24/2002 |
| 2.1 | **2.9 Synchronize FTE & Share,** sections **Absences for a single membership** and **2.12 Attendance dates outside enrollment period:** changed message 444101 to 444103 in document to synchronize with system. | document did not match system operation. | Janice McGoldrick, MIS PMO |
| 2.1 | **2.9 Synchronize FTE & Share,** sections **Absences for a single membership** and **Absences across multiple concurrent memberships for high school only:** New validation: Generate an error if total absence amount on the first day of membership OR on the day of withdrawal is equal to or greater than the FTE amount (statutorily, a student must be in at least partial attendance on each of those days). | validation did not exist | Janice McGoldrick, MIS PMO |
| 2.1 | **2.10 Synchronize Absence Amounts and FTE values**, section **Absences for a Single Membership:** Changed message from @@ to 44103. | previous message number not listed in the document | Juan Reza, software developer 3/28/2003 |
| 2.1 | **2.10 Synchronize Absence Amounts and FTE values**, section **Absences across multiple concurrent memberships for high school only:** Changed message from @@ to 44103. | previous message number not listed in the document | Juan Reza, software developer 3/28/2003 |
| 2.1 | **2.11 Absence dates outside enrollment period:** Restated description to say that absence would not count into the funding calculation. Corrected solution to fix the problem to say fix the absence OR the withdrawal date. | previously stated that the entire membership would be omitted from funding; solution said to fix the absence values OR to fix FTE/Share values. | Helen Hugo, SAIS QA/Test Manager 6/26/2002 |
| 2.1 | **2.12 Attendance dates outside enrollment period:** Added note: Where a SPED Need or Service Participation is relevant to the attendance method of reporting (homebound and preschool, respectively), the SPED Start Date should have no impact on acceptance of the attendance transaction. | note did not previously exist | Janice McGoldrick, MIS PMO; ticket 12267 |
| 2.1 | **2.13 Display candidates for withdrawal for excessive absence:** Expanded validation to check that student was completely absent for 10 consecutive days. | previously only checked for days; a student could have had a partial attendance during that time | Janice McGoldrick, MIS PMO |
| 2.1 | **2.13 Display candidates for withdrawal for excessive absence:** Error messages changed: 444003 to 444001; 444004 to 444002, 444005 to 444003. | assigned incorrectly | Janice McGoldrick, MIS PMO |
| 2.1 | **2.15 Attendance candidates:** Removed validation to ensure that attendance is submitted only for PS, high school, or elementary with Homebound need. | this validation is already ensured by the transaction component. | Venkat Maddipatla, software developer 11/14/2002 |
| 2.1 | **2.15 Attendance candidates:** Changed message from @@ to 44201. | previous message number not listed in the document | Juan Reza, software developer 3/28/2003 |

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| 2.1 | **2.16 Gaps in Attendance for a Homebound Student:** New section. Issue warning when finding a period without reported attendance when there's an active homebound need. | validation did not exist | Buell Brown, MIS QA, Janice McGoldrick, MIS PMO, ticket 10799 2/24/2003 |
| 2.1 | **3 Integrity Checking Processes: Special Education Needs:** Added notes to show the SPED state funding reporting period and the SPED Census (federal) reporting date. | dates were not listed previously | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **3.1 Student Counts Needs Rules**, section **5. District of Residence (DOR):** Added a note that grade validations do not have to be performed on the DOR if the DOR is old type 03, 23, or 76. | note did not previously exist, and some of the validations were being performed erroneously | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **3.1 Student Counts Needs Rules**, section **5. District of Residence (DOR), Rule 6:** removed the note "this used to be represented by an "X" in switch-1 for this type of district on the School Names file". | was relevant to a system that has been out of use since mid-1999 | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **3.1 Student Counts Needs Rules**, section **5. District of Residence (DOR)**, rule **16**: message 43128 changed to 44322, text "This school is not approved to provide Special Education services for this grade." | wording of message was confusing | Janice McGoldrick, MIS PMO, ticket 11536, 3/11/2003 |
| 2.1 | **3.1 Student Counts Needs Rules**, section **6. CEC/DOA/DOR,** rule **2.** CEC's may not have SPED Service Codes F, V, or J. Message 44311 changed to reflect this. | previously also could not have service code of S. | Bruce Schmidt, SF; Peggy Staples, ESS; Janice McGoldrick, MIS PMO; ticket 10879 2/24/2003 |
| 2.1 | **3.1 Student Counts Needs Rules**, New rule **Valid Open Enrollment characteristics:** Open Enrollment may not have SPED Service Code of F. | validation did not exist | MIS/SF Team, Peggy Staples, ESS; Janice McGoldrick, MIS Software Development Mgr ticket 10879 |
| 2.1 | **3.1 Student Counts Needs Rules**, rule **9:** message 9017 changed to 43133. | global message number assigned incorrectly; integrity number is more appropriate | Venkat Maddipatla, SAIS developer; Janice McGoldrick, MIS PMO |
| 2.1 | **3.1 Student Counts Needs Rules**, rule 10, Exception item 7**:** message text changed to "This school is not approved to provide Special Education services for this grade.". | previously said school was not approved to teach this grade. | Janice McGoldrick, MIS Software Development Mgr |
| 2.1 | **3.1 Student Counts Needs Rules**, **rule 11: SPED Service Code:**, item 1. Public and Charter schools (DOAs) may have self contained SPED services. | Previously allowed for Public schools only | Peggy Staples, ESS; Jim Whelan, MIS QA; Janice McGoldrick MIS PMO; ticket 12012 2/3/2003 |
| 2.1 | **3.1 Student Counts Needs Rules**, section **11 SPED Service Code**, rule **10:** Service code "I", may be used for any SPED Need, provided that at least one of them is A, MD, OI, or SMR. | previously, service code "I" was only eligible for SPED Needs A, MD, OI, or SMR (No other Needs could use code "I".). | Peggy Staples, ESS; Mike Lyczywek, SAIS developer, Janice McGoldrick MIS PMO; ticket 11964 2/14/2003 |
| 2.1 | **3.1 Student Counts Needs Rules**, section **11 SPED Service Code**, new rule**:** Service code "R" may only be used for preschool. | new service code did not exist | Peggy Staples, ESS; Janice McGoldrick MIS PMO |
| 2.1 | **3.1 Student Counts Needs Rules**, section **12 Valid Need Code characteristics:** message 44332 changed to Invalid grade for preschool-only Need Code.. | previously said "Invalid grade for preschool-only Service Code" | Janice McGoldrick MIS PMO |
| 2.1 | **3.1 Student Counts Needs Rules**, section **12 Valid Need Code characteristics:** new validations: (1) compatibility of MD with other SPED needs, (2) compatibility of MDSSI with other SPED needs. | validations did not exist | Peggy Staples, ESS; Janice McGoldrick MIS PMO; ticket 12632 2/3/2003 (started in ticket 11964) |

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| 2.1 | **3.1 Student Counts Needs Rules**, section **17. Age:** Added note that Birth Date / SPED Grade must be synchronized for SPED just like they are for Membership. Expanded all birthdate validations to more explicitly refer to the statutes identified in the Membership transactions specification document. | notes did not previously exist | Janice McGoldrick, MIS PMO |
| 2.1 | **3.2.1 Multiple concurrent DORs:** Rule **3**. Clarified that the validation is being done on SPED DORs. Changed message 243103 to 244303. | previously simply stated that it was validating DORs | Venkat Maddipatla 11/5/2002; Janice McGoldrick, MIS PMO |
| 2.1 | **3.3 Overlapping Programs for a SPED Need:** Message 44341 replaced with error message 44349 There is more than one program/service specified at a single point in time for this need. | previous message erroneously referred to SPED DOR overlaps. | Venkat Maddipatla; Janice McGoldrick, MIS PMO |
| 2.1 | **3.4 Multiple grades or services:** Added message 244305 and 244307. | messages did not exist | Venkat Maddipatla 11/5/2002; Janice McGoldrick, MIS PMO ticket 9748 |
| 2.1 | **4.1 Overlapping Programs for a Language Need:** Warning message 244304 replaced with error message 44348. | Earlier error message was incorrectly replaced with a warning. | Mike Lyczywek, developer; Janice McGoldrick, MIS PMO 4/24/2003; ticket 13525 |
| 2.1 | **4.2 Missing membership for a Language Program:** Issue an error if a language program participation is reported but no Grade Membership is found in SAIS for the fiscal year. | validation did not exist | Richard Valdivia, Nancy Konitzer, & Jeff Stowe, Academic Support Division; Janice McGoldrick, MIS PMO; ticket 12468 |
| 2.1 | **Appendix B: Relevant Arizona Statutes:** Expanded reference list of relevant statutes for ADM funding, SPED, and SAIS. | these statutes were not previously listed in the Appendix | Janice McGoldrick, MIS PMO |

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| 2.0 | **Updated About this Document Section** | synchronize with other documents | Janice McGoldrick, MIS Project Management Office |
| 2.0 | **2.3 (18.2):** Removed valid DOR types of Head Start, Co-Op/IGA/Other. | previously were valid DOR types | Charity Torrez, Technical Writer, 9/9/2002 |
| 2.0 | **2.3 (18.3.a-f) Replaced error message numbers to synchronize with coded numbers** | replaced numbers –43402 through -43407 with –43127 through –43131 | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **2.3 (18.7a DOA/DOR Combination For Juvenile or Public SPED Institution Districts):** re-named and re-numbered sections but not content | was section 18.7 | Charity Torrez, Technical Writer, Venkat Maddipatla, SAIS Developer |
| 2.0 | **2.3 (18.7.b-d):** Added new edits: If DOR is Juvenile, DOA must be the same as the DOR; if DOA is Public SPED Institution, DOR must the same as the DOA; if DOR is Public SPED Institution, DOA must be the same as the DOR. | edits did not exist; new messages 43134, 43135, 43136 | Charity Torrez, Technical Writer; Venkat Maddipatla, 9/9/2002 |
| 2.0 | **2.4 (1,2,3) Added warning message numbers** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **2.5 (4.b) Added error message number** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **2.6 (1-3) Replaced error message numbers to synchronize with coded numbers** | replaced numbers –43408 through -43410 with –43401 through –43403 | Charity Torrez, Technical Writer |

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| 2.0 | **2.7 Replaced error message numbers to synchronize with coded numbers** | Replaced "@@" with –43403 and changed message from "Grade transfer withdrawn in error. SAIS must fix." | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **2.7 Replaced error message numbers to synchronize with coded numbers** | replaced number –43411 with –43404; also replaced "@@" with –43404; slightly changed error message | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **2.7 Replaced error message numbers to synchronize with coded numbers** | replaced number –43412 with -43405 | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **2.14 Added error message number** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **3.1 Student Counts Needs Rules.** 5.3 DOR valid types: added CHARTER. | previously only PUBLIC, COMPACT, STATE INSTITUTE | Marcie Celaya, School Finance Director; by Janice McGoldrick, MIS Project Management Office |
| 2.0 | **3.1 Added error message numbers throughout section** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **3.12.11 Added failure message number -44327** | holder was marked "@@" | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **3.2.1 Added warning message numbers** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **3.2.2 Added error message numbers** | holders were marked "@@" | Charity Torrez, Technical Writer |
| 2.0 | **3.3 Overlapping Services for a Need:** added new validation | did not exist | Venkat Maddipatla, SAIS Developer |
| 2.0 | **3.3 Added failure message number –44341** | holder was marked "@@" | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **3.4 Multiple grades or services:** added new validation | did not exist | Venkat Maddipatla, SAIS Developer |
| 2.0 | **3.4 Added failure message number –44341** | holder was marked "@@" | Charity Torrez, Technical Writer; John Booth, SAIS Developer |
| 2.0 | **4.1 Overlapping Programs for a Language Need:** added new validation (same as for SPED needs). | did not exist | Juan Reza, SAIS Developer |

8/3/2002 Version 1.1 published.

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| 1.1 | **3.1 Student Counts Needs Rules; rule 10.** (1) Reorganized rule so that exceptions and errors are considered in the correct sequence. (2) Deleted validation and exception sub-item 8. **3.1 Student Counts Needs Rules; rule 5, sub-item 17.** Added exception for DOR that may teach grades not usually allowed by ADE, from (2) above. | (1) Exception and error conditions were placed such that the validation rules were unclear. (2) The validation was already covered in rule 5, sub-items 16 and 17. The exception was moved to sub-item 17. | Larry Lindain, SAIS Developer, Janice McGoldrick, SAIS Requirements Lead |

7/12/2001 **Version 1.0** published.

5/8/2001 **Third Draft** version published

4/30/2001 **Second Draft** version published
9/26/2000 **First Draft** version published

# About This Document

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## CONTACTS

For comments, corrections, or other information about this document, contact the ADE MIS Department at ADEsupport@ade.az.gov. Please provide the following information:

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    - your name
    - your district name and CTD, or school name and CTDS, or your company name
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## DOCUMENT REFERENCES

The SAIS system is described in detail on ADE's main SAIS website, at http://www.ade.state.az.us/sais/.

Other related information, including those items referred to in this document, can be found at another ADE website at http://www.ade.state.az.us/sais/saisdbdocs.asp.

### DOCUMENT DISTRIBUTION / POSTINGS

Notification of the updated to this document will be made to the following:

- all Student Management System vendors participating in the SAIS project
- all Arizona school district MIS contacts
- all RTCs

The updated document will be posted on ADE's SAIS Design/Requirements Documents website: (http://www.ade.state.az.us/sais/saisdbdocs.asp).

### DOCUMENT FILENAME

This document is stored at ADE with the filename Integrity Checking Processes.doc.

# 1 Reference Information

The following information is used throughout this Integrity Processing document.

## 1.1 SAIS Processing at a Glance

Prior to SAIS, ADE captured data on an aggregated level only. (The sole exception to this was the Special Education data, which was submitted on an individual student and service basis.) The portion of the system handling aggregated data is called Student Counts.

With the implementation of SAIS, ADE collects more elemental information having to do with each individual student. The portion of the system handling this data is called Student Detail. From a processing point of view, the following occurs.

- student-level data is submitted to ADE by districts
- the student-level data is loaded into the SAIS Student Database using the Student Detail system
- periodically the Integrity Checking Process is run to verify the submitted data in relation to all other data submitted; Integrity Checking also performs validations that have traditionally been applied to the Student Counts process
- the student-level data is aggregated into the pre-SAIS groupings by the Aggregation Process
- funding is calculated and reporting is created with the Student Counts system

## 1.2 How Integrity works

Integrity validates the entire collection of data submitted to SAIS for each single student. Illogic conditions amidst the data will cause the data for that student to be marked as an Integrity failure. While the Integrity process views all data for a student at one time, there are several distinct failure points: each illogic condition will fail only for the business processes to which that illogical data is relevant. The business processes that Integrity generates failures for are:

- ADM 40th day
- ADM 100th day
- ADM 200th day (for year round schools) *planned for FY2006*
- ADM EOY (covers days 101+ for regular schools, for days 201+ for year round schools)
- SPED
- October Enrollment
- Language: Group B
- Year End Enrollment
- Graduation Rate (failures to be identified in a future document update)
- Support Programs
- Support Programs: Free/Reduced Special Handling
- Test Labels

Each ERROR condition in this document identifies the business process(es) for which the data fails Integrity. Documentation of an Integrity failure takes the following form.

Example:

19.6. DOR **UNORGANIZED** is always CEC-A.

**ERROR** message -43126: Unorganized DOR must have a CEC-A.
**Integrity failure:**

- If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.
- If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.
- If date > 100th: ADM 200th, ADM EOY.

## 1.3 DISTRICT AND SCHOOL TYPES

Before SAIS, in the Student Counts-only pre-SAIS system, the grouping of districts and schools into types was imbedded in the number assigned to the "T" of the district number (CTD) and the school number (CTDS, or CTD + S). In old terminology, the following example shows how ADE classified a district or school based on the values of its CTD's component parts:

C (county) = 20 = this is not an Arizona county; it is out of state
T (type) = 05 = this is a high school or district
D (district sequence number) = 55 = identifies the individual school or district
S (school) = 000 = this is a district office (anything other than 000 means this is a school; therefore, district identifiers are referred to as a CTD, not a CTDS)

However, the state of Arizona continues to grow quickly and legislation continually changes in attempts to improve the educational system. This means that the makeup of particular groupings, and particularly the district types included in a group, can and do change from fiscal year to fiscal year. Therefore, beginning with SAIS documentation, districts and schools are referred to by their type names (e.g., **PUBLIC**, **VOC/TECH**, **CHARTER**) rather than by their type numbers.

This section contains a cross-reference between the names of these types and the numbering system used by ADE now and prior to implementation of SAIS. This makes it easier to ensure that when the makeup of a district type changes, only this one table must be updated; synchronization among the effected rules is not necessary.

> *Note: The primary source of the following table is this **Integrity Checking Processes** document. It is copied to the **Aggregating Student Details** and the **Student Counts System** documents. When changes are made to this table, those documents will be changed as well.*

> ***PUBLIC** = district types 01-05, and includes district-sponsored charter schools*
> ***CHARTER** = district types 86-89*
> ***ACCOMMODATION** = district type 01*
> ***UNIFIED** = district type 02*
> ***ELEM NOT IN HS** = district type 03*
> ***ELEMENTARY** = district type 04*
> ***ELEMENTARY GRADE** = grades KG, PS, 01-08, UE*
> ***HIGH SCHOOL** = district type 05*
> ***SECONDARY GRADE** = grades 09-12, US*
> ***VOC/TECH** = vocational / technological = district type 08*
> ***VOC/TECH PARTICIPATING** = any district that participates in the **VOC/TECH** system; on the DPS6, this was signified by the value in the School Names file's "switch-4"*
> ***SKILL CENTER** = special needs / skill center = district type 09*
> ***JUVENILE** = juvenile corrections facility = district type 10*
> ***PUBLIC SPED INSTITUTION** = public special education institution = district type 12*
> ***PRIVATE/SPED** = private school / special education = district type 21*
> ***COMPACT** = contiguous reservations that cross state lines = district type 23*
> ***HEAD START** = district type 26*
> ***CO-OP/IGA/OTHER** = co-ops, intergovernmental agreement, and instructional: non-public schools = district types 41, 42, and 43, respectively*
> ***STATE INSTITUTE** = state institute & stations = district type 76*
> ***UNORGANIZED** = unorganized territory = a CTD where C = an Arizona county (codes 01-15), T = **ELEMENTARY** or **HIGH SCHOOL**, and D = 00*

***CEC-A (Certificate of Educational Convenience type A)*** = *precluded by distance; from unorganized district*

***CEC-B (Certificate of Educational Convenience type B)*** = *foster; DOJC; institution; rehab; residential DES or DHS*

***ACCOMMODATION/PROGRAM*** = *accommodation districts that are also county programs;* ***varies by fiscal year***

*Fiscal year 1999 = 050199, 090199, 110199, 140199*

*Fiscal year 2000 = 050199, 060199, 110199*

***D-LEVEL-ACCOMMODATION*** = *an accommodation district as signified by "00" in the "D" portion of the CTD.*

***DOA EXCEPTION*** = *DOA's allowed to have a DOR;* ***varies by fiscal year***

*Fiscal year 1999 = 070199, 070403, and* ***ACCOMMODATION/PROGRAM***

*Fiscal year 2000 through FY 2003 = 070403, and* ***ACCOMMODATION/PROGRAM***

*Fiscal year 2003: (the following lists Entity ID – CTDS - Entity Name*

*4167 – 020100000 – Ft. Huachuca Accom.Dist.*

*4226 – 060100000 – Greenlee Alt.Sch.Dist.*

*4234 – 070199000 – Maricopa Cnty.Reg.Dist.*

*4386 – 090199000 – Rainbow Accom.Sch.*

*4401 – 100100000 – Pima Accom.Dist.*

*4435 – 110100000 – Mary C O'Brien Accom.Dist.*

*4498 – 140199000 – Yuma Cnty.Accom.Dist.*

*10386 – 030199000 – Coconino Cnty.Reg.Accom.Dist.*

*79379 – 130199000 – Yavapai Accom.Sch.Dist.*

***OUT OF STATE*** = *county 20*

## 1.4 LEA CALENDARS

Administration and maintenance of LEA calendars is performed using an Enterprise application which is available outside of SAIS. The application provides a window of time at the beginning of each academic year during which an LEA can define its educational calendar. The calendar defined in the application determines 40th Day, 100th Day, and additional critical dates used to calculate funding and other measurements. Once the calendar application window is closed to LEAs, School Finance retains exclusive rights to make changes to LEA calendars.

When an LEA calendar is changed, Integrity will be forced against the student records for the LEA. This rule will be applied whether the change is to the district calendar inherited by the LEA, or the change is to a track "owned" by the LEA. The following business process Integrity checks will be performed:

TAPBI schools will not be required to submit a calendar. Thus, TAPBI student records (membership or needs) will not be integrity checked against a school calendar. TAPBI absence records will be ignored by the SAIS integrity checking process. (4/28/05; TC)

- ADM 40th day
- ADM 100th day
- ADM 200th day ( for year r ound schools) *planned for FY2006*
- ADM EOY (covers days 101+ for regular s chools, f or da ys 201+ f or year round schools)
- SPED
- October Enrollment
- Language: Group B
- Year End Enrollment
- Graduation Rate
- Support Programs
- Support P rograms: F ree/Reduced Special Handling
- Test Labels

# 2 Integrity Checking Processes: Membership

This chapter describes validations that are performed periodically offline from the transaction processing function. These validations are integral to ensure the logical integrity of the SAIS student data as a whole.

Integrity Checking for Membership will validate that all rules connecting each student's personal and membership characteristics have been met. To avoid these rules becoming out of sync across different documents, they are listed in the **Student Counts System Requirements** document. The rules listed in this document are for illustrative purposes.

> *Note: SAIS issues a message for every condition found that does not comply with the rules identified in this section. Only when these messages are NOT previously identified in the detailed transaction requirements documents are they included here.*

> ***Note: If any discrepancy identified in these validations as an ERROR is not corrected, no funding or statistical value will be generated for that student at that school during that school year.*** *WARNINGs and INFORMATIONal messages will not withhold the student's data from funding or statistical calculations.*

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-AGG-MEM-001 | **Create Membership Intervals**<br>All elements pertaining to that student's membership will be sorted by effective date. This is done by sorting the disparate rows in the various entities. Whenever a funding-related element changes (FTE, District of Residence, Grade, etc.), the old Membership Interval ends and a new one begins. In this way, date gaps and overlaps can easily be identified and element value synchronizations can be accomplished | | N | | |
| SD-INT-MEM-001 | **Ensure Full Coverage for Required Elements**<br>Any student with a membership not having a value for each one of the required elements for every single day of that membership, will not contribute toward ADM or any funding calculations for that school. The elements are:<br>• Tuition Payer<br>• Student FTE<br>• District of Residence<br>• Grade<br>• Student Attendance, when it is being captured | | N | | |
| SC-INT-MEM-001 | **District**<br>CTDs 000400 and 000500 (State Department of Education, Elementary and High School, respectively) are not valid CTDs for any use in SAIS. (18.3)<br>*Integrity Failure(s)*:<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th:ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th:ADM 200th, ADM EOY | **ERROR** message - 43133: | N | | |
| SC-INT-MEM-002 | **District of Attendance**<br>Valid DOA types: PUBLIC (but not UNORGANIZED), VOC/TECH, SKILL CENTER, JUVENILE, PUBLIC SPED INSTITUTION, PRIVATE/SPED, HEAD START, CO-OP/IGA/OTHER, CHARTER (18.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th:ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY.<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43101 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-MEM-002 | **District of Residence (DOR)**<br>Each DOR must fall within a membership; therefore, the DOR end date must be equal to or less than the membership end date.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43102 | N | | |
| SD-INT-MEM-003 | **DOR Dates**<br>DOR dates cannot overlap.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43103 | N | | |
| SD-INT-MEM-004 | **DOR Date Gaps**<br>DOR dates cannot have a gap.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43104 | N | | |
| SC-INT-MEM-003 | **DOR**<br>Valid DOR types: PUBLIC, VOC/TECH, COMPACT, STATE INSTITUTE, CHARTER, JUVENILE, PUBLIC SPED INSTITUTION (18.2).<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43105 | N | | |
| SC-INT-MEM-004 | **DOA / DOR Combination(s)**<br>If DOA is SKILL CENTER or PRIVATE/SPED, its DOR must be PUBLIC or CHARTER (18.6).<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43106 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-005.1 | **DOA / DOR Combination(s)**<br>If DOA is **JUVENILE**, DOR must be the same as the DOA (18.7)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43107 | N | | |
| SC-INT-MEM-005.2 | **DOA / DOR Combination(s)**<br>If DOR is JUVENILE, DOA must be the same as the DOR (18.7)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message – 43134 | N | | |
| SC-INT-MEM-005.3 | **DOA / DOR Combination(s)**<br>If DOA is Public **SPED Institution** district, DOA must be the same as the DOR (18.7)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43135 | N | | |
| SC-INT-MEM-005.4 | **DOA / DOR Combination(s)**<br>If DOR is Public **SPED Institution** district, DOR must be the same as the DOA (18.7).<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43136 | N | | |
| SC-INT-MEM-006 | **DOA Exception**<br>If DOA is a DOA EXCEPTION its DOR must be PUBLIC or CHARTER. Note that DOA EXCEPTIONs change from one fiscal year to the next, and in some fiscal years there might not be any at all (18.8).<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43108 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-007.1 | **DOR COMPACT Exceptions**<br>If DOR = 012327 (Red Mesa/IC Utah), DOA must be 010227 (Red Mesa Unified District) (18.9.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43109 | N | | |
| SC-INT-MEM-007.2 | **DOR COMPACT Exceptions**<br>If DOR = 092327 (Kayenta/IC Utah), DOA must be 090227 (Kayenta Unified District) (18.9.2)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43110 | N | | |
| SC-INT-MEM-008.1 | **DOR State Institute Exceptions**<br>If DOR = 027613 (Ft. Grant/Willcox Unified), DOA must be 020213 (Willcox Unified District) (18.10.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43111 | N | | |
| SC-INT-MEM-008.2 | **DOR State Institute Exceptions**<br>If DOR = 057601 (Ft. Grant/Safford Unified), DOA must be 050201 (Safford Unified District) (18.10.2)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43112 | N | | |
| SC-INT-MEM-008.3 | **DOR State Institute Exceptions**<br>If DOR = 057605 (Ft. Grant / Solomonville), DOA must be 050305 (Solomon Elementary District) (18.10.3)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43113 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-008.4 | **DOR State Institute Exceptions**<br>If DOR = 057616 (Ft. Grant/Bonita), DOA must be 050316 (Bonita Elementary District) (18.10.4)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43114 | N | | |
| SC-INT-MEM-008.5 | **DOR State Institute Exceptions**<br>If DOR = 057607 (Ft. Grant/Ft. Thomas), school of attendance CTDS must be 050199001 (Dan Hinton Accommodation School) (18.10.5)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message -@@: For DOR 057607, school of attendance CTDS must be 050199001 | N | | |
| SC-INT-MEM-009 | **OUT OF STATE: County 20**<br>DOA or DOR may be OUT OF STATE (18.11) | | N | | |
| SC-INT-MEM-009.1 | **OUT OF STATE: County 20**<br>Of DOA and DOR, only one may be OUT OF STATE (18.11.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43115 | N | | |
| SC-INT-MEM-009.2 | **OUT OF STATE: County 20**<br>If DOA is OUT OF STATE, its DOR must be PUBLIC or CHARTER (18.11.2)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43116 | N | | |
| SC-INT-MEM-010.1 | **ACCOMMODATION**<br>If DOR is ACCOMMODATION, DOR must be allowed to be listed as a district of residence (18.12.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43117 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-010.2 | **ACCOMMODATION**<br>DOR is ACCOMMODATION and DOA is ACCOMMODATION, DOA must have the permission allowing it to be listed as a district of residence. Exceptions: DOA is a DOA EXCEPTION. (18.12)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43118 | N | | |
| SC-INT-MEM-011 | **District / Grade Combination**<br>DOA and DOR must be approved for the grade submitted. Exceptions to these rules will be found in the Student Counts Exceptions table, which changes from year to year. (18.13) | | N | | |
| SC-INT-MEM-011.1 | **District / Grade Combination**<br>For district sponsored charter schools, valid grades are based on the approved grades for that individual school, not on the sponsoring district's type (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message – 43127 | N | | |
| SC-INT-MEM-011.2 | **District / Grade Combination**<br>If DOA is ELEMENTARY or ELEM NOT IN HS the grade must be ELEMENTARY GRADE unless the district has a type/grade exception (18.13).<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message – 43128 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-011.2.1 | **District/Grade Combination Exception**<br>As of fiscal year 1999: 150404700 (Quartzsite Academy). (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message – 43128 | N | | |
| SC-INT-MEM-011.2.2 | **District/Grade Combination Exception**<br>If DOA is 070403 (Tempe Elementary) and the grade is SECONDARY, then DOR must be 070513 (Tempe Union HS). (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message – 43128 | N | | |
| SC-INT-MEM-011.3 | **District / Grade Combination**<br>If DOR is ELEMENTARY or ELEM NOT IN HS the grade must be ELEMENTARY GRADE unless the district has a type/grade exception. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message –- 43129 | N | | |
| SC-INT-MEM-011.4 | **District / Grade Combination**<br>If DOA is HIGH SCHOOL the grade must be HIGH SCHOOL GRADE unless the district has a type/grade exception. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message –- 43130 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-MEM-011.5 | **District / Grade Combination**<br>If DOR is HIGH SCHOOL (type 05) the grade must be HIGH SCHOOL GRADE unless the district has a type/grade exception. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message –- 43131 | N | | |
| SC-INT-MEM-011.6 | **District / Grade Combination**<br>If DOA is PRIVATE/SPED, that district must be approved for the grade submitted. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message – 43127 | N | | |
| SC-INT-MEM-012.1 | **DOA / DOR / CEC Combination**<br>Valid DOA types for CEC: PUBLIC, VOC/TECH, PRIVATE/SPED. (19.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43119 | N | | |
| SC-INT-MEM-012.2 | **DOA / DOR / CEC Combination**<br>Valid DOR types for CEC: PUBLIC (19.2)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43123 | N | | |
| SC-INT-MEM-012.3 | **DOA / DOR / CEC Combination**<br>For CEC of any type (element Special Enrollment Code), neither DOA nor DOR may be CHARTER (19.3)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43123 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SC-INT-MEM-011.5 | **District / Grade Combination**<br>If DOR is HIGH SCHOOL (type 05) the grade must be HIGH SCHOOL GRADE unless the district has a type/grade exception. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message –- 43131 | N | | |
| SC-INT-MEM-011.6 | **District / Grade Combination**<br>If DOA is PRIVATE/SPED, that district must be approved for the grade submitted. (18.13)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message – 43127 | N | | |
| SC-INT-MEM-011.7 | **TAPBI Grade Level Validation**<br>If Grade is "PS"<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43411<br>TAPBI enrollments are only authorized for grades KG and 1-12 | N | | |
| SC-INT-MEM-012.1 | **DOA / DOR / CEC Combination**<br>Valid DOA types for CEC: PUBLIC, VOC/TECH, PRIVATE/SPED. (19.1)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43119 | N | | |
| SC-INT-MEM-012.2 | **DOA / DOR / CEC Combination**<br>Valid DOR types for CEC: PUBLIC (19.2)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43123 | N | | |

| BR ID | Rule Description | Message | New / change this yr? | Date Revised | Revisor |
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| SC-INT-MEM-012.3 | **DOA / DOR / CEC Combination**<br>For CEC of any type (element Special Enrollment Code), neither DOA nor DOR may be CHARTER (19.3)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43123 | N | | |
| SC-INT-MEM-012.4 | **DOA / DOR / CEC Combination**<br>DOA OUT OF STATE must always be designated as CEC-A. (19.4)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43121 | N | | |
| SC-INT-MEM-012.5 | **DOA / DOR / CEC Combination**<br>DOR OUT OF STATE may never have a CEC of any type (19.5)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43122 | N | | |
| SC-INT-MEM-012.6.1 | **DOA / DOR / CEC Combination**<br>DOR UNORGANIZED is always CEC-A. (19.6)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43126 | N | | |
| SC-INT-MEM-012.6.2 | **DOA / DOR / CEC Combination**<br>When there is a CEC-A, the District of Residence (DOR) County-Type-District (CTD) number should indicate the county code of residence (e.g. if in Maricopa County the county code = "07"), plus the type of school grade reported (e.g. 04 = elementary grades, 05=high school grades), plus 00 as the district code.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43126: Unorganized Territory DOR for CEC A must be from its own county and grade range | N | | |

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| SC-INT-MEM-012.7 | **DOA / DOR / CEC Combination**<br>For CEC (of any type): IF the DOA is not the same as the DOR, then one (and ONLY one) of the two must be PUBLIC. (19.7)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43138 | N | | |
| SC-INT-MEM-012.8 | **DOA / DOR / CEC Combination**<br>For CEC-B with DOA = **PUBLIC**, DOR must be the same as DOA (19.8)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43124 | N | | |
| SC-INT-MEM-012.9 | **DOA / DOR / CEC Combination**<br>If DOA is PRIVATE/SPED and CEC = B, DOR must be PUBLIC (19.9)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43125 | N | | |
| SD-INT-MEM-005 | **DOA / DOR / Open Enrollment Combination**<br>If Tuition Payer = **Open Enrollment**, then DOA and DOR must be the same.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43137 | N | | |
| SD-INT-MEM-006.1 | **Tuition Payer**<br>Tuition Payer dates cannot overlap<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43802 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-006.2 | **TUITION PAYER**<br>Tuition Payer dates cannot have a gap<br>**INTEGRITY FAILURE:**<br>• IF DATE =< 40TH: ADM 40TH, ADM 100TH, ADM 200TH, ADM EOY.<br>• IF DATE > 40TH AND =< 100TH: ADM 100TH, ADM 200TH, ADM EOY.<br>• IF DATE > 100TH: ADM 200TH, ADM EOY | **ERROR** Message - 43801 | N | | |
| SD-INT-MEM-007 | **Multiple Concurrent DORs**<br>This validation concerns students having more than one membership occurring at the same time. The intention is to inform districts when DOR anomalies exist | | N | | |
| SD-INT-MEM-007.1 | **Multiple Concurrent DORs**<br>When the DOR for concurrent Membership and SPED are different, notify the DOR for ADM. | **WARNING** message -243101 | N | | |
| SD-INT-MEM-007.2 | **Multiple Concurrent DORs**<br>If concurrent Memberships for a single student are reported with different DORs, notify all DORS | **WARNING** message -243102 | N | | |
| SD-INT-MEM-007.3 | **Multiple Concurrent DORs**<br>If concurrent SPED services for a single student are reported with different DORs, notify all DORS | **WARNING** message -243103 | N | | |
| SD-INT-MEM-008 | **Synchronize Activity Codes**<br>All Activity Codes must be synchronized: enrollment, withdrawal, readmission, year end status, summer withdrawal. | | N | | |
| SD-INT-MEM-008.1 | **Synchronize Activity Codes**<br>The first enrollment of the year in a single track must be an "E" code for that student/school/grade.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43201 | N | | |
| SD-INT-MEM-008.2 | **Synchronize Activity Codes**<br>Only one "E" code is allowed for a student/school/grade in a single year. The exception is the “EK” code, which is for a track transfer within the same school<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43202 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-008.3 | **Synchronize Activity Codes**<br>Any "R" code value must synchronize with its previous "W" code<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43203 | N | | |
| SD-INT-MEM-008.3.1 | **Synchronize Activity Codes**<br>Full-day absence on the first day of readmission is not allowed.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 44105<br>Student may not have a full day absence on the first day of membership unless the absence fall on the first day of school as defined in the calendar track to which the student is assigned. | Y | 9/7/06 | CCree |
| SD-INT-MEM-008.4.1 | **Synchronize Activity Codes**<br>Every student must have EITHER a year end status OR a withdrawal that is not followed by a readmission. This rule will be validated for the student's membership once the school/track has reached its 100th day for the fiscal year.<br>**Integrity failure:**<br>• ADM EOY<br>• Year End Enrollment | **ERROR** message - 43204 | N | | |
| SD-INT-MEM-008.4.2 | **Synchronize Activity Codes**<br>A student cannot have BOTH a year end status AND a withdrawal that is not followed by a readmission.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43206 | N | | |
| SD-INT-MEM-008.4.3 | **Synchronize Activity Codes**<br>A student may not withdraw from school on the last scheduled day in session UNLESS the withdrawal is a W8 (deceased).<br>**Integrity failure:**<br>• Year End Enrollment | **ERROR** message - 43208 | N | | |
| SD-INT-MEM-008.4.4 (rule not implemented) | **Synchronize Activity Codes**<br>If a student has a summer withdrawal, he must have a year end status as well *BUT the summer withdrawal and the year end status don't necessarily have to be from the same school*<br>**Integrity failure:**<br>• Year End Enrollment | **ERROR** message - 43205 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-008.4.5 | **Synchronize Activity Codes**<br>Mid-year track change: WK is not stand alone. WK must be followed by an EK. No other E codes can follow a W code.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Year End Enrollment | **ERROR** message @@. Mid-year track change Withdrawal code WK must be followed with a mid-year track change Enrollment code EK | N | | |
| SD-INT-MEM-008.4.6 | **Synchronize Activity Codes**<br>The last withdrawal for a student in a specific track in a specific school in a fiscal year cannot be a WK unless followed by an EK.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Year End Enrollment | **ERROR** message @@. Mid-year track change Withdrawal code WK must be followed with a mid-year track change Enrollment code EK | N | | |
| SD-INT-MEM-008.4.7 | **Synchronize Activity Codes**<br>If there is a withdrawal code *other* than WK, no E code of any kind can follow. Only a readmission would be proper in this case. | **ERROR** message - 43202 | N | | |
| SD-INT-MEM-008.4.8 | **Synchronize Activity Codes**<br>EK is not a valid enrollment code by itself. It is to be used following a WK withdrawal code for the sole purpose of a mid-year track change. EK cannot be the first Enrollment code in a fiscal year at a school for a student<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Year End Enrollment | **ERROR** message @@. A student's first Enrollment Code in a school for the fiscal year cannot be EK | N | | |
| SD-INT-MEM-008.4.9 | **Synchronize Activity Codes**<br>An enrollment submitted with the EK activity code must not be accepted until the corresponding withdrawal with an activity code of WK has been successfully applied to the student's previous membership. This synchronization is required to avoid a concurrent enrollment.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Year End Enrollment | **ERROR** message - 11066. Mid-year track change Enrollment code EK must be preceded by a mid-year track change Withdrawal code WK | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-008.4.10 | **Synchronize Activity Codes**<br>A student's Year End Integrity shall fail, starting in FY 2007, if the student in grades PS – 10, including UE, was submitted with a Year End status of 'G'.<br>Integrity failure:<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• Year End Status | **ERROR** message 43216. Student can only have a Year End Status of 'G' (Graduated at year end) if student is either in grade 11 or 12.<br><br>*Solution: In order for a student with a grade below 11th grade to be submitted with a Graduated Year End status, the student will need to be promoted to 11th or 12th grade in order to graduate.* | Y | 9/6/06 | CCree |
| SD-INT-MEM-008.4.11 | **Synchronize Activity Codes**<br>Starting in FY 2007, students in grades PS – 10, including UE, can only have Year End status of P (Promoted) or R (Retained).<br>Integrity failure:<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• Year End Status | **ERROR** message - 43218:<br>Student can only have a Year End Status of P (Promoted) or R (Retained) in grades PS – 10, including UE. | Y | 9/6/06 | CCree |
| SD-INT-MEM-008.4.12 | **Synchronize Activity Codes**<br>A student's Year End Integrity shall fail, starting in FY2007, if the student in grades PS – 10, including UE, was submitted with a Withdrawal Activity Codes of W7.<br>Integrity failure:<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• Year End Status | **ERROR** message - 43217:<br>Student can only have Withdrawal Activity code of W7 (Graduated) if student is in either grade 11 or 12. | Y | 9/6/06 | CCree |
| SD-INT-MEM-009 | **Validate Grade Membership**<br>Every membership requires at least one grade assignment | | N | | |
| SD-INT-MEM-009.1 | **Validate Grade Membership**<br>There may be no gaps in Grade for a Membership. (A grade is required for every day of a membership.)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43401 | N | | |

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| SD-INT-MEM-009.2 | **Validate Grade Membership**<br>There may be no overlaps between Grades for a Membership. (Only one grade may be reported for a single day of membership.)<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43402 | N | | |
| SD-INT-MEM-009.3 | **Validate Grade Membership**<br>If a Grade has an Exit Status, it must also have an Exit Date and vice versa.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43403 | N | | |
| SD-INT-MEM-009.4 | **Validate Grade Membership**<br>If any record is submitted with a value of "US" as a grade assignment, fail the record.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43409 Ungraded Secondary (US) is no longer a valid grade assignment | N | | |
| SD-INT-MEM-009.5 | **Validate Grade Membership**<br>If any record is submitted with a value of "UE" as a grade assignment, validate that the student also has an active Group B SPED service and is of Kindergarten age. Else, fail the record.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43410 Ungraded Elementary (UE) cannot be submitted unless student has Group B SPED participation and is of KG age | N | | |

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| SD-INT-MEM-010 | **Validate Grade Exit Status**<br>Perform the following validations for each school membership. | | N | | |
| SD-INT-MEM-010.1 | **Validate Grade Exit Status**<br>For any but the last grade membership (when there is more than one grade membership for that school) | | N | | |
| SD-INT-MEM-010.1.1 | If a Grade Membership is not the last grade Membership for this student's Membership, but its exit status and date are blank, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR** message - 43404<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade exit information | N | | |
| SD-INT-MEM-010.1.2 | If a Grade Membership is not the last grade Membership for this student's Membership, but the Grade Membership's exit status is "W", report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message -43403<br><br>**Solution:** SAIS will need to correct the grade exit information. | N | | |
| SD-INT-MEM-010.2 | **Validate Grade Exit Status**<br>For the last GradeMembership (whether there is only one GradeMembership for that SchoolMembership or there is more than one) | | N | | |
| SD-INT-MEM-010.2.1 | If the Grade Membership's exit status is not blank but there is not a SdStudentWithdrawal, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message -43401<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade exit information or a Student Withdrawal transaction with an add operation to withdraw the student | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-010.2.2 | If a Grade Membership is the last grade Membership for this student's Membership, and there is a SdStudentWithdrawal but the Grade Membership's exit status is not "W", report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message -43407<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade exit information | N | | |
| SD-INT-MEM-010.3 | **Grade Exit Status**<br>For each School Membership with more than one associated Grade Membership, starting with the oldest Grade Membership, compare the row with the following row until all rows have been examined | | N | | |
| SD-INT-MEM-010.3.2 | If the exit status of a row = promoted, then the next grade level should be greater than the grade level of the row being examined. Report any discrepancy**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message –43405<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade information. | N | | |
| SD-INT-MEM-010.3.3 | If the exit status of a row = demoted, then the next grade level should be less than the grade level of the row being examined, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message –43405<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade information | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-MEM-010.3.4 | **Grade Exit Status**<br>If the exit status of a row = lateral, then the next grade level should be the same as the grade level of the row being examined, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment | **ERROR:** system-message –43405<br><br>**Solution:** The school will need to submit a Student Grade Transfer transaction with a change request to correct the grade information | N | | |
| SD-INT-MEM-010.3.5 | If a grade and the grade immediately after it are more than 1 year apart, report the discrepancy. | **INFORMATION:** system-message - 443401 | N | | |
| SD-INT-MEM-011 | **Synchronize Grade / Age**<br>The table indicates grade / age validations that will be applied for funding purposes. Beginning in FY05, if a student's tuition payer code indicates 'privately paid', the grade / age validations must not be applied.<br>  <br>H:\SAIS Documents\ AgeValidationsforFun | | N | | |
| SD-INT-MEM-011.1 | **Kindergarten Age / UE Grade with Group B SPED**<br>If a student's grade is UE for ANY period of time in a membership | | N | | |
| SD-INT-MEM-011.1.1 | If the student meets the statutory kindergarten age requirements; As of March 2003, statutory kindergarten age requirements: at least 5 years old but under 6 years old by September 1 | | N | | |
| SD-INT-MEM-011.1.2 | If the student does NOT have an active Group B SPED Service **(**Group B disabilities are defined in §15-901.B.11**)**, **(**A child receiving regular instruction in one school (or district) and receiving SPED services in another school (or district) is still eligible for this benefit**)** for every day he has a membership graded as UE.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B<br>• Year End Enrollment<br>• SPED | **ERROR:** message - 44345 | N | | |
| N/A (example) | **Funding Scenarios**<br>  <br>H:\SAIS Documents\ FundingScenarios.doc | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-012.1 | **Validate FTE**<br>FTE dates cannot overlap<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43702 | N | | |
| SD-INT-MEM-012.2 | **Validate FTE**<br>FTE dates cannot have a gap.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 43701 | N | | |
| SD-INT-MEM-012.3.1 | **Concurrent Enrollment Limits by Valid Combinations**<br>All combinations of district and charter will be limited to a total of 1.0 ADM. In other words, any number of charter + district combinations is limited to 1.0 ADM. The 1.0 ADM will be allocated proportionately | | N | | |
| SD-INT-MEM-012.3.2 | Multiple districts, no charter: limited to 1.0 ADM for each district | | N | | |
| SD-INT-MEM-012.3.3 | Multiple charters, no district: limited to 1.0 ADM for each charter | | N | | |
| SD-INT-MEM-012.3.4 | A member district of a JTED + JTED satellite campus at same member district combination will be limited to 1.25 ADM. In this case, the district receives the first cut up to 1.0 and the JTED receives the remainder up to 1.25 combined. If any other agreement exists, it is up to the district and the JTED to resolve those issues. It is important to report correctly. If a district reports .75 FTE and a satellite JTED reports .25 FTE, they will receive 1.0 combined even though they could receive 1.25 ADM | | N | | |
| SD-INT-MEM-012.3.5 | A member district and a JTED main campus, or a member district and a JTED satellite that is operated by a different member district, may generate 1.0 ADM each | | N | | |
| SD-INT-MEM-012.3.6 | **Concurrent Enrollment Limits by Valid Combinations**<br>Any other combination not covered in 1 through 5 above, will be treated as a tuition in/out situation. The DOR will receive the ADM and funding and pay tuition to the DOA | | N | | |
| SD-INT-MEM-012.3.7 | Charter and JTED main or satellite campus. If the charter validates the membership, the funding will ALWAYS go to the Charter (the limit is 1.0, as shown in item 1 above) | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-012.3 (examples) | The following table illustrates the combinations described above<br>  <br>H:\SAIS Documents\ ConcurEnrLimits.doc | | N | | |
| SD-INT-MEM-013 | **Charter / Non-Charter Concurrency Validation**<br>ARS §15-185.C states: If a pupil is enrolled IN BOTH A CHARTER SCHOOL AND A PUBLIC SCHOOL THAT IS NOT A CHARTER SCHOOL, THE DEPARTMENT OF EDUCATION SHALL DIRECT THE AVERAGE DAILY MEMBERSHIP TO THE SCHOOL WITH THE MOST RECENT ENROLLMENT DATE. UPON VALIDATION OF ACTUAL ENROLLMENT in both a charter school and a public school that is not a charter school and the sum of the daily membership or daily attendance for that pupil is greater than 1.0, the sum shall be reduced to 1.0 and shall be apportioned between the public school and the charter school based on the percentage of total time that the pupil is enrolled or in attendance in the public school and the charter school<br>To accommodate this legislation, SAIS must do two things<br>• Provide a means requiring that LEAs validate memberships in specific combinations for concurrency that are subject to the legislation<br>• Direct funding from a membership in a combination subject to the "validation" requirement, but that the LEA fails to validate<br>LEAs/memberships subject to the validation requirement are those that fall into one of the following concurrency combinations:<br>• Charter(s) with regular district(s) (types 01-05) AND/OR<br>• Charter(s) with voc tech(s) (type 08) | | N | | |
| SD-INT-MEM-013.1 | **Student Membership FTE**<br>Run the **Create Membership Intervals** process for all students who attended school during the fiscal year. Extract student school membership rows for any student that has **concurrent** multiple membership rows (same fiscal year, overlapping Membership Intervals for same school or different schools during a single time frame) | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-013.1.1 | For a given Membership Interval during which there are concurrent memberships, Sum the Student Membership FTE's for these memberships. If the sum of the Student Membership FTE's exceeds the maximum allowable limit as defined above based on the entity group combination, report the discrepancy. | **INFORMATION:** system-message -244102<br><br>**Solutions:**. The schools may correct the discrepancy by submitting a **Student FTE** transaction with the proper values | N | | |
| SD-INT-MEM-013.1.2 | For a given Membership that is part of a combination of concurrencies that is subject to the additional "validation" requirement. If at least one of the memberships in the concurrency HAS been validated by the LEA, Re-set the integrity flag of all related concurrent memberships to NULLs to execute auto-Integrity for entities involved. | | N | | |
| SD-INT-MEM-013.1.2.1 | If this membership has NOT been validated by the LEA, Set the fundable amount for THIS membership to 0. Report the discrepancy. | **WARNING:** system-message -@@.<br>Message: This concurrent membership has not been validated. Funding will be redirected to the other membership(s).<br><br>**Solutions:**. The LEA must validate the membership as is or correct it | N | | |
| SD-INT-MEM-013.1.3 | If NONE of the memberships in the concurrency has been validated by the LEA;<br>If this membership does NOT have the most recent enrollment date, Set the fundable amount for THIS membership to 0. Report the discrepancy. | **WARNING:** system-message -@@.<br>Message: This concurrent membership has not been validated. Funding will be redirected to the other membership(s)<br><br>**Solutions:**. The LEA must validate the membership as is or correct it | N | | |
| SD-INT-MEM-014 | **Synchronize Absence Amounts & FTE Values**<br>If any Absence Amounts exceed the FTE in effect for the student on the date reported, then SAIS will not attempt to fix this. We will issue an ERROR to the effect that this condition exists on the database and that we will reduce the Absence Amount to the FTE value for purposes of calculating Absences and ADA only. We will not change the database. SAIS will limit the absences used in any calculations to not exceed the enrollment for the student which is in the system, for the date(s) the absence(s) are reported | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-014.1 | **Absences for a single membership**<br>Absence Amounts must fall within the student's FTE for that school.<br>For each student absence record for a student in a single membership: Retrieve the associated Student Membership FTE for this date.<br>If the absence amount of the student absence record > the Student Membership FTE, report the discrepancy. | **ERROR:** system-message -44104<br><br>**Solutions:**. The schools should correct the discrepancy by submitting a **Student FTE** or **Student Absence** transaction with the proper values | N | | |
| SD-INT-MEM-014.2 | If the absence date on the student absence record = the date of withdrawal, AND the absence amount of the student absence record >= the Student Membership FTE, then report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B | **ERROR:** system-message -44103: Student may have only a partial absence on the date of withdrawal.<br><br>**Solutions:**. The schools should correct the discrepancy by submitting a **Student FTE** or **Student Absence** or **Student Withdrawal** transaction with the proper values/dates | Y | 9/6/06 | CCree |
| SD-INT-MEM-014.2.1 | Full-day absence on the first day of a mid-year track change (EK) is not allowed.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR: Message -** 44106<br>Student may not have a full-day absence on the first day of membership of a mid-year track change. | Y | 11/30/06 | CCree |
| SD-INT-MEM-014.3 | **Absences Across Multiple Concurrent Memberships (High School Only)**<br>For a student having multiple concurrent memberships across schools in a related district; Retrieve each student absence record. | | N | | |
| SD-INT-MEM-014.3.1 | If there are more than one student absence records across these schools for a single date, calculate the total unadjusted district FTE, the calculated district attendance, the total unadjusted district Absence Amount, and the total district Absence Amount. If the unadjusted sum of the absence amounts of the student absence records (the total unadjusted district Absence Amount) > the sum of the Student Membership FTE's (the total district Absence Amount), then report the discrepancy. | **INFORMATION:** system-message - 444102<br><br>**Solutions:**. If there is a problem with the submitted data, the schools may correct the discrepancy by submitting a **Student FTE** or **Student Absence** transaction with the proper values | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-014.3.2 | If the absence date of the student absence records = the first day of membership or the date of withdrawal,<br>AND the absence amount of the student absence records >= the Student Membership FTE, then, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B | **ERROR:** system-message -44103<br><br>**Solutions:**. The schools should correct the discrepancy by submitting a **Student FTE** or **Student Absence** or **Student Withdrawal** transaction with the proper values/dates | N | | |
| SD-INT-MEM-014.3 | **Formulae**<br>The formulae for calculating a student's absence or attendance for concurrent schools within a related district are:<br>• district absence = adjusted* (unadjusted district FTE – unadjusted calculated district attendance)<br>• district attendance = adjusted* (unadjusted district FTE – unadjusted calculated district absence)<br>• unadjusted district FTE = the sum of (unadjusted school FTEs) of all related School FTEs for the student<br>• unadjusted calculated district attendance = the sum of (unadjusted school attendance) of all related School attendance for the student<br>(** "adjusted" means reduced to the maximum allowable by Arizona statute)* | | N | | |
| SD-INT-MEM-015 | **Absence Dates Outside Enrollment Period**<br>Absence Dates must fall within the student's enrollment dates for that membership. If an absence row is found outside the student's enrollment period, SAIS will ignore it for aggregation. For each student absence row for a student, Retrieve the associated student membership and, if it exists, the withdrawal. If the absence date on student absence records =< start date of the student membership OR if it is > the withdrawal exit date, report the discrepancy. | **WARNING:** system-message -244101<br>**Solutions**: If the submitted absence date is wrong, the LEA should correct the discrepancy by submitting a Student Absence transaction with the proper absence date. If the withdrawal date on SAIS is wrong, the LEA should correct the discrepancy by submitting a Student Withdrawal transaction with the correct withdrawal date and then re-submitting this Student Absence transaction. If the first day of membership on SAIS is wrong, the LEA should submit a Student Enrollment delete operation and resubmit all transactions for this student, containing the correct information | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-016 | **Attendance Dates Outside Enrollment Period**<br>Attendance periods must fall within the student's enrollment dates for that membership. If an attendance row is found outside the student's enrollment period, SAIS will ignore it for aggregation.<br>For each separate membership belonging to a student, Retrieve all attendance rows. If any dates in an attendance row fall outside the student's enrollment period, report the discrepancy. | **INFORMATION:** system-message - 444101<br>**Solutions:** Either the missing attendance data should be deleted with a Student Attendance transaction OR the student's exit date should be fixed with a Student Withdrawal transaction OR the school's calendar should be fixed using ADE's Calendar facility | N | | |
| SD-INT-MEM-017 | **Display Candidates for Withdrawal for Excessive Absences**<br>Before running any process that uses absences or withdrawals, such as the ADM calculation, funding calculations, and year-end statistics, SAIS must scan student absences for students who should be withdrawn automatically due to excessive absences. "Excessive absence" is defined as 10 consecutive days of unexcused absences. Since absence count and student withdrawal status have an effect on funding and on various reports, when SAIS finds a student who matches the condition we advise the districts of the existence of these students. For the following process, "consecutive days" includes only those days the LEA is in session | | N | | |
| SD-INT-MEM-017.1 | Students on Absence Reporting<br>SAIS will analyze the absence data to see if the student has incurred excessive unexcused absences. For each separate membership belonging to a student:<br>Retrieve all absence rows. If this membership has 10 or more consecutive absences, each having Absence Reason Code = Unexcused AND Absence Amount >= the membership's FTE value for that date, then, report the discrepancy. | Report the discrepancy as: **ERROR:** system-message -44001<br>**Solutions:**. The school should either correct the absence information with Student Absence transaction(s) or withdraw the student with a Student Withdrawal transaction | N | | |
| SD-INT-MEM-017.1.1 | A student may not have a record of enrollment on the first day of a calendar track and a period of ten or more consecutive absences (excused or unexcused) starting on the date of enrollment. *Note: A student must participate in (attend) school at some point within the first ten days of the calendar track to which the he/she is assigned regardless of the length of period of enrollment.*<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR:** Message - 44107<br>Student has not participated in instruction during the first ten days of the calendar track to which he/she is assigned. Student's enrollment must be deleted. | Y | 9/6/06 | CCree |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-017.2.1 | Students on Attendance Reporting<br>For each separate membership belonging to a student, Retrieve all attendance rows. If there is a gap of 10 days or more that weren't reported, report the discrepancy. | **INFORMATION:** system-message - 444002<br>**Solutions:**. Either the missing attendance data should be submitted with a Student Attendance transaction or the school should withdraw the student with a Student Withdrawal transaction | N | | |
| SD-INT-MEM-017.2.2 | Students on Attendance Reporting<br>Create totals for each set of contiguous reporting periods that adds up to 10 or more days. If the total attendance amount for any of these combined periods includes a span of time that could represent 10 missed days of attendance, report the discrepancy. | **INFORMATION:** system-message - 444003<br><br>**Solutions:**. Either no action is necessary or the school should withdraw the student with a Student Withdrawal transaction | N | | |
| SD-INT-MEM-017.2.3 | If there is any gap or missing attendance for a reported student as identified in the bullet list below during all or part of 40th Day, 100th Day, or EOY periods, provide the following warning for the current and subsequent period(s):<br>• Pre-school students – missing attendance,<br>• Kindergartners demoted to Preschool, - missing attendance<br>• High school students reporting attendance – gap in attendance.<br>Report the discrepancy. | **WARNING:** system-message -244201<br><br>**Solutions:**. Either the missing attendance data should be submitted with a Student Attendance transaction or the school should withdraw the student with a Student Withdrawal transaction | N | | |
| SD-INT-MEM-017.2.4 | For each absence row for a student in a single membership:<br>Retrieve the associated Student Membership FTE for this date. If the absence amount of the student absences > the Student Membership FTE, then, report the discrepancy. | **ERROR:** system-message -44104<br><br>**Solutions:**. The schools should correct the discrepancy by submitting a Student FTE or Student Absence transaction with the proper values | N | | |
| SD-INT-MEM-017.2.5 | If the absence date of the student absence = the first day of membership or the date of withdrawal,<br>AND the absence amount of the student absences >= the Student Membership FTE, then, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY.<br>• If date > 100th: ADM 200th, ADM EOY<br>• October Enrollment<br>• Language / Group B | **ERROR:** system-message -44103<br><br>**Solutions:**. The schools should correct the discrepancy by submitting a Student FTE or Student Absence or Student Withdrawal transaction with the proper values/dates | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-017.2.6 | Retrieve all student absence rows. If this membership corresponding to the student absences has 10 or more consecutive absences, each having Absence Reason Code = Unexcused AND Absence Amount >= the membership's FTE value for that date, then: | **ERROR:** system-message -44001 **Solutions:**. The school should either correct the absence information with Student Absence transaction(s) or withdraw the student with a Student Withdrawal transaction | N | | |
| SD-INT-MEM-017.2.6 | If attendance is being reported, SAIS will not allow a gap of 10 days of missing attendance from the start date of enrollment and if enrollment date is equal to the 1st day of the calendar track the student is assigned. An enrollment with a start date equal to the first day of attendance should then be submitted. **Integrity failure:** • If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY. • If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY. • If date > 100th: ADM 200th, ADM EOY | **ERROR: Message -** 44107 Student has not participated in instruction during the first ten days of the calendar track to which he/she is assigned. Student's enrollment must be deleted. | Y | 11/30/06 | CCree |
| SD-INT-MEM-018 | **Normal Graduation Year** Normal Graduation Year is required for all high school students who are not special needs-only students. If a student having a membership for this year in grades 9-12 does not have a Normal Graduation Year, then this should be an error. If a student has a membership for this year. If the student's grade is a HIGH SCHOOL GRADE and the Normal Graduation Year is missing **Integrity failure:** • Graduation Rate | **ERROR** message - 43406 | N | | |
| SD-INT-MEM-019 | **Attendance Candidates** Verify that attendance is only submitted for eligible candidates. | | N | | |
| SD-INT-MEM-019.1 | For each Membership having one or more attendance rows: For each attendance row, If the grade during the timeframe reflected on the attendance row is preschool or a HIGH SCHOOL GRADE, skip the rest of this validation. ELSE | | N | | |
| SD-INT-MEM-019.2 | If during the timeframe reflected on the attendance row, this child is homebound for that entire period of time, skip the rest of this validation. ELSE, report the discrepancy. **Integrity failure:** • If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY. • If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY. • If date > 100th: ADM 200th, ADM EOY | **ERROR** message - 44201 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-020 | **Gaps in Attendance for a Homebound Student**<br>If there is a gap in reported attendance for a student with an active Homebound need during all or part of that period, report the discrepancy. | **WARNING:** system-message -244201<br>**Solutions:**. Either the missing attendance data should be submitted with a **Student Attendance** transaction or the school should withdraw the student with a **Student Withdrawal** transaction | N | | |
| SD-INT-MEM-021 | **Community College Classes**<br>No Integrity validations are required for community college class data | | N | | |
| SD-INT-MEM-022 | **Temporary Values**<br>Beginning in FY2005, if an invalid value is found in one of the required SAIS elements, fail the student.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **ERROR:** system-message -@@.<br>Message: {} is not a valid value for the {} element<br><br>Examples of invalid values:<br>• "not available"<br>• "unknown"<br>• "not collected" | N | | |
| SD-INT-MEM-023 | **Withdrawal Reason Codes**<br>Withdrawal Reason Code is an optional code associated with both the Withdrawal transaction (003) and the Summer Withdrawal transaction (018). | | N | | |
| SD-INT-MEM-023.1 | **Supplemental Withdrawal Reasons** are only compatible with certain specific Withdrawal Codes. If there is an incompatibility between them, report the discrepancy. The table identifying relationships of withdrawal reasons to supplemental withdrawal reasons is below.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY<br>  <br>H:\SAIS Documents\ WDRsnSupWDRsnXre | **WARNING** –243601. Message "Withdrawal Reason Code {} not compatible with Withdrawal Activity Code {}." | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
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| SD-INT-MEM-023.2 | Relationship of Labels to Withdrawal Reason<br>"In school improvement" is a federal (NCLB) label applied only to some Title I schools. A prerequisite for receiving the federal label of "in school improvement" is that the school must have the state label of "underperforming" for two years in a row. Not all underperforming schools will be identified for federal school improvement. ADE determines the NCLB school labels prior to the beginning of each school year. The NCLB school labels identifying schools as "in school improvement", "corrective action" or "restructuring" are assigned by ADE's Academic Achievement and Research and Policy units, and are or will be included on the School Report Card. Claiming the School Choice Option requires that a student transfer out of one school and into another in the same school year. | | N | | |
| SD-INT-MEM-023.2.1 | If a School Choice option Withdrawal Reason Code (WR1, WR2, WR3) is specified for a student but the withdrawing school is not labeled "in school improvement" (on Enterprise), report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **WARNING** –215000 | N | | |
| SD-INT-MEM-023.2.2 | If the Withdrawal Reason Code is WR1 but the school is not officially labeled underperforming, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **WARNING** –215001 | N | | |
| SD-INT-MEM-023.2.3 | If the Withdrawal Reason Code is WR2 but the school is not officially labeled Persistently Dangerous, report the discrepancy.<br>**Integrity failure:**<br>• If date =< 40th: ADM 40th, ADM 100th, ADM 200th, ADM EOY.<br>• If date > 40th AND =< 100th: ADM 100th, ADM 200th, ADM EOY<br>• If date > 100th: ADM 200th, ADM EOY | **WARNING** –215003 | N | | |
| SD-INT-MEM-023.2.4 | Withdrawal due to school choice: individual transfer option (WR3), and Withdrawal due to Pregnancy or being the biological parent of a child (WR4)<br>No validations will be done in SAIS against these supplemental withdrawal reasons. | | N | | |

# 3 Integrity Checking Processes: Special Education Needs

As with Membership, most of the Needs validations identified here were traditionally performed in the Student Counts system when the data was submitted in aggregated form. Since the data this process is dealing with is already on the SAIS database, Integrity Processing will ignore anything having to do with validating students, memberships, needs, and offerings at a particular school.

Refer to section **1.2 District and School Types** for a cross-reference between the district and school type names (e.g., **PUBLIC**, **VOC/TECH**, **CHARTER**) used in these validations and the district and school type numbers used in the Student Counts and other pre-SAIS systems.

Also as with Membership, any data failing one of these validations will cause an error message to be produced unless specifically stated otherwise.

*The **State SPED Funding Reporting Period** is September 1 through January 28.*

*The **Federal SPED Census Reporting Date** is December 1.*

Through FY 2005, all Student Detail level SPED validations were at the State level. Federal counts for 12/1 were based off of Student Counts level data (after data was 'pushed' into the Student Counts system from the Student Details system). To more accurately reflect the Federal SPED Census 12/1 count and to ease the redundancy of cross-system validations, there will be **two** Student Detail **SPED Integrity validations flags, State and Federal** beginning in FY 2006.

SPED Integrity validations as previously documented, including new rules for FY 2006, are grouped as **State SPED Integrity validations**. There is no change in validation methodology for these rules.

**Federal SPED Integrity validations** will check against the rules specifically on 12/1. So it is possible for a student to be failing a State SPED Integrity check but pass a Federal check.

Although SPED Integrity rules can change, as of FY 2006, the following are noted highlights State and Federal SPED Integrity rules:

- *Except for one Initial IEP related Integrity rule (SC-INT-SPD-001.16), all rules are State SPED Integrity validations.*
- *All CEC related rules are only State SPED Integrity validations.*
- *All rules other than those related to CEC are also Federal SPED Integrity validations.*
- *The Initial IEP related Integrity rule (SC-INT-SPD-001.16) only applies to the Federal SPED Integrity check.*

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001 | **Student Counts SPED Rules**<br>The following rules are taken from the Student Counts document, chapter 3 Special Education | | N | | |
| SC-INT-SPD-001.1 | District of Attendance (DOA), from 3.4.1.11 District of Attendance (DOA):<br>Valid types: PUBLIC, JUVENILE, PUBLIC SPED INSTITUTION, PRIVATE/SPED, HEAD START, CO-OP/IGA/OTHER, CHARTER<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44301 | N | | |
| SC-INT-SPD-001.2 | Additional rule added fiscal year 2001-2002. Only types PUBLIC (but not HIGH SCHOOL), PRIVATE/SPED and HEAD START can teach grade PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44302 | N | | |
| SC-INT-SPD-001.3.1 | **School**<br>A student may never attend school at a district-level entity (school number 000).<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44303 | N | | |
| SC-INT-SPD-001.3.2 | PUBLIC SPED INSTITUTION and PRIVATE/SPED schools must be approved to service the Need Code submitted.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44304 | N | | |
| SC-INT-SPD-001.4 | **DOR**<br>District of Residence (DOR), from 3.4.1.12 District of Residence (DOR) | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.4.1 | (01-15) and **OUT OF STATE** (20).<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44305 | N | | |
| SC-INT-SPD-001.4.2 | Valid types: PUBLIC, COMPACT, STATE INSTITUTE, CHARTER, UNORGANIZED<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44306 | N | | |
| SC-INT-SPD-001.4.3 | If the DOR is ACCOMMODATION, then it must be allowed to be listed as a DOR.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 43117 | N | | |
| SC-INT-SPD-001.4.5 | If the DOA is **OUT OF STATE**, then the DOR cannot be **OUT OF STATE**.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44307 | N | | |
| SC-INT-SPD-001.4.6 | If the DOR type is equal to **STATE INSTITUTE**, then the DOA must be one of the following districts<br>• 020213 Wilcox Unified District<br>• 050201 Safford Unified District<br>• 050305 Solomon Elementary District<br>• 050316 Bonita Elementary District<br>• 110201 Florence USD<br>• 110221 Coolidge Unified District<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44309 | N | | |
| SC-INT-SPD-001.4.7 | If the DOR is ELEMENTARY and the grade is a HIGH SCHOOL GRADE, then the district must be approved to teach high school grades<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44322 | N | | |
| SC-INT-SPD-001.4.8 | If the DOR is **HIGH SCHOOL** and the grade is an **ELEMENTARY GRADE**, then the district must be approved to teach elementary grades.<br>Exceptions: **HIGH SCHOOL** DOR exceptions (schools in these districts may teach any grade) 150404700 (Ehrenberg Quartzsite Academy)<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -43130 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.4.9 | If the DOA is **PUBLIC SPED INSTITUTION**, then the DOR must be the same as the DOA.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44310 | N | | |
| SC-INT-SPD-001.4.10 | If the DOA is **JUVENILE**, then the DOR must be the same as the DOA.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44310 | N | 8/4/05 | JW |
| SC-INT-SPD-001.5 | CEC/DOA/DOR. Valid CEC/DOA/DOR characteristics, from 3.4.1.19 CEC and from 3.4.1.20 CEC/DOA/DOR Combinations | | N | | |
| SC-INT-SPD-001.5.1 | CEC is NOT valid for Service Code F, V, or J<br>**Integrity failure:**<br>• State SPED | **ERROR** message - 44311 | N | | |
| SC-INT-SPD-001.5.2 | Valid DOA/DOR counties: regular Arizona counties (01-15) may have both CEC-A and CEC-B. Any other county is an error.<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44339 | N | | |
| SC-INT-SPD-001.5.3 | Valid DOA types: **PUBLIC**, **JUVENILE**, **PRIVATE/SPED**, may have both CEC-A and CEC-B.<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44312 | N | | |
| SC-INT-SPD-001.5.4 | Valid DOR types: **PUBLIC** may have both CEC-A and CEC-B. **JUVENILE** may have CEC-B. **UNORGANIZED** may have CEC-A. | | N | | |
| SC-INT-SPD-001.5.4.1 | for anything except **PUBLIC**, **JUVENILE**, and **UNORGANIZED**:<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44313 | N | | |
| SC-INT-SPD-001.5.4.2 | for **JUVENILE**<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44314 | N | | |
| SC-INT-SPD-001.5.4.3 | for any CEC-A that's not **PUBLIC** or **UNORGANIZED**<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44315 | N | | |
| SC-INT-SPD-001.5.5 | Valid DOA/DOR district codes: anything except **D-LEVEL-ACCOMMODATION** may have both CEC-A and CEC-B.<br>**Integrity failure:**<br>• State SPED | **ERROR** message - 44349: Unorganized territories DOR are not eligible for SPED services not reported as CEC-A | N | | |
| SC-INT-SPD-001.5.6 | If the CEC is not blank and the DOA is **PRIVATE/SPED**, **CO-OP** or **IGA,** then the DOR must be equal to **PUBLIC**<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44315 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.5.7 | If the CEC = A and the DOA is **PUBLIC** (but not **ACCOMMODATION**), then the DOR must be the same as the DOA or the DOR must be **UNORGANIZED**. **Integrity failure:**<br>• State SPED | **ERROR** message - 44316 | N | | |
| SC-INT-SPD-001.5.8 | If the CEC = A and the DOA is ACCOMMODATION**,** then the DOR must be the same as the DOA. Exception: DOA 050199, 070199, 090199, 110199 or 140199<br>**Integrity failure:**<br>• State SPED | **ERROR** message - 44317 | N | | |
| SC-INT-SPD-001.5.9 | If the CEC = B and the DOA is ACCOMMODATION, then the DOR must be PUBLIC.<br>**Integrity failure:**<br>• State SPED | **ERROR** message - 44318 | N | | |
| SC-INT-SPD-001.5.10 | If the CEC = B and the DOA is **PUBLIC** (but not ACCOMMODATION), or JUVENILE then the DOR must be the same as the DOA. Exceptions: DOA 070403 and DOR 070513.<br>**Integrity failure:**<br>• State SPED | **ERROR** message -44319 | N | | |
| SC-INT-SPD-001.6 | **Other Entity / Service Code Rules**<br>The table below identifies additional rules to be validated for entity/service code combinations<br>  <br>H:\SAIS Documents\ SPEDSvcTypeEntityXr<br>If service codes submitted for LEA types listed above do not match the decision matrix, report the discrepancy.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44326 | N | | |
| SC-INT-SPD-001.7 | **Valid Open Enrollment Characteristics**<br>Open Enrollment may not have Service Code F. If Tuition Payer shows that this membership is an Open Enrollment.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44342 | N | | |
| SC-INT-SPD-001.8 | CTDs 000400 and 000500 (State Department of Education, Elementary and High School, respectively) are not valid CTDs for use in SAIS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -43133 | N | | |
| SC-INT-SPD-001.9 | Each school must be approved to teach the student's grade, from 3.4.1.23 Grade | **ERROR** message -44322 | N | | |
| SC-INT-SPD-001.9.1 | PUBLIC DOA exceptions (schools in these districts may teach any grade) 150404700 (Ehrenberg Quartzsite Academy). | | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.9.2 | PUBLIC SPED INSTITUTION and PRIVATE/SPED DOA exceptions (may teach any grade)<br>072155 Youth Development Institute<br>072183 Desert Vista Residential School<br>142101 Bridges Academy<br>• State SPED<br>• Federal SPED (12/1) | | N | | |
| SC-INT-SPD-001.9.3 | PUBLIC SPED INSTITUTION and PRIVATE/SPED district/category exceptions (may teach any grade provided the category is listed here)<br>072195 Valley Vocational Services if category is SLD<br>102132 Fan Kane Neurohabilitation Ser. if category is OHI or TBI<br>• State SPED<br>• Federal SPED (12/1) | | N | | |
| SC-INT-SPD-001.10 | **SPED Service Code**<br>Grade and Service Code validations do not have to be performed on the DOR if the DOR is ELEM NOT IN HS or COMPACT or STATE INSTITUTION. | | N | | |
| SC-INT-SPD-001.10.1 | Only PUBLIC, CHARTER, and PRIVATE/SPED schools (DOA's) may have "self-contained" SPED services.<br>*-Exception: Any student attending a secure care (corrections) facility (county 21) can be submitted with a service code of C.*<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44323 | N | | |
| SC-INT-SPD-001.10.2 | If the DOA = HEAD START, then the Service Code must be A, B, H, or S<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44324 | N | | |
| SC-INT-SPD-001.10.3 | If the DOA county is AZ Department of Corrections and all county type 21, then the Service Code must be A, B, C, or S.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44325 | N | | |
| SC-INT-SPD-001.10.4 | If the Service Code is E or G, the DOA must be PRIVATE/SPED and the DOR must be PUBLIC or CHARTER. Before fiscal year 1998-99, Service Code G could also have DOA = ACCOMMODATION.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44326 | N | | |
| SC-INT-SPD-001.10.5 | If the Service Code is equal to A, B, C, I or S and the DOA is not the same as the DOR, the DOA must be equal to PUBLIC or HEAD START and the DOR must be equal PUBLIC or STATE INSTITUTE.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44326 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.10.6 | If the Service Code is equal to I, at least one of the student's Need Codes must be equal to MD, A, SMR, or OI. *A student can be reported with a service type of I only if eligible for one of the following needs: A, MD, OI or SMR. Any other need can also be reported with a service type of I, ONLY IF student is reported with one of the 4 eligible needs eligible needs previously listed.*<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44327<br><br>ERROR message – 44343: Multiple Service Participation records are allowed for Service Type "I" only if at least one of those Service Participation records is for SPED Need category: A, MD, SMR, or OI. | N | | |
| SC-INT-SPD-001.10.7 | If the Service Code = V, then the DOA must be PRIVATE/SPED and the DOR must be PUBLIC.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44326 | N | | |
| SC-INT-SPD-001.10.8 | If the Service Code = F, then the DOA must be PUBLIC SPED INSTITUTION.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44328 | N | | |
| SC-INT-SPD-001.10.9 | If the Service Code = R, then the grade must be PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44332 | N | | |
| SC-INT-SPD-001.10.10 | Not assigned | | N | | |
| SC-INT-SPD-001.10.11 | The Service Code must be valid for the fiscal year identified by the SPED Service Start Date.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -@@: SPED Service Code {SPED Service Code} is not valid for FY {fiscal year} | N | | |
| SC-INT-SPD-001.10.12 | If the entity ID is 211001000 (Arizona Department of Juvenile Corrections) or 211002000, SPED Service Codes must be "A", "B", "C", or "S". All others are to be disallowed. This rule to be implemented FY2004 forward.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44365: SPED Service Code {SPED Service Code} is not valid for entity {entity ID} | N | | |
| SC-INT-SPD-001.10.12.1 | If the entity ID is associated with a TAPBI school, and SPED Service Code is a group B need (A, EDP, HI, MD, MDSSI, MOMR, OI, PSD, SMR, VI).<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **WARNING** message - 244311: TAPBI student reported with a Group B disability. | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.10.13 | Valid Need Code characteristics, from 3.4.1.21 Need Category<br>For DOA types PUBLIC SPED INSTITUTION and PRIVATE/SPED, the school must be approved to service the student's Need Code<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44304 | N | | |
| SC-INT-SPD-001.10.14 | For Need Code EDP, if DOA = ACCOMMODATION, Service Code must be D.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44329 | N | | |
| SC-INT-SPD-001.10.15 | For Need Code EDP, if DOA = PUBLIC SPED INSTITUTION, Service Code must be F<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44329 | N | | |
| SC-INT-SPD-001.10.16 | If the Need Code = EDP the Service Code must be equal to C, D, E, F, G, or V.<br>Exceptions: DOA county = Arizona Department of Corrections (21).<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44330 | N | | |
| SC-INT-SPD-001.11.1 | If the Service Code = F, the Need Code cannot be PMD, PSD, or PSL.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44327 | N | | |
| SC-INT-SPD-001.11.2 | If the Need Code = PSL, then there cannot be a concurrent (overlapping entry/withdrawal dates, or an earlier entry date with an open withdrawal date) SPED service for the same student with a Need Code of PSD or PMD. And vice-versa (if PSD or PMD, cannot have concurrency with PSL).<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44331 | N | | |
| SC-INT-SPD-001.11.3 | If the Need Code on the transaction record is PSD, PSL, or PMD, then the grade must be PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44332 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.11.4 | **SPED Need/Service/Grade Relationship**<br>The matrix attached below summarizes the relationship of grades, SPED service codes, and SPED needs. Where there is a discrepancy between verbal validation descriptions, and the matrix, the matrix should rule.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1)<br>  <br>H:\SAIS Documents\ SPEDSvcGradeNeedX | | N | | |
| SC-INT-SPD-001.11.5 | **Concurrent Needs**<br>The following table defines the validation rules for concurrent SPED needs. If a combination of Need codes submitted for a student do not comply with the matrix above:<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1)<br>  <br>H:\SAIS Documents\ ConcurrentNeedsXref | **ERROR** message - 44362: The combination of SPED Need categories that are concurrent for this student is either incorrect or incomplete {additional error information follows}<br><br>**ERROR** message – 44344: SPED Need categories that must exist for MD to be valid are: Two or more of HI, MOMR, OI, VI, **OR** One of HI, MOMR, OI, VI, **and** at least one of ED, EDP, MIMR, SLD.<br><br>**ERROR** message – 44346: SPED Need categories that must exist for MDSSI to be valid are: Both HI and VI **OR** either HI or VI, **and** at least one of A, EDP, MOMR, OI, SMR. | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.11.6 | **Arizona School for the Deaf and Blind (ASDB)**<br>Students attending the Arizona School for the Deaf and Blind must be receiving appropriate and valid SPED program services for HI or VI at ASDB to be eligible to receive any other Sped services for Needs at ASDB.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44355 Students attending ASDB must be receiving HI or VI Need services at ASDB to be eligible for any other Need at ASDB. | N | | |
| SC-INT-SPD-001.11.7 | From 3.4.1.23 Grade:<br>If the grade = PS, then the Need Code must be HI, PMD, PSD, PSL, or VI.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44333 | N | | |
| SC-INT-SPD-001.12.1 | **Age**<br>From 3.4.1.13 Birthdate , a student over 21 years of age will not receive funding for SPED services. A student beginning SPED services when he's over 21 will be rejected.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44334 | N | | |
| SC-INT-SPD-001.12.2 | A student must be at least 3 years minus three months old to receive funding for SPED services. If he is not going to reach PS-eligible age before the end of school, he will be rejected.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44335 | N | | |
| SC-INT-SPD-001.12.3 | Student must be **at least** 6 years old before January 1st of the current school year to attend grades higher than Kindergarten. Otherwise, student will not generate funding. Exception: A KG-age child MAY receive ADM funding for grade UE if he's got an active SPED Group B service. If the birthdate makes the student less than 6 years old before January 1st, then the student must be reported in grades KG, UE or PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44336 | N | | |
| SC-INT-SPD-001.12.4 | Student must be **at least** 5 years old by January 1st of the current school year to attend Kindergarten. Otherwise, student will not generate funding. If the birthdate makes the student less than 5 years old, then the student must be reported in grade PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ADM ERROR** message - 44337<br><br>**SPED ERROR** message -44503 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.12.5 | A student with a SPED grade of UE must have an active Group B Sped service for every day they have a SPED membership graded UE. Otherwise, they need an ADM grade of KG for every day of such a condition.<br>If a student's SPED grade is UE for ANY period of time in a membership<br>If the student meets the statutory kindergarten age requirements **(A)**<br>If the student does NOT have an active Group B SPED Service **(B)**, **(C)** for every day he has a SPED membership graded as UE,<br>If the student does not have an ADM grade of UE for every day of a SPED participation period when SPED grade is UE and student does not have an active Group B SPED service, report the discrepancy.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR:** message - 44345: Change membership/SPED grade to KG or submit a Group B SPED service for each day of UE membership for a 5 year old. ;SchoolCTDS= | N | | |
| SC-INT-SPD-001.12.6 | Beginning fiscal year 2002-2003, a child must be at least within 90 days of their third birthday AND not yet reached kindergarten age (5 years of age *before* September 1) to start membership in grade PS.<br>**Integrity failure:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44338 | N | | |
| SC-INT-SPD-001.13 | **SPED DORs**<br>SPED DORs are associated with an individual SPED service. SAIS must allow districts to specify a SPED DOR separately because a student may receive SPED services from the state of Arizona while obtaining regular instruction outside the public school system. | | N | | |
| SC-INT-SPD-001.13.1 | **Multiple Concurrent DORs**<br>This validation concerns students having more than one membership occurring at the same time. The intention is to inform districts when DOR anomalies exist.<br>If concurrent SPED services for a single student are reported with different SPED DORs, notify all SPED DORS.<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **WARNING** message - 244301 | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.13.2 | **Overlaps or Gaps Between SPED DORs**<br>For each SPED service, ensure that there are no gaps for a DOR: that there is a SPED DOR specified for each valid school day<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44340 | N | | |
| SC-INT-SPD-001.13.3 | For each SPED service, ensure that there are no overlaps: that there is only one SPED DOR specified for each valid school day.<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message -44341 | N | | |
| SC-INT-SPD-001.13.4 | **SPED DORs Outside Service Dates**<br>If a SPED DOR is found to exist before a given SPED Service start date or past its end date, SAIS will not issue a message. The days outside the Service period will be ignored by the aggregation process | | N | | |
| SC-INT-SPD-001.14 | **Overlapping Services for a SPED Need**<br>Overlaps for services for a single Special Education Need is not allowed in SAIS. If **services** for a single SPED Need overlap, report the discrepancy.<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44348 | N | | |
| SC-INT-SPD-001.15.1 | **Multiple Grades or Services**<br>For each student;<br>If the student is in more than one **SPED service** in the same **district** during the school year<br>AND if the student is reported in more than one **grade** during the year | **WARNING** message - 244305 | N | | |
| SC-INT-SPD-001.15.2 | If the student is in more than one **SPED service** in the same **district** during a single point of time<br>AND if more than one **SPED service code** is reported during that time | **WARNING** message - 244307 | N | | |
| SC-INT-SPD-001.16 | **Initial IEP**<br>A student whose first SPED participation in Arizona is in FY 2006 or greater<br>AND is PS age or younger student must have a submitted Initial IEP in SAIS to be eligible for SPED Service Participation.<br>**Integrity failure:**<br>• Federal SPED (12/1) | **ERROR** message - 44363:<br>PS age or younger student must have a submitted Initial IEP in SAIS to be eligible for SPED Service Participation | N | | |
| SC-INT-SPD-001.17.1 | **SPED Exit Reason/Age/Grade Validation**<br>If student grade is PS and SPED Exit Reason is invalid for PS (code 2 " Graduated with regular high school diploma", or code 3 "Reached maximum age ", or code 7 "Dropped out")<br>**Integrity warning:**<br>• State SPED<br>Federal SPED (12/1) | **ERROR** message - 44356. Message "Invalid SPED Exit Reason {SPED Exit Reason code} for preschool." | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SC-INT-SPD-001.17.2 | If student grade is NOT PS and SPED Exit Reason is ONLY invalid for PS (code 8, "Transition to kindergarten")<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44357. Message "SPED Exit Reason 8 only valid for PS." | N | | |
| SC-INT-SPD-001.17.3 (modified in FY05) | If student has SPED Exit Reason code 3 ("Reached maximum age") and student age on SPED Service Exit Date is not 22 years minus one day:<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44358. Message "Student's age on SPED Service Exit Date does not qualify to use this SPED Exit Reason" | N | | |
| SC-INT-SPD-001.17.4 (modified in FY05) | If student has SPED Exit Reason code 2 ("Graduated with regular high school diploma") and the student's age on December 1 is not between 16 and 21<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44359. Message "Must be between 16 and 21 on December 1st to count as a graduate for Special Education." | N | | |
| SC-INT-SPD-001.17.5 | SAIS shall validate if any SPED Service Participation is has a start date > the latest exit date of SPED Service Participation with a SPED Exit Reason Code = 9 (Exited due to intended change in Need/Service Code), else fail the Integrity validation | **ERROR message** - 44@@<br>Student must have a SPED Service Participation with a start date > the latest exit date of a SPED with an Exit Reason Code = 9; {Return SPED exit date; Return SPED Exit Reason Code} | Y | 7/1/2006 | JWhelan |
| SC-INT-SPD-001.18 | **Synchronize SPED / Membership Grade**<br>The SPED Grade and the grade on the student's membership (if a membership exists) must match.<br>If a student is receiving one or more SPED services, and a membership exists, validate that the SPED grade(s) and the membership grade match. If not, report the discrepancy.<br>**Integrity warning:**<br>• State SPED<br>• Federal SPED (12/1) | **ERROR** message - 44364: This student shows different grades for SPED services and Membership. | N | | |
| SC-INT-SPD-001.19.1 | **SPED Federal Primary Need Indicator**<br>Perform the following Federal Integrity validations only from 12/1 of the fiscal year and forward:<br>Each student with a SPED Service Participation shall be required to have one and only one Federal Primary Indicator on 12/1 of the fiscal year<br>**Integrity Error:**<br>• Federal SPED | **ERROR Message** - 44xxx<br>Student participating in SPED service(s) must have one Federal Primary Indicator; {} | Y | 7/1/2006 | JWhelan |
| SC-INT-SPD-001.19.2 | **SPED Federal Primary Need Indicator**<br>If a student has more than one Federal Primary Indicator on 12/1, fail Federal SPED Integrity.<br>**Integrity Error:**<br>• Federal SPED | **ERROR Message** - 44xxx<br>Student participating in SPED service(s) must have only one Federal Primary Indicator; {return the existing SPED Need with Federal Primary Indicator} | Y | 7/1/2006 | JWhelan |

# 4 Integrity Checking Processes: Language Needs

Following is the Integrity Checking Process necessary for the Language Needs area, which includes both Assessments and Language Program Participation.

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-LNG-001 | **Overlapping Programs for a Language Need**<br>Overlaps for programs for a single Language Need is not allowed in SAIS. If **programs** for a single Language Need overlap, report the discrepancy. | **ERROR** message - 44348<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-002 | **Missing Membership for a Language Program**<br>If a **language program** has been submitted for a student who does not have a Grade Membership in any Track in the same fiscal year, fail the language program participation. The Grade Membership and Track must be in the same LEA that is providing the language program for the given student. | **ERROR** message - 44347<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003 | **Missing or Invalid Assessment for a Language Program**<br>Language participation can be valid with an assessment administered at any public or charter school within the State either during the current or the previous fiscal year, and the most recent assessment must demonstrate that the student is in need of language program assistance. | | N | | |
| SD-INT-LNG-003.1 | If a **language program** has been submitted for a student who does not have an Assessment within the current or past fiscal year of the language program start date, fail the language program participation | **ERROR** message - 44401<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.2 | If a **language program** has been submitted for a student, find the most recent assessment on SAIS having an assessment date the same as or earlier than the language program start date.<br>If the assessment date is on or before June 30, 2004:<br>If the Assessment Result is not New English Language Learner, or Continuing ELL, or ELL After Re-classification, fail the language program participation | **ERROR** message - 44402<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.3 | If the corresponding assessment date is on or after July 1, 2004, find the most recent oral and most recent writing and most recent reading assessments: All three must be present and occur on or prior to the ELL program participation start date; if not, fail the language program participation | **ERROR** message - 44403<br><br>**Integrity Failure**: Language Group B | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-LNG-003.4 | At least one of the 3 Arizona Language Assessment sub-tests must contain an assessment result:<br>3. *for FY05 or FY06 - validate if the latest assessments occurred in FY05*<br>4. *FY06 - do not perform this validation if the latest assessments occurred in FY06 – due to change in FY06 assessment transaction 012, which now collects only one overall assessment result. Validation occurs at import.* | **ERROR** message - 44404:<br>At least one of the 3 Arizona Language Assessment sub-tests must contain an assessment result.<br><br>**Integrity Failure**:<br>Language Group B | N | | |
| SD-INT-LNG-003.5 | If the Assessment Result is not New English Language Learner, or Continuing ELL, or ELL After Re-classification on any of the 3 assessments, fail the language program participation. | **ERROR** message - 44402<br><br>**Integrity Failure**:<br>Language Group B | N | | |
| SD-INT-LNG-003.6 | If the Assessment Result for any of the 3 Arizona Language Assessment sub-tests is Continuing FEP, fail the language program participation based on the following:<br>1. *FY05 or FY06 - validate if the latest assessments occurred in the current -1 fiscal year.*<br>2. *FY06 - validate if the latest assessment occurred in the current fiscal year. Only validate based on the overall assessment result, which is the only captured assessment result from FY06 forward.* | **ERROR** message - 44405:<br>The Assessment Result found is Continuing FEP and is not valid for language program participation<br><br>**Integrity Failure**:<br>Language Group B | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-LNG-003.5 | If the Assessment Result is not New English Language Learner, or Continuing ELL, or ELL After Re-classification on any of the 3 assessments, fail the language program participation. | **ERROR** message - 44402<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.6 | If the Assessment Result on any of the 3 assessments is Continuing FEP, fail the language program participation. | **ERROR** message - 44405<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.7 | If the student is below KG age when the ELL assessment is given - fail ELL integrity<br>For purposes of this rule, *"Below KG age"* = *Student is < 5 years old on Jan. 1st of the FY when the most recent assessment was given.*<br>This will be the most lenient interpretation of below KG age as the date includes those students who may be in either PS or KG. | **ERROR** message - 44407;<br>Student is below KG age and therefore should not be given the ELL Assessment<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.8 | Effective for FY 2006 only:<br>If the student is KG age when the assessment is given:<br>Check that Reading and Writing are reported with scores of 998<br>AND that the Proficiency Levels for these two areas are PE - otherwise fail ELL integrity.<br><br>For purposes of this rule, *"Is KG age" is to be defined with entry and exit criteria.*<br>• *Entry criteria = Student is 5 years old on Jan. 1st of the FY when the most recent assessment was given.*<br>• *Exit criteria = 6 years old by Sept. 1st of the FY when the most recent assessment was given.*<br>*The interpretation of the KG entry criteria is derived from the definition of PS exit as stated in ARS 15-821C. The KG exit criteria are derived from the definition of 1st Grade entry as stated in ARS 15-821C.* | **ERROR** message - 44408;<br>KG student ELL Assessment scores for Reading and Writing must be 998, and the corresponding Proficiency Level must be 'PE'<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-003.9 | If ANY assessment score is reported as 998 the corresponding Proficiency Level MUST be PE - otherwise fail ELL Integrity | **ERROR** message - 44409;<br>If assessment score is 998, the corresponding proficiency level must be PE;<br><br>**Integrity Failure**: Language Group B | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-LNG-004 | **Invalid Grade for a Language Program**<br>If a **language program** has been submitted for a student in preschool, fail the language program participation. | **ERROR** message - 43408<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-005.1 | **Invalid District for a Language Program**<br>If a **language program** has been submitted for a student attending school outside Arizona, fail the language program participation. | **ERROR** message - 44507<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-005.2 | If a **language program** has been submitted for an LEA that is not a public or charter school, fail the language program participation. | **ERROR** message - 44508<br><br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-006 | **Transfer to Different Grade or Track for Language Participants**<br>If a student having a language program participation also has a mid-year track change, validate that the track number of the language participation is the same as the membership track number | **ERROR** message - 44406: Student language track number must be the same as the membership track number<br>**Integrity Failure**: Language Group B | N | | |
| SD-INT-LNG-007.1 | **Language Participation / Grade end date Validations**<br>Perform this validation if the grade end date or language participation end date occurs after February 1. If the grade end date and language participation end date are not synchronous, and either end date occurs after February 1, issue a warning. | **WARNING** -244310 | N | | |
| SD-INT-LNG-007.2 | Perform this validation if the grade end date or language participation end date occurs on or prior to February 1. If the language participation does not have a corresponding grade membership for each day of the language service participation, issue an error. | **ERROR** -44347 | N | | |
| SD-INT-LNG-008 | **Concurrent Language Participation Validation**<br>Perform this validation if a **language program** has been submitted, and other language participations are active in one or more LEAs other than the submitting LEA. | **WARNING** -222000 | N | | |

# 5 Integrity Checking Processes: Support Programs

This chapter describes the Integrity Checking Process necessary for the Support Program Participation area. The following table lists Support Programs and the validations required for each.

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-SUP-001 | **Support Program Validations**<br>The attached table summarizes validations for support programs.<br>  <br>H:\SAIS Documents\<br>SUPPORT PROGRAM | | N | 2/28/05 | TC |
| SD-INT-SUP-001.1 | **Overlapping Same Support Programs for a Single Need**<br>Overlaps for same support programs for a single Need are not allowed in SAIS. If same support programs for a single Need overlap, report the discrepancy. This is validated per student, entity, need, and fiscal year.<br>**Integrity Failure**:<br>• Support Program | **ERROR** message -44523: The same Support Program already exists for this Need. | N | | |
| SD-INT-SUP-002 | **Permission for LEA to offer a Support Program**<br>If a Support Program requires that an LEA have permission to offer it and this LEA does not have that permission on Enterprise for the fiscal year specified by the program start date, report the discrepancy.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44501 | N | | |
| SD-INT-SUP-003.1 | **Transportation / School Choice**<br>If the submitting CTDS does NOT have the federal label "in school improvement" on Enterprise for the fiscal year identified by the student's Program Entry Date:<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44512: School {CTDS; Name} is not federally defined as in school improvement; cannot provide the Transportation/School Choice Support Program | N | | |
| SD-INT-SUP-003.2 | If the Receiving CTDS has the federal label "in school improvement" on Enterprise for the fiscal year identified by the student's Program Entry Date<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44513: School {Receiving CTDS; Name} is labeled in federal improvement and is not a valid Receiving School for Transportation/School Improvement Program | N | | |
| SD-INT-SUP-003.3 | The Receiving CTDS must be a public school. If the Receiving CTDS is not a public school<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44514: Receiving School for Transportation/School Improvement Program {Receiving CTDS; Name} is not a public school. | N | | |
| SD-INT-SUP-004 | **Validate Support Program / Student**<br>A student may participate in the same program more than once during a fiscal year, but a student may only participate in a single occurrence of a specific Support Program for one Need at a time. If a single specific support program is submitted for a student more than once with the same start date, fail the support program transaction | **ERROR** message -44502: Support program {support program code} cannot be submitted for a student more than once with the same start date | N | | |

| BR ID | Rule Description | Message(s) | New / change this yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-SUP-005.1 | **School Improvement – Supplemental Education Services**<br>For Support Program "School Improvement Supplemental Education Services", If the student does NOT have a required need (NCLB) in the fiscal year specified by the program start date, report the discrepancy.<br>**Integrity failure:**<br>• Support Program / Special Handling | **ERROR** message -44514 | N | | |
| SD-INT-SUP-005.2 | If a support program transaction is submitted for School Improvement Supplemental Education Services, the school must have the federal designation of "In School Improvement". Otherwise, fail the support program transaction.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44504: School does not have federal designation of "In School Improvement" and cannot offer Supplemental Education Services | N | | |
| SD-INT-SUP-006.1 | **Johnson O'Malley Indian Education Program**<br>For Support Program "Johnson-O'Malley Indian Education":<br>If the student does NOT have ethnicity/race of "I" (American Indian or Alaskan Native), report the discrepancy.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44505 | N | | |
| SD-INT-SUP-006.2 | If the student is younger than 3 years old on the program start date, report the discrepancy.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44506 | N | | |
| SD-INT-SUP-006.3 | If the Tribal Name is equal to nulls, report the discrepancy.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44507: Student must have Tribal Name to be eligible for a Johnson O'Malley Indian Education program | N | | |
| SD-INT-SUP-007 | **Failing Schools Tutoring Fund**<br>For Support Program "Failing Schools Tutoring Fund"<br>If the student is not reported with a Need of Math (13) or Language Arts (14):<br>**Integrity failure:**<br>Support Program | **ERROR** message -44519: Student requires a need of Math or Language Arts for the Failing Schools Tutoring Fund Support Program. | N | | |
| SD-INT-SUP-008 | **Failing Schools Tutoring Fund**<br>For Support Program "Failing Schools Tutoring Fund"<br>If the student is not enrolled in a failing or underperforming school, as identified by AZLEARNS;<br>**Integrity failure:**<br>Support Program | **ERROR** message -44520: "School must be designated as underperforming or failing to provide this service." | N | | |

| BR ID | Rule Description | Message(s) | New / change this Yr? | Date Revised | Revisor |
|---|---|---|---|---|---|
| SD-INT-SUP-008 | **Title I Academic Disadvantage Support Programs**<br>Academic Disadvantage support programs under Title I require that the student has Need transactions in SAIS specific to the given educational subject area. | | N | | |
| SD-INT-SUP-008.1 | If a student's support program transaction is for the following Title I program(s), validate that the following Needs are in SAIS<br>• Title I Mathematics Support Program Transaction requires a Math Need Code (13);<br>• Title I Other Support Program Transaction requires an Other Academic Services Need Code (19);<br>• Title I Reading Support Program Transaction requires a Language Arts (reading and/or writing) Need Code (14);<br>• Title I Science Support Program Transaction requires a Science Need Code (15);<br>• Title I Social Studies Support Program Transaction requires a Social Studies Need Code (18);<br>**Integrity failure:**<br>• Support Program | **ERROR** message -24016 | N | | |
| SD-INT-SUP-009.1 | **Membership Validations for a Support Program**<br>If a student does not have a Membership at some school in the same fiscal year, fail the support program participation.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44509 | N | | |
| SD-INT-SUP-009.2 | If the support Program Entry Date does not fall within the active Membership/Track interval, fail the support program participation, fail the support program.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44510: No active membership was found for the Program Entry Date {program entry date} submitted. SAIS not updated | N | | |
| SD-INT-SUP-009.3 | If the Support Program transaction is for a student having more than one active Membership (concurrent enrollment) across LEAs, validate that the Support Program is not already in existence for the corresponding membership interval at an LEA other than the sending entity.<br>**Integrity failure:**<br>• Support Program | **ERROR** message -44516: This student {student ID} may not be receiving program services for {support program code} at more than one LEA at a time | N | | |
| SD-INT-SUP-009.4 | Student submitted with an Evacuee Need cannot have a membership in Arizona prior to 8/26/2005 | **ERROR** message -44522 | N | | |
| SD-INT-SUP-009.5 | SAIS shall issue a warning for FY 2007 in Integrity if a student identified in the current fiscal year as Immigrant was identified previously as an Immigrant in 3 or more prior fiscal years. | **Warning** message 244503<br>Student has been identified as Immigrant for 3 or more prior fiscal years. | Y | 9/6/06 | CCree |

# 6 Integrity Checking Processes: Test Label Information

No Integrity Checking errors or warnings have been defined at this time.

# 7. Early Childhood Information

No Integrity Checking errors or warnings have been defined at this time.

# Appendix A: Notes on Certificates of Educational Convenience

Certificates of Educational Convenience (CECs) are issued by school districts to provide relief for students in very specific circumstances and who need to attend a school outside their district of residence. CECs incur additional State funding. There are two types of CEC available: CEC-A and CEC-B. They apply to both Membership and to Needs.

## CEC-A

The rules for CEC-As are defined in ARS §15-825 (A). The following students are eligible for a CEC-A:

- students who are precluded by distance or lack of adequate transportation from attending a school within their own district, including out of state
- students residing in unorganized territories and attending school in another district.

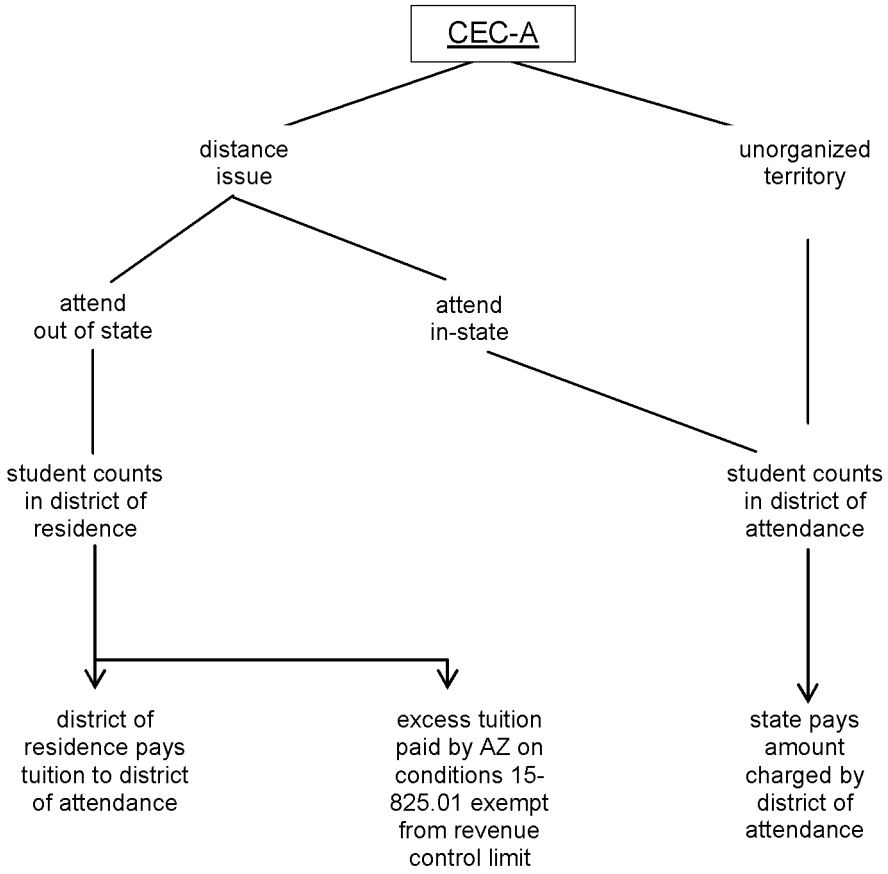



**Figure 1 CEC-A Eligibility**

## CEC-B

The rules for CEC-Bs are defined in ARS §15-825 (B). The following students are eligible for a CEC-B: students who reside in

- a state rehabilitation or corrective institution;
- a foster home or child care agency or institution which is licensed and supervised by the Department of Economic Security or Department of Health Services;
- a residential facility operated or supported by the Department of Economic Security or Department of Health Services;
- under the supervision of the Department of Juvenile Corrections in a residence pursuant to the interstate compact on juveniles.

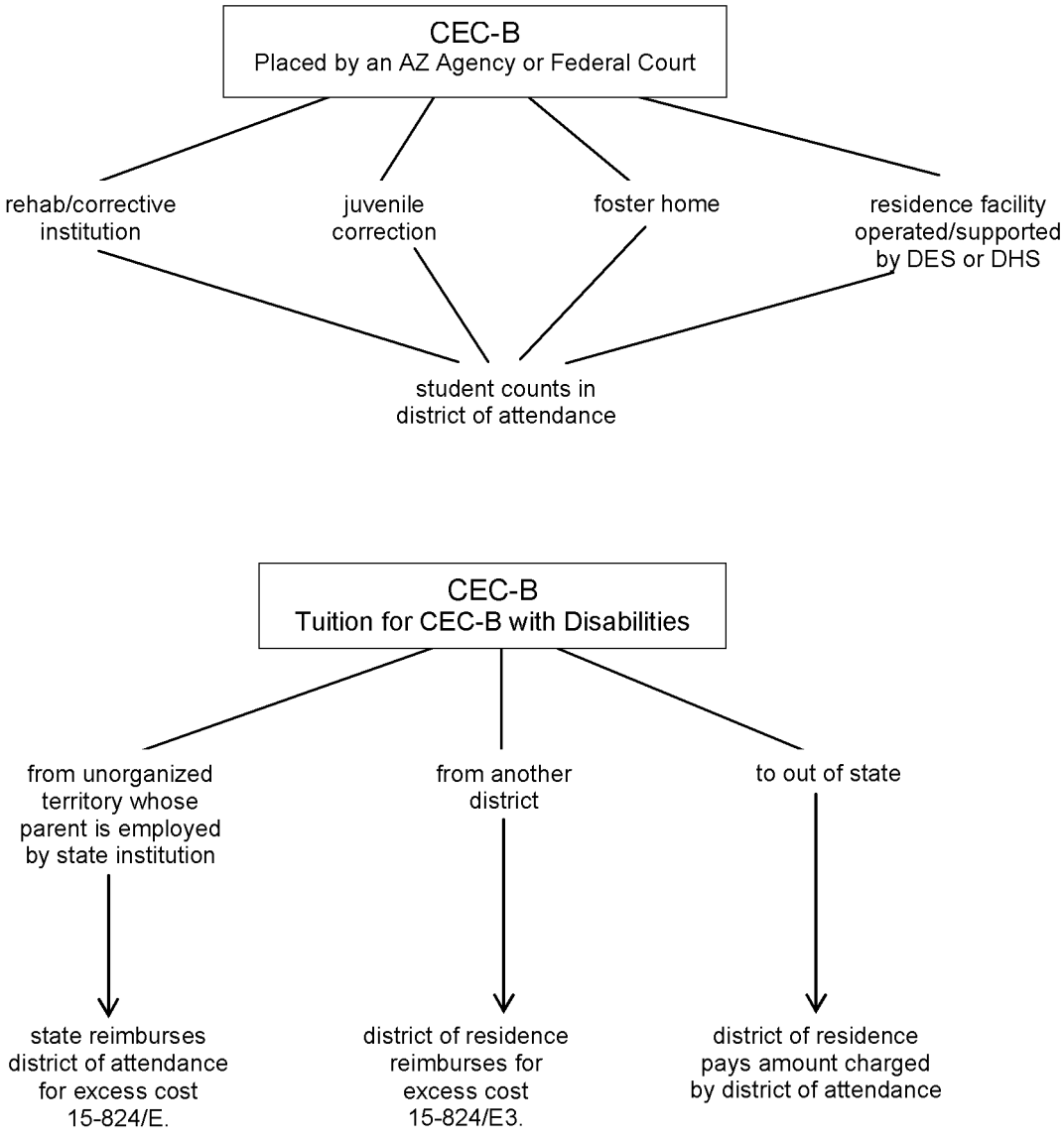



**Figure 2 CEC-B Eligibility**

# Appendix B: Relevant Arizona Statutes

Title 15 of the Arizona Revised Statutes (ARS) deals with education. The following lists just some of the individual statutes relevant to State funding and, thereby, the Integrity Checking Processes. They are listed here for reference purposes only. This list does not attempt to form a complete reference, but rather to point out some commonly asked-about statutes.

The statutes themselves are not quoted here since the content is subject to change by the legislature. The titles are current as of September 2000. See the most current version of these statutes for correct information.

## STATUTES RELATED TO STATE ADM FUNDING

Admission Requirements
- Article 2. Admission Requirements
  - ARS § 15-821 Admission of children; required age
  - ARS § 15-824 Admission of pupils of other school districts; homeless children; tuition charges; definitions
  - ARS § 15-825 Certificate of educational convenience; issuance; effect on enrollment records
  - ARS § 15-825.01 Certificates of educational convenience; pupils attending out-of-state schools
  - ARS § 15-827 Presentation of withdrawal forms
  - ARS § 15-828 Birth certificate; school records; exemption
    - Paragraph G addresses disclosure of educational records by the school district or charter school

Attendance
- Article 1. School Year and Attendance Requirements
  - ARS § 15-801 School year; school month; holidays
  - ARS § 15-803 School attendance; exemptions; definitions

School District Budgeting (full-time equivalency participation requirements)
- ARS § 15-901 Definitions
- ARS § 15-902 Determination of student count
- ARS § 15-902.2 Optional two hundred day average daily membership calculation

Student Age and Grade (see also the items related to Admission Requirements above and to Special Education on the next page)
- ARS § 15-821 Admission of children; required age
- ARS § 15-901 Definitions

Charter Schools
- ARS § 15-185 Charter schools; financing; definitions
  - Paragraph C addresses splitting funding for concurrent enrollments in a charter school and a public school

JTEDs
- ARS § 15-393 Joint technological education district governing board

Language
- Article 3.1 English Language Education for Children in Public Schools
  - ARS § 15-751 Definitions in this article

Miscellaneous
- ARS § 15-941 Teacher experience index; computation; definition

ARS § 15-942 Adjustment for rapid decline in student count
ARS § 15-943 Base support level
*this includes the Group B weighted student count calculation*

## STATUTES RELATED TO SPECIAL EDUCATION

School District Budgeting (full-time equivalency attendance requirements)
ARS § 15-901 Definitions

Student Age and Grade (see also the items related to Admission Requirements and the membership-related items on Student Age and Grade on the previous page)
ARS § 15-761 Definitions
ARS § 15-771 Preschool programs for handicapped children; definition
ARS § 15-1181 Definitions
*ARS § 15-1181 is related to Voucher programs only*

ARS § 15-1343 Persons entitled to education
*ARS § 15-1343 is related to Arizona School for the Deaf and Blind (ASDB) only*

ARS § 15-1344 Authority for enrollment of children under three years of age; definition
*ARS § 15-1344 is related to Arizona School for the Deaf and Blind (ASDB) only*

ARS § 15-1345 Overage and nonresident students; deposit
*ARS § 15-1345 is related to Arizona School for the Deaf and Blind (ASDB) only*

## STATUTES RELATED TO SAIS

Article 8. Student Accountability Information System
ARS § 15-1041 Student Accountability Information System
ARS § 15-1042 Time line; student level data; definition
ARS § 15-1043 Student level data; confidentiality

# Issues

## Appendix (C)(1)-6 - Teacher Data Elements

### Teacher Data Elements

- Personal Info
    - Name
        - First Name
        - Middle Name
        - Last/Surname
        - Generation Code/Suffix
        - Last/Surname at Birth
        - Tribal or Clan Name
    - Background Info
        - Hispanic or Latino Ethnicity
        - Race
        - Gender
        - Birthdate
        - City, State, Country of Birth
        - Highest Level of Education Completed
- Educational Experience
    - Education Institution Information
        - Name of Institution
        - Address
        - Telephone Number
        - E-Mail Address
        - Web Site Address
    - Subject Matter Area of Study
        - Level of Specialization
        - Postsecondary Subject Matter Area
        - Early Intervention Postsecondary Subject Matter Area
    - Course Work Taken
        - Session Type
        - Session Beginning Date
        - Session Ending Date
        - Course Title
        - Course Description
        - Grade Earned
        - Credit Type Earned
        - Credits Earned in Course/Staff Development Activity
        - GPA: Cumulative
- Qualification Info
    - Credential Info
        - Credential Type
        - Teaching Credential Type

        - Teaching Credential Basis
        - Credential Description
        - Date Credential Requirement Met
        - Credential Issuance Date
        - Credential Expiration Date
    - Years of Employment Experience
        - Years of Prior Teaching Experience
        - Years of Prior Education Experience
        - Years of Prior Related Experience
        - Total Number of Years of Prior Experience
        - Years of Virtual Teaching Experience
- Assignments
    - Assignment Info
        - Education Staff Classification
        - Job Classification
    - Operational Unit to Which Assigned
        - Institution Identification Code
        - Immediate Supervisor EduID
- Evaluation and Career Development
    - Quality of Performance
        - Evaluation Purpose
        - Evaluation Periodicity
        - Evaluation Date
        - Evaluation Recommendation
        - Evaluation System
        - Evaluation Score/Rating
        - Evaluation Scale
        - Evaluation Outcome
        - Evaluator EduID
        - Evaluator Name
        - Evaluator Position Title
        - Evaluator Name of Institution

**Student Data Elements**

- Personal Info
    - Name
        - First Name
        - Middle Name
        - Last/Surname

        - Generation Code/Suffix
        - Last/Surname at Birth
        - Tribal or Clan Name
    - Background Info
        - Hispanic or Latino Ethnicity
        - Race
        - Gender
        - Birthdate
        - City, State, Country of Birth
        - Language Type
        - Language Code
- Enrollment
    - School Info
        - Enrollment Status
        - School Name of Institution
        - LEA Name of Institution
    - Entrance Info
        - Entry Date
        - Cohort Year
        - Entry Type
        - Entry/Grade Level
    - Attendance Info
        - Number of Days of Membership
        - Number of Days in Attendance
    - Exit/Withdrawal Info
        - Exit/Withdrawal Date
        - Exit/Withdrawal Status
        - Exit/Withdrawal Type
- School Participation and Activities
    - Progress Info
        - End of Term Status
        - Promotion Type
        - Nonpromotion Reason
- Assessment
    - Assessment Info
        - Identification Code
        - Identification System
        - Grade Level when Assessed
    - Score/Results Reporting
        - Score Results
        - Assessment Reporting Method

- Special Program Participation and Student Support
    - Special Program Participation and Student Support Service Participation
        - Identification Code
        - Identification System
        - Special Assistance Program Name
        - Name of Institution
    - Special Program/Service Delivery
        - Care/Service Beginning Date
    - Program Exit
        - Care/Service Ending Date
        - Program Exit Reason

**Course/Class Data Elements**

- Class Identification
    - Class Info
        - Classroom Identification Code
        - Class Period
        - Class Beginning Time
        - Class Ending Time
        - Class Meeting Days
        - Maximum Number of Seats
        - Optimum Number of Seats
        - Medium of Instruction
- Instructional Programs
    - Course Info
        - Course Title
        - Course Code
        - Course Code System
        - Available Credit
        - Elementary Subject/Course
        - Course Description
        - Course Weight
        - Course Level Characteristic
        - Honors Course
        - High School Course Requirement
        - Credit Type Earned
        - Number of Credits Attempted
        - Applicable Grades

**Class Roster Data Elements**

- Class Roster Identification
  - Class Info
    - Class Identification Code
    - Class Period
    - Class Beginning Time
    - Class Ending Time
  - Teacher Info
    - Teacher Identification Code
    - First Name
    - Middle Name
    - Last/Surname
    - Generation Code/Suffix
  - Student Info
    - Student Identification Code
    - First Name
    - Middle Name
    - Last/Surname
    - Generation Code/Suffix

# StudentTracker Agreement for State Education Agencies

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the National Student Clearinghouse ("Clearinghouse"), a not-for-profit corporation organized under the laws of the Commonwealth of Virginia, and the undersigned state education agency ("State") agree as follows:

**Invoice to:** Arizona Board of Regents
2020 N. Central Ave., Suite 230
Phoenix, AZ 85004-4593

NATIONAL STUDENT CLEARINGHOUSE

(b)(6)

Signature

Ricardo D. Torres
Print Name

President
Title

1-12-10
Date

www.studentclearinghouse.org

Fax: 703-742-4234

Email: graham@studentclearinghouse.org

Arizona Department of Education
State Education Agency

(b)(6)

Signature

1/8/10
Date

Margaret Dugan
Print Name

Deputy Superintendent of Public Instruction
Title (legal notices will be sent to this individual)

1535 West Jefferson Street, Bin 2
Street Address

Phoenix, AZ 85007
City/State/Zip

602-364-2339
Telephone

Margaret.Dugan@azed.gov
Email

**Scope of Agreement** (check one):

- ☐ Single study for state agency*
- ☐ State agency subscription (multiple submissions)
- ☒ Statewide subscription (includes districts and schools)

**if this option is selected, attach Details of Study Appendix to Agreeement*

**Third party** to be provided with access to data:

Arizona Board of Regents
Organization Name

Signature Date

Print Name

2020 N. Central Ave., Suite 230
Street Address

Phoenix, AZ 85004-4593
City/State/Zip

**The terms of this Agreement incorporate Paragraphs 1 through 10 attached.**

# StudentTracker Agreement for State Education Agencies

1. **Background.** The Clearinghouse provides a nationwide, central repository of information on the enrollment status and educational achievements of postsecondary students. Participating educational institutions submit to the Clearinghouse information on the enrollment statuses of all of their students and listings of the alumni to whom they have awarded degrees or certificates. They appoint the Clearinghouse as their agent for purposes of reporting student information to authorized recipients.

2. **Request Files.** State will submit to the Clearinghouse lists ("Request Files") of persons in order to obtain data on their enrollment status and educational achievements at postsecondary educational institutions. State agrees to format and submit Request Files in accordance with Clearinghouse published specifications.

   a. The term of agreement will include all requests concerning State public educational institutions for a one-year period beginning with the signing of this agreement. Individual schools or districts wishing to submit Request Files will have to sign a StudentTracker for High Schools Agreement and participate in DiplomaVerify, but will not be required to pay an additional fee during the term of this agreement. The State may also disseminate results to principals, teachers, and other school officials at the school or district to which the data relates.

3. **Response Files.** The Clearinghouse will promptly compare Request Files with its postsecondary student database and provide State with information ("Response Files") on the enrollment and academic achievements of the individuals in the Request Files. Characteristics and limitations on the use of the information in the Response Files are as follows:

   a. The information in the Response Files will include enrollment and academic achievement information for institutions attended by individuals in the Request File subsequent to the Last Date of Attendance at the secondary level.

   b. State agrees that it may only disclose the data provided by the Clearinghouse to other school officials within the parameters described in Paragraph 2 above whom it has determined to have legitimate educational interests.

   c. State agrees that it will not release data provided by the Clearinghouse to any other individuals, institutions, or organizations, other than those identified above, either in student or institution identifiable form, without the Clearinghouse's express written permission.

   d. Regarding postsecondary data, the parties agree that the Clearinghouse does not release or confirm Social Security numbers under this Agreement and releases only unblocked directory information, as defined in FERPA, unless FERPA authorizes disclosure without consent.

   e. The Clearinghouse agrees to destroy all personally identifiable, non-directory information received from State when it is no longer needed for audit or similar regulatory purposes.

4. **Disclaimers of Liability.** State understands and agrees that the Clearinghouse releases only information that has been provided by postsecondary educational institutions participating in the Clearinghouse. Accordingly, the Clearinghouse does not warrant or guarantee the completeness, accuracy or reliability of the enrollment information in its database. The Clearinghouse specifically disclaims any responsibility or liability for errors or omissions in information provided by educational institutions, including direct, indirect, incidental, special, or consequential damages resulting from State's use of information released by the Clearinghouse under this Agreement.

5. **Indemnification and Insurance.** The Clearinghouse agrees to indemnify and hold State harmless from any loss, cost, damage or expense suffered by State as a direct result of the Clearinghouse's failure to comply with its obligations under this Agreement. The Clearinghouse agrees to maintain insurance covering errors and omissions in its data processing operations in the amount of at least two million dollars ($2,000,000).

6. **Fees.** State understands that the fee for the services outlined in this agreement is equal to $41,649.00 for the one year in the contract period, with the annual renewal fee based upon the State Agency StudentTracker fee schedule. Arizona Board of Regents agrees to submit payment of applicable fee on behalf of the State within thirty (30) days of receipt of a bill from the Clearinghouse.

7. **Acknowledgement.** State agrees to acknowledge in all internal and external reports, presentations, publications, press releases, and/or research announcements that utilize StudentTracker data that the source of the data is the StudentTracker service from the National Student Clearinghouse.

8. **Notices.** State agrees to provide all notices to the Clearinghouse under this Agreement to:

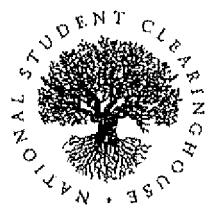
   National Student Clearinghouse
   2300 Dulles Station Blvd., Suite 300
   Herndon, VA 20171
   Attn: Vickie Graham, Contract Admin.

   The Clearinghouse agrees to provide all notices under this Agreement to State to the signatory and address on Page 1 of this Agreement unless otherwise instructed in writing by State. The Clearinghouse considers the signatory to this Agreement as its primary contact for all operational and systems issues related to StudentTracker unless otherwise instructed in writing by State.

9. **Modification, Termination, and Assignment.** This Agreement may be modified by written, mutual agreement of the parties and remains in effect until terminated by either party by providing sixty (60) days written notice to the other party. The Clearinghouse may assign this Agreement without consent to a successor or wholly owned subsidiary.

10. **Special Terms.** If applicable, any special terms should be placed in this paragraph.




## Attachment 1 (for Districts)
## StudentTracker Agreement

### Participating High Schools

| | |
|---|---|
| **District Name** | |
| **Date** | |

| **School Name** |
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**Attachment 2:**
**StudentTracker Agreement**

# NATIONAL STUDENT CLEARINGHOUSE
# SCHEDULE OF FEES FOR SECONDARY SCHOOLS
**Published May 15, 2007 and Effective Until Further Notice**

High schools and/or high school districts covered by a statewide subscription will be able to participate in the StudentTracker for High Schools program free of charge. In the absence of such a subscription, high schools and/or high school districts wishing to participate in the StudentTracker for High Schools program will need to pay an annual subscription fee equal to $425.00 per high school.

The program will be provided at **no charge** to high schools that meet the following criteria:

- Have a total enrollment of less than 300 students, AND
- Are located in a district where two or more high schools pay the full annual StudentTracker for High Schools subscription fee.

**Attachment 3**

**StudentTracker Contact List**

ARIZONA DEPARTMENT OF EDUCATION - I.T. DEPARTMENT
School District

**Primary Contact:**

DONALD J. HOUDE, CIO, DEPUTY ASSOC. SUPERINTENDENT
Name

DONALD.HOUDE@AZED.GOV
Email Address

(602) 364-1368 (602) 364-1937
Phone Number Fax Number

**Technical Contact:**

LARRY LINDAIN, DIRECTOR of DEVELOPMENT
Name

LARRY.LINDAIN@AZED.GOV
Email Address

(602) 542-7882 (602) 364-1937
Phone Number Fax Number

**Reports Contact(s):**

RICK RACHKOFSKI, DIRECTOR OF DATA MANAGEMENT
Name

RICK.RACHKOFSKI@AZED.GOV
Email Address

(602) 542-5834 (602) 364-1937
Phone Number Fax Number

Name

Email Address

Phone Number Fax Number

Name

Email Address

Phone Number Fax Number

**Please FAX completed contact list to the StudentTracker Department: 703-733-4196**

# DATA SHARING AGREEMENT

This Data Sharing Agreement ("the Agreement") is between The Arizona Department of Education ("ADE") and_____

The Agreement is for the purpose of providing ASU access to data elements (Appendix A) from fifteen specific school districts (Appendix B) that are participating in an analytical research study conducted by ASU. The signing of this agreement by the ASU representative explicitly implies that written agreements with the participating school districts to release their data are in place. The capture of the data under discussion is by previous data collections by the AZ Department of Education or by data collections tools developed by ADE for this analytic research study. Because the data needs of this project are understood and agreed to by the participating AZ school districts, several of the constraining paragraphs of this agreement are viewed as not appropriate and have been stricken.

Certain proprietary information ("Data") as described in Appendix A, which is attached to and made a part of this Agreement, is to be released to __(ASU chosen designation)_____

By _____

[*check one*] ☐no other appendixes apply, or ☐the following additional appendix(es) is (are) attached and made a part of this Agreement: _____

_____

**Conditions**

_____ understands that ADE cannot guarantee, nor may _____ hold ADE liable for, the accuracy, correctness, or timeliness of the data. ADE shall not be held responsible for how the data is used or analyzed, or how any analysis of the data may be interpreted.

_____ affirms that its staff has the skills to use, analyze, and interpret this data properly, and that ADE may not be held responsible for assisting

_____ in the use of or the interpretation of this data, except as may be separately agreed by both parties.

**Data security**

_____ certifies that it has in place sufficient security and privacy procedures to protect the data in a manner and to a degree that satisfies all federal and statutory requirements, and affirms that the data will be protected from the time that it is received to the time it is returned or destroyed.

_____ affirms that data either in hard copy form or in the form of non-encrypted removable media will be locked, and that data in electronic form will be stored using encryption that will meet federal and statutory standards.

The data shall be [*check one*] (A) ☐returned to ADE or (B) ☐destroyed when no longer needed or by

[*date* _____], whichever is earlier.

If the data is destroyed, _____ will supply ADE with certification that proper destruction has been conducted.

The data is not meant to be copied, however, any copies that may be made are to be handled with the same level of access and security as the original data, and returned or destroyed as described above.

_____ understands that the data it is to receive by from ADE under this agreement may be sensitive or confidential in whole or in part, and may include individual records about public school enrollment or other data that may be regulated by state or federal law, such as FERPA for student data or HIPPA for health data.

_____ affirms that it will have in place confidentiality agreements for all staff that will be using the data or have access to the data.

_____ understands that it may be possible that individuals could be identified from small portions of the data (e.g., any geography with fewer than 10 cases), and agrees to apply appropriate suppression rules so as to avoid identification of any individuals.

**Release of data, analysis, or interpretation to third parties**

Except as may be provided in this Agreement, _____ agrees that it will not share, publish or otherwise release any findings, conclusions, analyses, reports, or products of any nature derived from the Proprietary Information without prior written approval from ADE.

_____ certifies that any products of the Data released to third parties will be used solely for the purpose(s) described in this Agreement.

_____ shall obtain no right of any kind in the Data, which remains the property of ADE. At completion of the Agreement or termination of the

relationship between _____ and ADE,

_____ shall return all Data to ADE and/or shall destroy all Data (including all computer or electronic files).

ADE retains all rights to the use of the Data. _____ agrees that it will not sell the Data and, except as described in this Agreement, will not share the Data with other parties.

**Source identification:**

_____ will state on any reports that it is solely responsible for any analysis or interpretation of the data.

_____ [*check one*] (A) ☐shall or (B) ☐shall not identify ADE as the source of the data on any reports released or published.

**Renewal schedule**

The duration of data sharing under this agreement shall be from [*date* _____]

to [*date* _____], unless both _____ and ADE agree to extension or renewal.

**Amendment and termination process**

Any amendment to this agreement shall be in writing and by mutual consent of _____

_____ and ADE.

The agreement may be terminated at any time by either party for any reason.

Within [*specify length of time* _____], _____

shall return or destroy the original data supplied and any copies of the data as described above.

**Signature Page**

[NAME OF DATA SHARING ENTITY]

[SIGNATURE] [DATE]

[PRINTED NAME] [TITLE OR FUNCTION]

**Arizona Department of Education**

[SIGNATURE] [DATE]

[PRINTED NAME] [TITLE OR FUNCTION]

**APPENDIX A**

**Data description, content, format, and transmission**

File format (e.g., comma-delimited text file)

Method(s) for transmission (*e.g., email of non-confidential data, mailing of DVDs, picked up by in-person*)

Timing of the data delivery (*e.g., one time, weekly, monthly, annually*)

Fields to be included

Time period the data is to represent

J-119 DSA (09/2005)

**ARIZONA DEPARTMENT OF ECONOMIC SECURITY**
**Information Security Administration,**
**1720 W. Madison St, Room C4, Site 820Z**
**Phoenix, AZ 85007**
**Phone: (602) 254-2779 · Fax: (602) 542-4014**

# DATA-SHARING REQUEST/AGREEMENT

**BETWEEN**

## REQUESTING ENTITY:

Arizona Department of Education
*(DES Division/Administration/Program/Office Name or External Organization Name)*

AND

DATA MANAGER: ARIZONA DEPARTMENT OF ECONOMIC SECURITY

Division of Children, Youth and Families, FBOA, CHILDS
*(Division/Administration/Program/Office Name)*

| | |
|---|---|
| **Effective Date:** __/__/_____ | **Agreement No.:** _____ |

Equal Opportunity Employer/Program
This document available in alternative formats by contacting: (602) 229-2821.



Agreement No.: _____

**SECTION I. REQUEST** ***(Completed by Requesting Entity)***

**Use attachment if necessary**

1a. PURPOSE OF THIS REQUEST (*What information is being requested and why? How will it be used? Give details/specifics.)*

**To enable DES/DCYF to send requests to the Arizona Department of Education (ADE) so that ADE can respond back with education related information of children in the care, custody and control of the DES.**

1b. INFORMATION TECHNOLOGY AND CONNECTIVITY

The requester describes the information technology (IT) environment that will connect to DES. (be explicit – consult your IT personnel for assistance.

**ADE will provide a secure WebService (https/443) that will enable connectivity to the DES**

The requester enters all information required for successful communication between the requesting entity and the DES IT Staff.

Contact Name (1): **Larry Lindain, PMP** Phone: **602-542-7882**
Contact Name (2): Phone:
Contact Address: **1535 W Jefferson St Bin #17 Phoenix AZ 85007**
Contact (1) E-Mail Address: Larry.Lindain@azed.gov Contact (2) E-Mail Address:
Contact Fax No: **602-364-1937**

J-119 DSA (09/2005) - PAGE 3 Agreement No.: _____

## SECTION I - *REQUEST (Completed by Requesting Entity)*

Use attachment if necessary

2. CITE LAW, REGULATION, DIRECTIVE OR OTHER BASIS FOR THIS REQUEST

**The interface between the DES/DCYF CHILDS and the Arizona Department of Education Interface will fulfill educational requirements of the Fostering Connections to Success and Increasing Adoptions Act of 2008 ( a federal law that was introduced as HR 6893 and signed into public law as Public Law 110-351.)**

3. WILL OTHER ENTITIES INTERFACE WITH YOUR AGENCY?

☐ Yes **X** No If Yes, identify entity and reason(s):

4. WILL IINFORMATION BE DISCLOSED/SHARED WITH ANOTHER ENTITY?

☐ Yes **X** No If Yes, identify entity and reason(s) for disclosure:

5. WILL DES DATA BE REPACKAGED/INCLUDED IN OTHER DATA BASES, FILES, TAPES, ETC.

☐ Yes **X** No If Yes, identify entity and reason(s):

6. DESIRED OUTPUT *(Printout, tape, terminal access/display, etc.)*

**XML data stream**

7. DESCRIBE SAFEGUARDS IN PLACE TO GUARD AGAINST UNAUTHORIZED ACCESS/DISCLOSURE OF THE INFORMATION All printouts will be shredded in accordance with DES Policy of disposal of confidential data. All users will sign a J-129, Data Security required Training and Annual Recertification.

| PRINT NAME AND TITLE OF AUTHORIZED CONTACT | PHONE NO. 602-264-3376 x3243<br>FAX 602-264-3585<br>E-MAIL EBaca@azdes.gov | DATE |
|---|---|---|
| Ernest Baca, Project Leader | | 7/9/2009 |

| MAILING ADDRESS/SITE CODE | CITY | STATE | ZIP CODE |
|---|---|---|---|
| 3443 N. Central Avenue, Suite 300<br>Site Code 829Z | Phoenix | AZ | 85012 |

| | | | |
|---|---|---|---|
| | | | |



**Agreement No.:** _____

## SECTION II - STIPULATIONS REGARDING THE USE OF INFORMATION

**STIPULATIONS APPLICABLE TO THE REQUESTING ENTITY:**

1. Disclosure of the data provided to the Requesting Entity is not permitted unless specifically authorized.
2. Repackaging or redistribution of data or screens, or creation of separate files will not be permitted unless specifically authorized.
3. The data shall be used only to assist in valid administrative needs as stated in Section I, item 1 of this Agreement.
4. All data shall be stored in a physically secure facility.
5. All data in electronic format shall be stored or processed so that unauthorized persons cannot retrieve the information by means of a computer, remote access, or other means.
6. Only authorized staff will be given access needed to accomplish the purpose(s) specified in Section I, item 1 of this Agreement.
7. All staff shall attend an authorized data security awareness training class, where they will be instructed on confidentiality, privacy laws and penalties imposed when compliance is breached.
8. A **Request for Terminal Access and Other Activity (J-125)** shall be used to request specific access for each authorized staff member.
9. All authorized staff is required to sign a **User Affirmation Statement (J-129),** as a condition for using requested data.
10. Any personnel changes requiring change or removal of access as described in Section I, item 1 of this Agreement, shall be reported promptly to the respective data security analyst.
11. Federal and state audit and data security personnel may have access to offices and records of the requesting entity to monitor or verify compliance with this agreement.
12. This Data-Sharing Agreement will remain in effect for 2 years from the effective date unless otherwise stipulated.

**STIPULATIONS APPLICABLE TO PROVIDER:**

1. DES will use the Requesting Entity employee identifying information solely for the purpose of establishing on-line access.
2. Only authorized DES employees will have access to requesting agency employee data.
3. In accordance with applicable federal, state, and/or local privacy regulations, DES will protect all information collected from the Requesting Entity.

**STIPULATIONS APPLICABLE TO HIPAA – HEALTH INSURANCE PORTABILITY & ACCOUNTABILITY ACT:**

1. All staff shall attend an authorized HIPAA awareness training class, where they will be instructed on confidentiality, privacy, information safeguards and penalties imposed when compliance is breached.

2. If applicable, there is a "Business Associate Contract" [45 CFR 164.502(e), 154.504(e). 164.532(d) & (e)] on file and will be attached to this data sharing agreement as an addendum.



Agreement No.: _____

## SECTION III. ADDITIONAL INFORMATION

| Print Name<br>Signature _____ | PHONE NO.<br>( ) - | DATE<br>/ / |
|---|---|---|

## SECTION IV (A) RECOMMENDATIONS *(Completed by the data managing program)*

☐ Recommend **APPROVAL**

☐ Request is not recommended for approval.

| Print Name Maeyn Myers/DCYF Security Manager<br>Signature _____ | SITE CODE<br>041C-7 | PHONE NO.<br>(602) 264-3376 | DATE<br>/ / |
|---|---|---|---|

## SECTION IV (B) HIPAA RECOMMENDATIONS *(Completed by the HIPAA DIVISION PRIVACY OFFICER)*

☐ Recommend **APPROVAL**

☐ Request is not recommended for approval.

Print Name Amy Alexander
Signature _____

SITE CODE 030C-3 | PHONE NO. (602) 771-3619 | DATE / /



Agreement No.: _____

## SECTION V. APPROVAL *(Completed by the requesting entity and the data managing program)*

I attest to the correctness of the information provided in Section I and agree to the stipulations and costs listed in Section II and III. I agree to comply with all provisions of the DES Data Security Policy. Should any violations of the DES Data Security Policy occur, this Agreement may be terminated. I further understand that DES will periodically review the terms of the Agreement to ensure it conforms with DES Policies and Procedures. In the event changes in either federal or state law or regulations occur that conflict with the terms of the Agreement or render the terms of the Agreement void, impracticable, or otherwise impossible, this Agreement will terminate immediately. A new Agreement or an amendment to the existing Agreement will be initiated to provide for any changes, which cannot be accommodated within the provisions of the existing Agreement. The Requesting Entity shall hold harmless and indemnify the State of Arizona and its Department of Economic Security for any liability resulting from acts or ommissions attributable to the Requesting Entity.

IN WITNESS HERETO, the PARTIES have executed this Agreement by signature of their duly authorized officials:
**For the Requesting Entity:**

Entity Name

*Print Signatory Name*

Title

Signature

Date
/ /

**For the Department of Economic Security:**

Entity Name
Division of Children, Youth & Families

David E. Longo

Title DCYF Administrator

Signature

Date
/ /

## SECTION VI. APPROVAL *(Completed by the Information Security Administration)*

This signed Agreement meets all requirements necessary to permit the controlled sharing of the DES data while simultaneously providing for the protection of the data. I certify that:

☐ **THIS AGREEMENT CONFORMS to DES Information Security Policy.**

☐ **THIS AGREEMENT DOES NOT CONFORM to the DES Information Security Policy. Implementation of this Agreement cannot proceed until the following action is taken:**

_____

_____

_____

_____

_____

| _____ | Kristy Westphal<br>DES Information Security Administrator | ____/__/____ |
|---|---|---|
| *(Signature)* | *(Title)* | *(DATE)* |

## ROUTING INSTRUCTIONS for J-119

### DATA SHARING AGREEMENT BETWEEN DES ENTITIES:

1. Section I is completed, contact infromation is provided and the document is signed by the requesting Division or Program Assistant Director, Program Administrator or designee. The requesting entity Division or Program Security Analyst sends the document to the Data Managing Division/Program Security Analyst. The DSA/PSA from the Data Managing Division/Program will complete Section III and the recommendation in Section IV. If applicable, the Division HIPAA Privacy Officer will complete the recommendation in Section IV. Reason must be given if request is not recommended for approval. Section V is signed and dated by the Data Managing Assistant Director, Program Administrator or designee.

   **EXCEPTION:** All DERS Employment Administration Data Sharing Agreements contain numerous addendums. These data sharing agreements should not be signed by the requesting entity at the time of submittal. The DERS-EA will return the initial agreement with addendums to the requesting entity for review and then signature. The process will then proceed as indicated in No.1 above.

2. The data managing Division/Program Security Analyst forwards the agreement to the Information Security Administration (Site Code 859Z). The agreement is signed, numbered and dated by the Information Security Administrator. The original agreement is filed in the DES Information Security Administration and entered into the master log. The agreement is not final until signed by the Information Security Administrator. A copy of the agreement is sent to both the requesting entity DSA/PSA and the Data Managing DSA/PSA.

**NOTE:**
When the agreement is modified during the approval process, both entities must review the modifications and resign/date the document.

### DATA-SHARING AGREEMENT BETWEEN DES AND AN EXTERNAL ENTITY:

1. Section I is completed by the requesting external entity and Section V is signed and dated by the signatory. The agreement is sent to the DES Information Security Administration, 1717 W Jefferson, Room 114, Phoenix, AZ 85007 (Site Code 859Z), for review and coordination.

   **EXCEPTION:** All DERS Employment Administration Data Sharing Agreements contain numerous addendums. These data sharing agreements should not be signed by the requesting entity at the time of submittal. The DERS-EA will return the initial agreement with addendums to the requesting entity for review and then signature. The process will then proceed to No 2.

2. The Information Security Administration will distribute the agreement to all applicable Data Managing Division or Program Security Analysts (DSA/PSA). The Data Managing DSA/PSA will complete Section III (if required) and the recommendation in Section IV. If applicable, the Division HIPAA Privacy Officer will complete the recommendation in Section IV. Reason must be given if request is not recommended for approval. Section V is signed and dated by the Data Managing Assistant Director, Program Administrator or designee.

3. The agreement is sent to the DES Information Security Administrator, 1717 W Jefferson, Room 114, Phoenix, AZ 85007 (Site Code 859Z), for review. The agreement is then signed, numbered and dated by the Information Security Administrator. The original agreement is filed in the DES Information Security Administration and entered into the master log. The Agreement is not final until signed by the Information Security Administrator. A copy of the Agreement is sent to both the requesting external entity and the Data Managing DSA/PSA.

**NOTE:**
When the agreement is modified during the approval process, both entities must review the modifications and resign/date the document.

Arizona Department of Education

# Arizona Education SLDS & Data Warehouse Project

## NCES Project Review

April 27, 2010

# Table of Contents

**Arizona Education SLDS & Data Warehouse Project Agenda**
NCES Project Review, April 27, 2010

| Topic | Minutes | Facilitator | Assignee | Start Time | Location |
|---|---|---|---|---|---|
| **Continental Breakfast** | 15 | | | 8:15 | 409 |
| | | | | | |
| **Introductions and Overview** | | | | | |
| Introductions | 10 | Shared | Don | 8:30 | 409 |
| Background and political context | 5 | AZ team | Don | 8:40 | 409 |
| | | | | | |
| **Project Background** | | | | | |
| Overview of ADE current systems and processes | 30 | AZ Team | Myrna | 8:45 | 409 |
| New data collection architecture and the Teacher-Student connection | 15 | AZ Team | Larry | 9:15 | 409 |
| | | | | | |
| **Break** | 10 | | | 9:30 | 409 |
| | | | | | |
| **Arizona Education Data Warehouse** | | | | | |
| AEDW project overview | 20 | NCES | Ilana | 9:40 | 409 |
| AEDW technical architecture | 20 | NCES | Surya | 10:00 | 409 |
| AEDW construction process | 20 | NCES | Orion | 10:20 | 409 |
| EDUACCESS - secure ADE access | 15 | NCES | Jenner | 10:40 | 409 |
| Secure AEDW access | 15 | NCES | Qais | 10:55 | 409 |
| ADE infrastructure technology | 15 | NCES | Keith | 11:10 | 409 |
| | | | | | |
| **Governance** | | | | | |
| Data Governance | 45 | NCES | Rick/Mardy | 11:25 | 409 |
| | | | | | |
| **Lunch and Open Discussion** | 50 | | | 12:10 | 409 |
| | | | | | |
| **DEMOS - Training Tools, Portals, Reports** | | | | | |
| DW hands-on demo | 60 | AZ team | Nancy | 1:00 | B2 |
| DW user training overview | 10 | AZ Team | Nancy | 2:00 | B2 |
| | | | | | |
| **Stakeholders** | | | | | |
| Stakeholder overview | 10 | NCES | Ilana | 2:15 | 409 |
| Stakeholders Exchange | 50 | NCES | | 2:30 | 409 |
| | | | | | |
| **Break** | 10 | | | 3:20 | |
| | | | | | |
| **Courtesy Meeting with Margaret Garcia Dugan, Deputy Superintendent of Schools** | 30 | NCES | | 3:30 | Margaret's Office |

NCES Project Review
April 27, 2010

# Attendees

## NCES

**Rosemary Collins**, NCES Program Analyst, Statewide Longitudinal Data Systems Grant Program

**Tate Gould,** NCES Research Scientist

## ADE

**Alexandra Jones**, AEDW Data Analyst

**Donald Houde**, ADE Chief Information Officer

**Ilana Licht**, AEDW Project Manager

**Jenner Holden**, Director of Information Security

**Keith Boesel**, Director of IT Infrastructure

**Larry Lindain**, Director of System Development

**Mardy Cruz**, Manager of Data Management

**Myrna Johnson**, AEDW Business Analyst

**Nancy Quinn**, AEDW Lead Trainer

**Orion Gebremedhin**, AEDW Developer

**Qais Gharib**, AEDW SharePoint Interface Developer

**Rich Rachkofski**, Director of Data Management

**Sina Mowzoon**, AEDW QA Lead Analyst

**Surya Vipparthy**, AEDW Lead Developer

# Introductions and Overview - Donald Houde

# Introductions

- **Donald Houde**, ADE Chief Information Officer
- **Jenner Holden**, Director of Information Security
- **Keith Boesel**, Director of IT Infrastructure
- **Larry Lindain**, Director of System Development

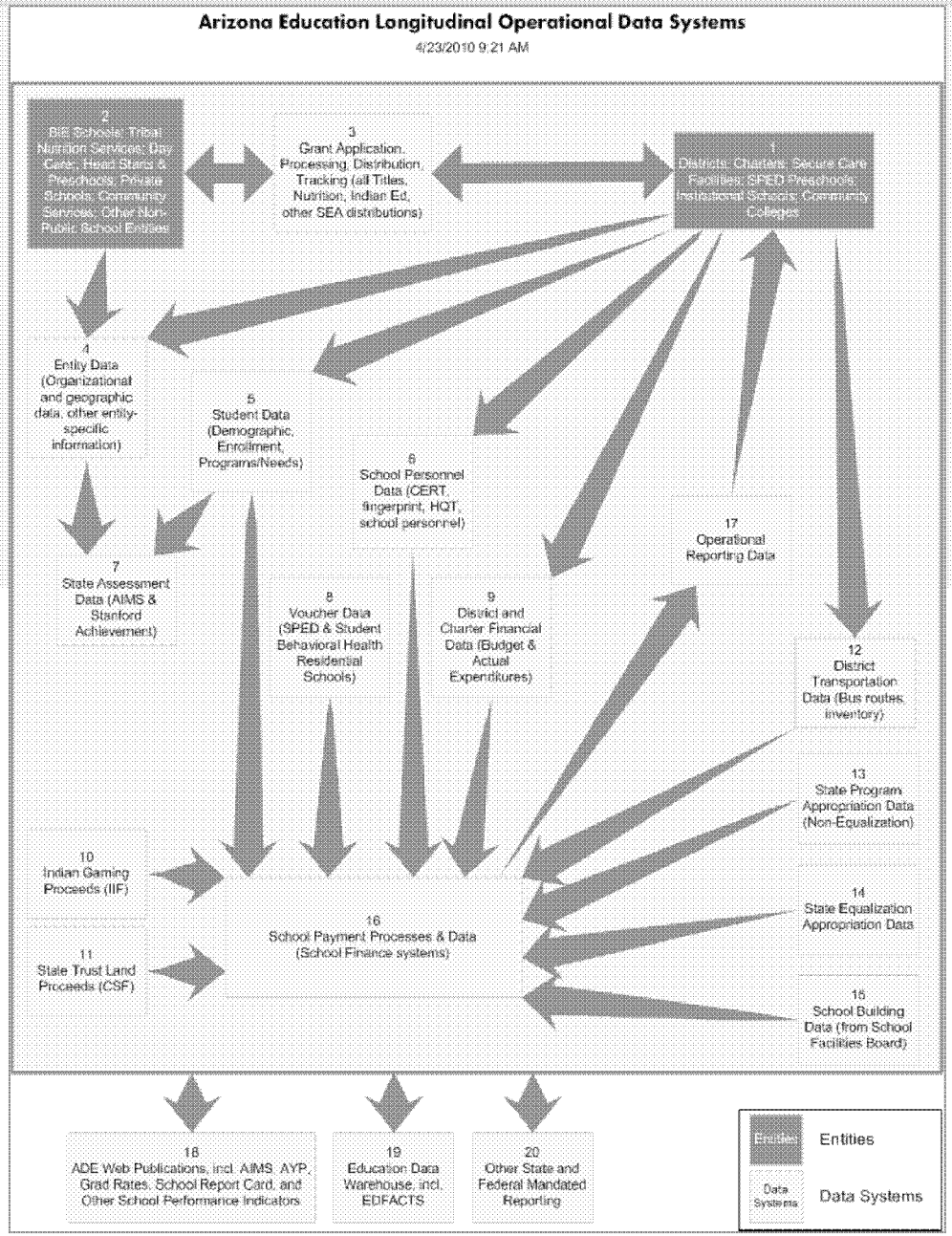
- **Rich Rachkofski**, Director of Data Management
- **Mardy Cruz**, Manager of Data Management

- **Ilana Licht**, AEDW Project Manager
- **Alexandra Jones**, AEDW Data Analyst
- **Myrna Johnson**, AEDW Business Analyst
- **Nancy Quinn**, AEDW Lead Trainer
- **Orion Gebremedhin**, AEDW Developer
- **Qais Gharib**, AEDW SharePoint Interface Developer
- **Sina Mowzoon**, AEDW QA Lead Analyst
- **Surya Vipparthy**, AEDW Lead Developer

# Current ADE Environment - Myrna Johnson

# Current ADE Environment

- Arizona education longitudinal operational data systems overview
- Arizona SEA funding overview
- Population challenges

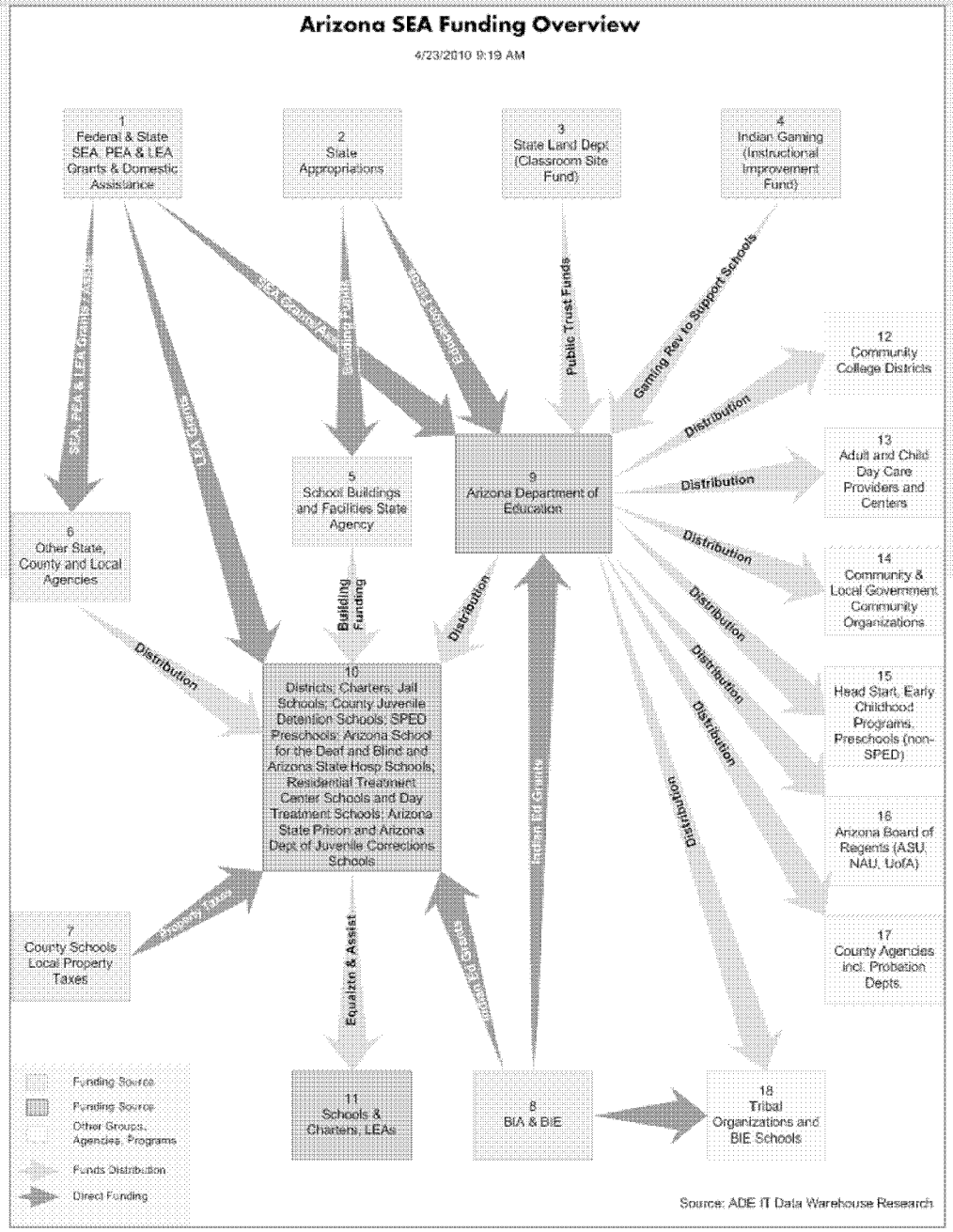

Arizona Education Longitudinal Operational Data Systems
4/23/2010 9:21 AM
2
BIE Schools; Tribal Nutrition Services; Day Care; Head Starts & Preschools; Private Schools; Community Services; Other Non-Public School Entities
3
Grant Application, Processing, Distribution, Tracking (all Titles, Nutrition, Indian Ed, other SEA distributions)
1
Districts; Charters; Secure Care Facilities; SPED Preschools; Institutional Schools; Community Colleges
4
Entity Data (Organizational and geographic data, other entity-specific information)
5
Student Data (Demographic, Enrollment, Programs/Needs)
6
School Personnel Data (CERT, fingerprint, HQT, school personnel)
17
Operational Reporting Data
7
State Assessment Data (AIMS & Stanford Achievement)
8
Voucher Data (SPED & Student Behavioral Health Residential Schools)
9
District and Charter Financial Data (Budget & Actual Expenditures)
12
District Transportation Data (Bus routes, inventory)
13
State Program Appropriation Data (Non-Equalization)
10
Indian Gaming Proceeds (IIF)
14
State Equalization Appropriation Data
11
State Trust Land Proceeds (CSF)
16
School Payment Processes & Data (School Finance systems)
15
School Building Data (from School Facilities Board)
18
ADE Web Publications, incl. AIMS, AYP, Grad Rates, School Report Card, and Other School Performance Indicators
19
Education Data Warehouse, incl. EDFACTS
20
Other State and Federal Mandated Reporting
Entities
Entities
Data Systems
Data Systems

# Longitudinal Operational Data Systems Map Definitions

| Box | Definition |
|---|---|
| 1 | Public school-based entities, including districts, charters, secure care |
| 2 | Non-public schools, preschools and daycares, community groups, and tribal entities |
| 3 | Grants management administers, allocates, and tracks performance for all SEA-based grants, including US Ed Titles, USDA nutrition funding, Indian education, US Dept of Labor. Grants are administered and distributed to both public and non-public entities (# 1 & 2). |
| 4 | Entity master data includes a unique identifier, geographic, personnel, charter-specific, grades, and contacts and other attributes used by specific ADE systems or processes. Master data is collected for entities in #1 & 2. |
| 5 | Student data includes a unique identifier, enrolled school, attendance, programs and needs, and grade, as well as status from the ELL and SPED assessment processes, incidents and disciplinary actions. Student-specific data is submitted to ADE by public schools (# 1); other data is added by ADE processes. |
| 6 | School personnel data encompasses both certified and non-certified staff and includes fingerprint data, certification status, experience, education, highly-qualified status. Personnel data is submitted to ADE by public schools (# 1). |
| 7 | Standardized testing results for AIMS and the Stanford Achievement Test. Assessment data are stored in this database. Students are tested in grades 3-8 and HS for AIMS, along with SAT testing in grades 2 & 9. |
| 8 | Students who require specialty services at SPED or behavioral health residential treatment schools are currently tracked and funded through a separate process. |
| 9 | Districts and charters submit budgets and actual expenditure data that are used for payment processes, auditing, and state compliance reporting. |

# Longitudinal Operational Data Systems
# Map Definitions (Cont'd)

| Box | Definition |
|---|---|
| 10 | Indian gaming proceeds (required by statute) are distributed through the school payments process. |
| 11 | State trust land proceeds (required by statute and known as "Classroom Site Funds") are distributed through the school payments process. |
| 12 | Public districts provide student transportation data, bus routes, and vehicle inventory information. |
| 13 | Non-equalization-based state appropriations for school projects are administered and tracked by separate systems. Includes teacher bonuses and mandated matching funds for Title III and other US Ed programs. |
| 14 | Equalization appropriations are used to balance public district funding against local property tax revenues in a statutory formula. Funds are allocated and tracked through the primary school finance system. |
| 15 | Public district school buildings and maintenance are provided through another state agency, which provides data to ADE. |
| 16 | School payment processes include allocation, payments, auditing, and reporting for all #1 entities, as well as other financial services required by statute. |
| 17 | Operational and financial reporting as a result of #16 is available to #1 entities. |
| 18 | Web-published data is available on ADE's public sites, including financial data for districts and counties, aggregate student data and assessment results, performance measures (AYP, AMAO, AZLEARNS, graduation/dropout/attendance rates), entity geographic and other data on the school report cards, and state performance aggregates. |
| 19 | The AEDW pulls data from all applicable source systems and transforms it into a cube with measures. The cube is also used for EDFACTS reporting. |
| 20 | Non-public facing state or federal mandated reporting generated through a number of systems or queries. |


Arizona SEA Funding Overview
4/23/2010 9:19 AM
1 Federal & State SEA, PEA & LEA Grants & Domestic Assistance
2 State Appropriations
3 State Land Dept (Classroom Site Fund)
4 Indian Gaming (Instructional Improvement Fund)
SEA, PEA & LEA Grants
LEA Grants
IGA Gaming $
Building Funding
Equalization Funding
Public Trust Funds
Gaming Rev to Support Schools
5 School Buildings and Facilities State Agency
9 Arizona Department of Education
6 Other State, County and Local Agencies
Distribution
Building Funding
10 Districts; Charters; Jail Schools; County Juvenile Detention Schools; SPED Preschools; Arizona School for the Deaf and Blind and Arizona State Hosp Schools; Residential Treatment Center Schools and Day Treatment Schools; Arizona State Prison and Arizona Dept of Juvenile Corrections Schools
Tribal IA Grants
12 Community College Districts
13 Adult and Child Day Care Providers and Centers
14 Community & Local Government Community Organizations
15 Head Start, Early Childhood Programs, Preschools (non-SPED)
16 Arizona Board of Regents (ASU, NAU, UofA)
17 County Agencies incl. Probation Depts.
7 County Schools Local Property Taxes
Property Taxes
Equalizn & Assist
Tribal IA Grants
11 Schools & Charters, LEAs
8 BIA & BIE
18 Tribal Organizations and BIE Schools
Funding Source
Funding Source
Other Groups, Agencies, Programs
Funds Distribution
Direct Funding
Source: ADE IT Data Warehouse Research

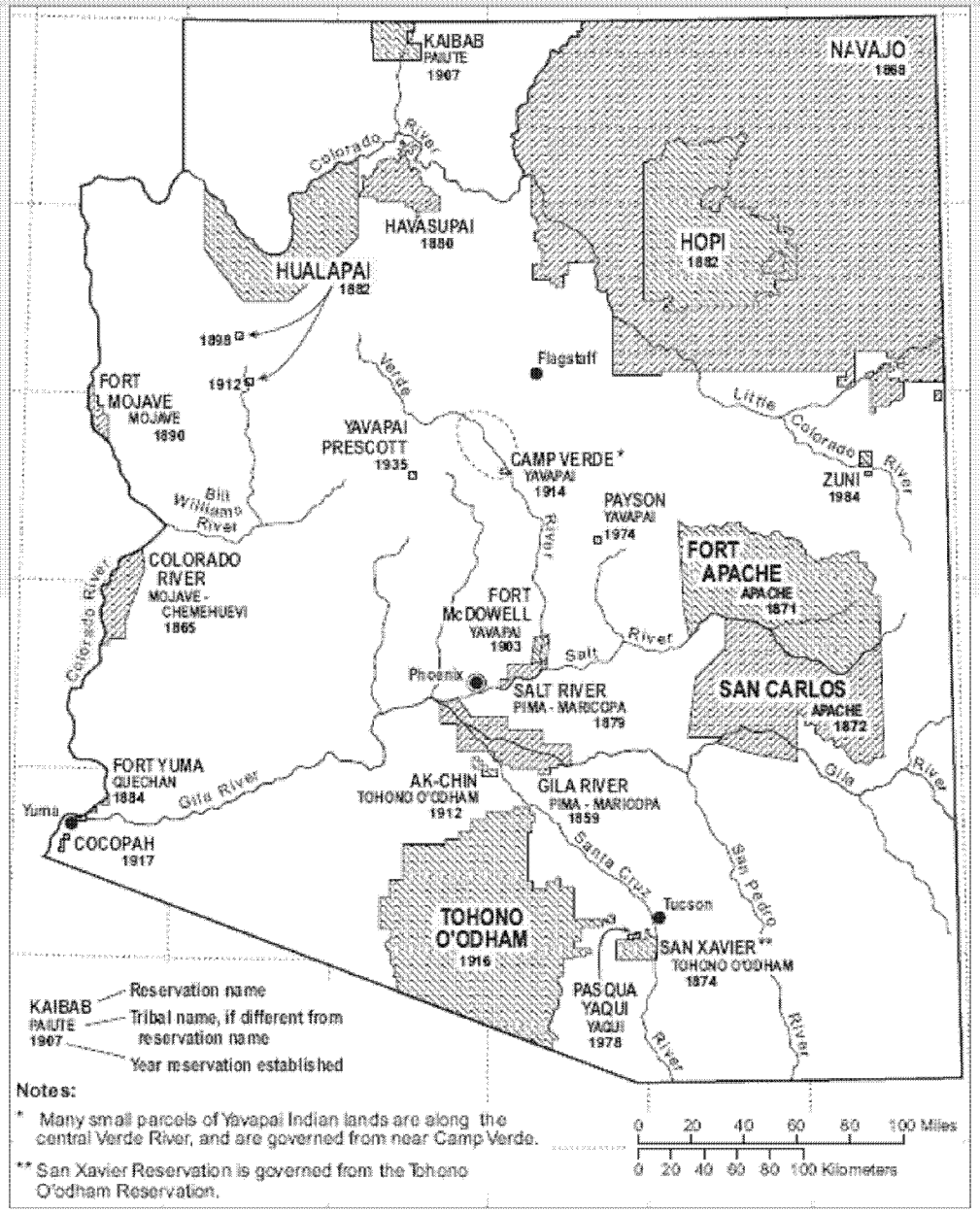
# Arizona SEA Funding Overview Map Definitions

| Box | Definition |
|---|---|
| 1 | Federal and State SEA, PEA, and LEA grants and domestic assistance are awarded to entities. SEA monies are distributed to ADE, the state universities and county Educational Service Agencies. PEA funds are received by the AZ Supreme Court for use in the juvenile justice system. LEA grants are received directly by districts, charters, and other entities. |
| 2 | State appropriations are determined for each fiscal year and funds distributed to ADE and the School Facilities Board. |
| 3 | The State Land Department collects State Trust Land proceeds and passes them to ADE as Classroom Site Funds. |
| 4 | Indian Gaming proceeds are passed to ADE and redistributed to schools as Instructional Improvement Funds. |
| 5 | The School Facilities Board provides building funds to regular public districts. |
| 6 | County and local agencies, including corrections and detention facilities, receive direct LEA grants and assistance from federal or state agencies. |
| 7 | Counties distributed the collected property taxes to the districts in their county. The value of the taxes is used to determine state equalization payments. |

# Arizona SEA Funding Overview Map Definitions (Cont'd)

| Box | Definition |
|---|---|
| 8 | Some of the funds received by BIA/BIE are redistributed to ADE for Indian Education under the Johnson O'Malley Act. |
| 9 | ADE receives, tracks, allocates, and administers funds primarily through the School Finance processes or via the Grants Management group including Child Nutrition Program funding. |
| 10 | Public school-based entities receive funds from a variety of sources, predominately ADE. The funds are distributed at the administrative level (district, charterholder, private facility owner). |
| 11 | Schools, charters, and other facilities (like behavioral health and secure care) receive funds from their parent entity. |
| 12-17 | These entities receive services and support from ADE for a variety of programs, like adult literacy and early childhood. They also receive SEA grant distributions as appropriate, like Child Nutrition Program funding for Head Starts and child or adult day cares. |
| 18 | Tribal organizations and BIE schools receive support and services from ADE for targeted programs, as well as grant distribution primarily for child nutrition. Public districts and charters physically located on the 21 tribal reservations receive regular public funding from School Finance. |

There are 21 tribal reservations in Arizona—a third of all US reservations—most of which have public school districts and/or charter schools physically located on the reservation lands. There are about 65,000 ethnically American Indian students enrolled in Arizona public schools and thousands more served by BIE schools within Arizona.




Map Source: Arizona Geographic Alliance, ASU

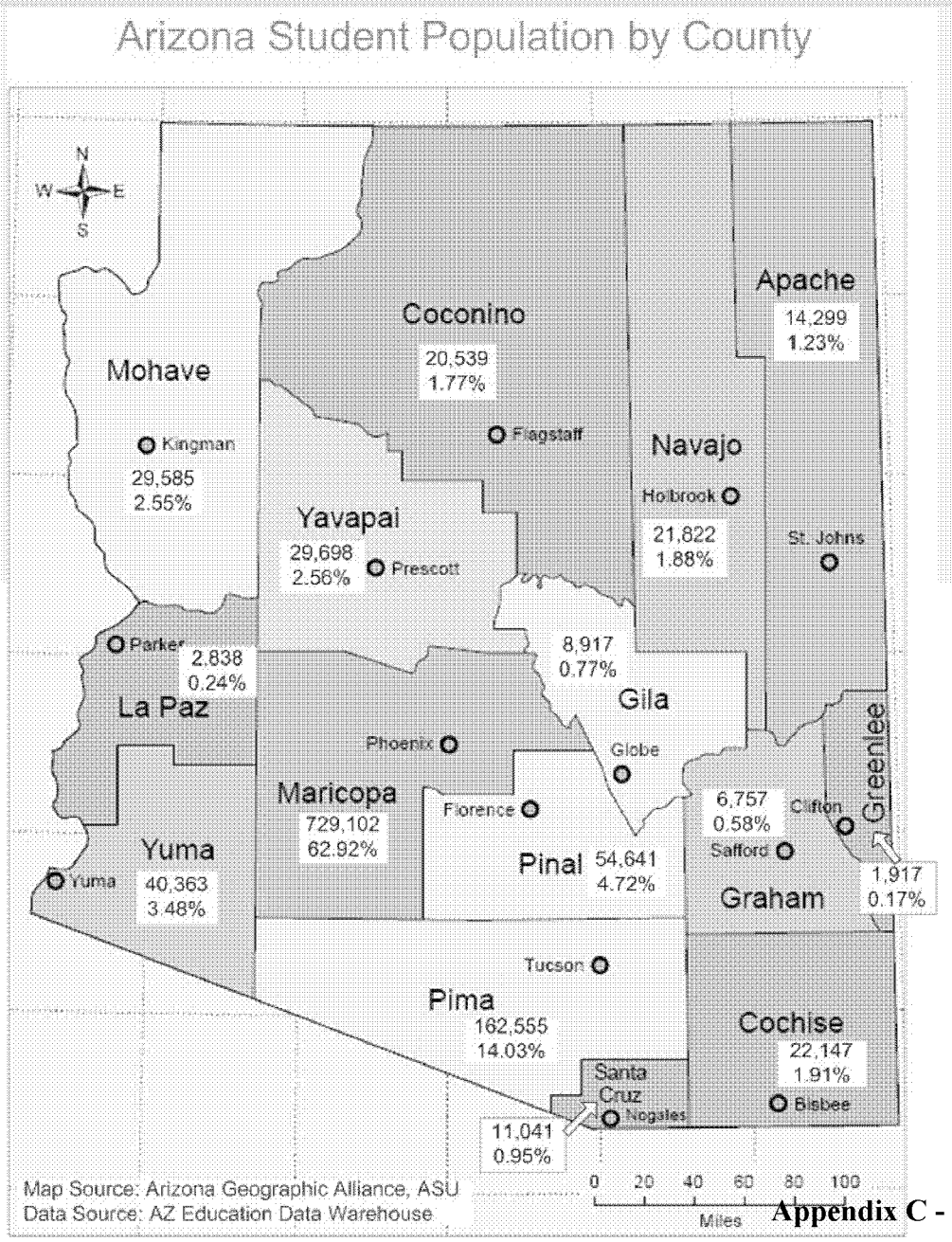
# Arizona Student Ethnicity Composition, 2003-2009

| Student Year End Outcome Count | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| Ethnicity | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| American Indian or Alaskan Native (I) | 66,225 | 66,360 | 66,151 | 66,631 | 65,885 | 65,612 | 65,023 |
| Asian or Pacific Islander (A) | 22,508 | 23,757 | 25,728 | 28,477 | 30,669 | 32,923 | 34,746 |
| Black or African-American (Not Hispanic) (B) | 51,437 | 53,783 | 57,464 | 61,799 | 64,651 | 67,718 | 69,804 |
| Hispanic or Latino (H) | 381,080 | 401,982 | 426,057 | 450,697 | 473,644 | 484,516 | 480,928 |
| White (Not Hispanic) (W) | 500,410 | 502,018 | 507,708 | 512,074 | 511,693 | 510,637 | 509,062 |
| **Grand Total** | **1,021,660** | **1,047,900** | **1,083,108** | **1,119,678** | **1,146,542** | **1,161,406** | **1,159,563** |

| Student Year End Outcome Count | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| Ethnicity | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| American Indian or Alaskan Native (I) | 6.48% | 6.33% | 6.11% | 5.95% | 5.75% | 5.65% | 5.61% |
| Asian or Pacific Islander (A) | 2.20% | 2.27% | 2.38% | 2.54% | 2.67% | 2.83% | 3.00% |
| Black or African-American (Not Hispanic) (B) | 5.03% | 5.13% | 5.31% | 5.52% | 5.64% | 5.83% | 6.02% |
| Hispanic or Latino (H) | 37.30% | 38.36% | 39.34% | 40.25% | 41.31% | 41.72% | 41.47% |
| White (Not Hispanic) (W) | 48.98% | 47.91% | 46.88% | 45.73% | 44.63% | 43.97% | 43.90% |
| **Grand Total** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** |

Source: AZ Education Data Warehouse

2009 Arizona student populations are concentrated in Maricopa and Pima counties. All other counties are predominantly rural and/or reservation areas with widely dispersed small schools.



# Arizona Education Longitudinal Operational Data Systems

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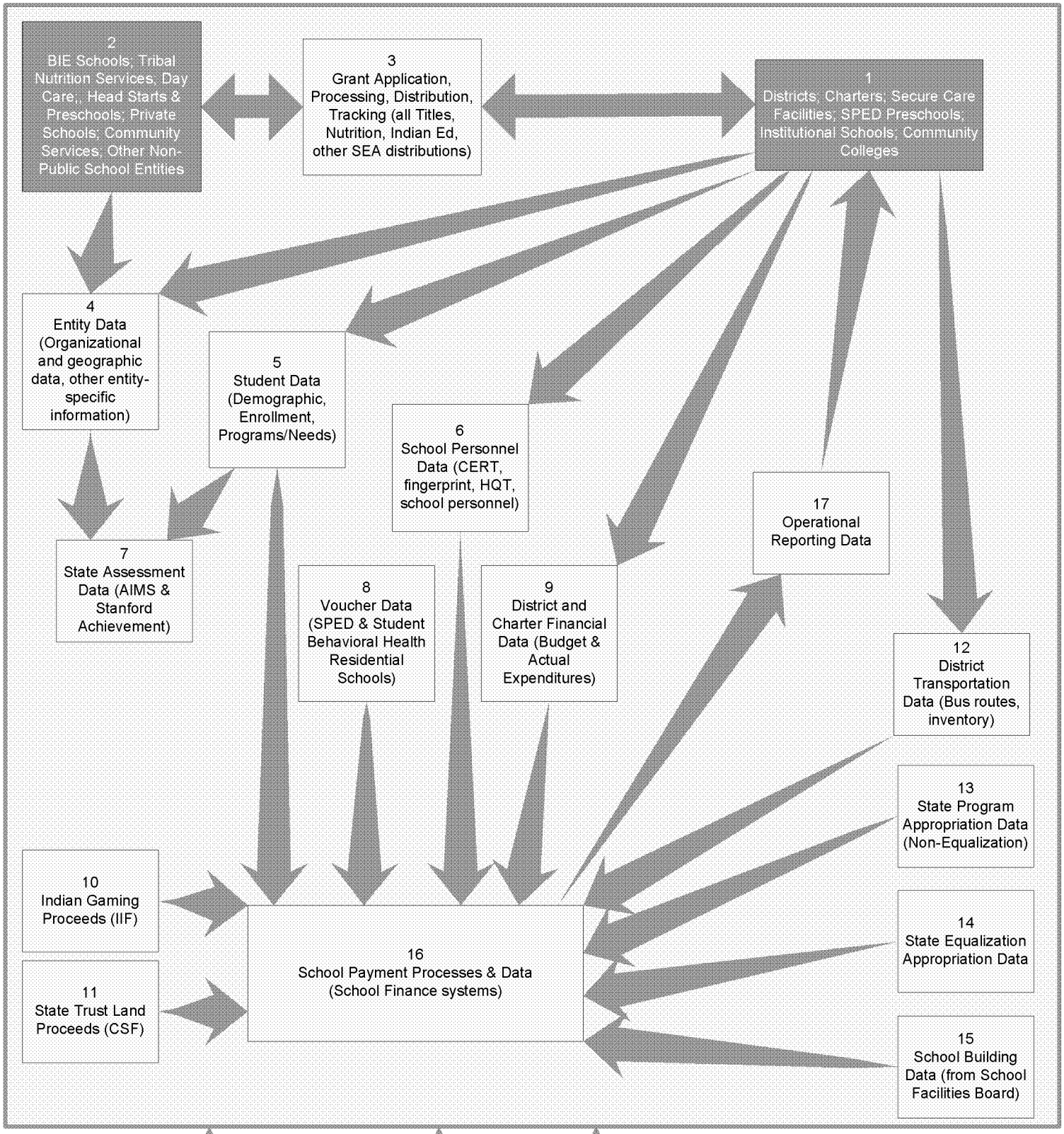

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# Arizona SEA Funding Overview

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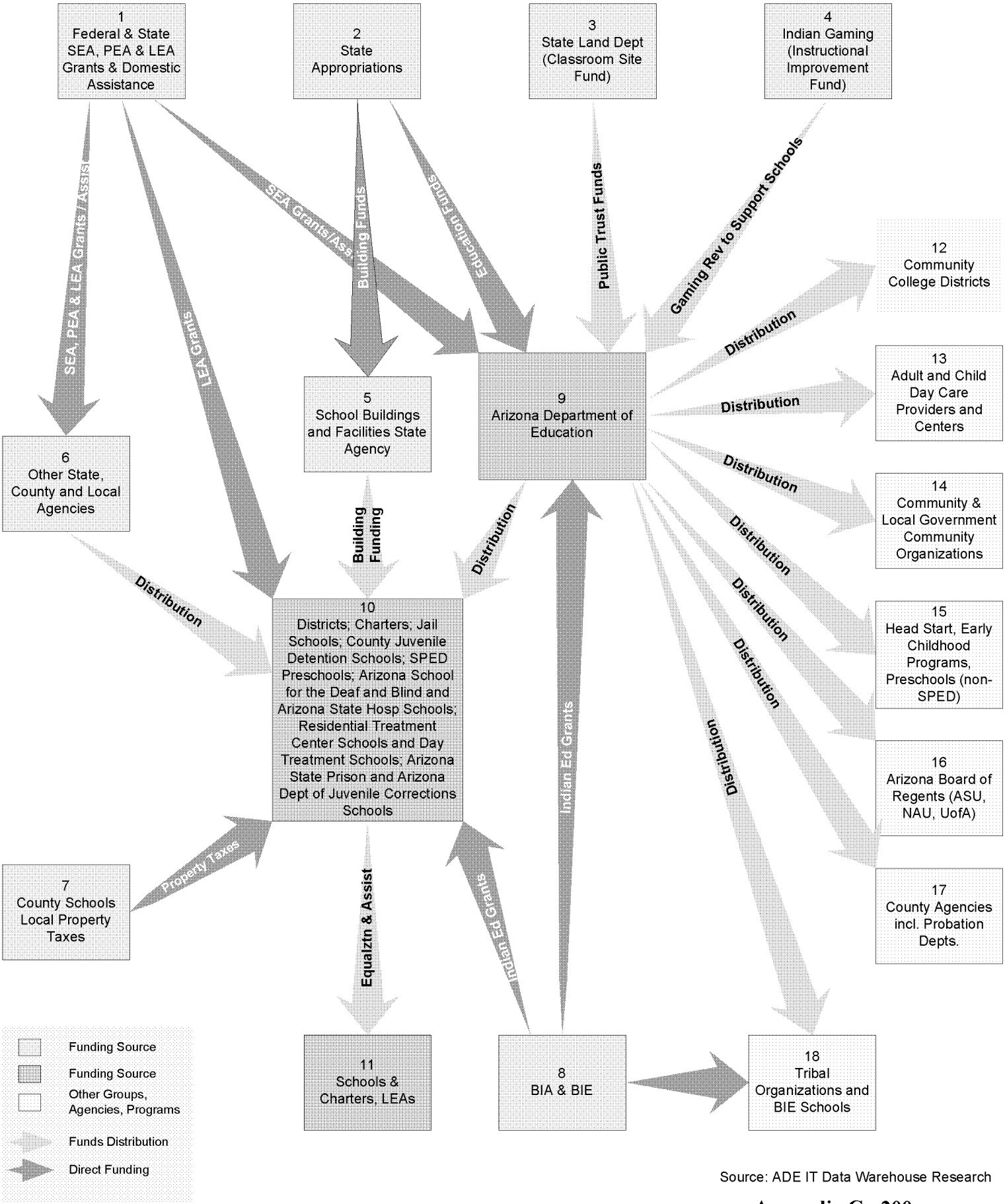


Source: ADE IT Data Warehouse Research

Arizona SEA Funding Overview Map Definitions
NCES Project Review 4/27/10

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# 1. Federal and State SEA, PEA and LEA Grants and Domestic Assistance

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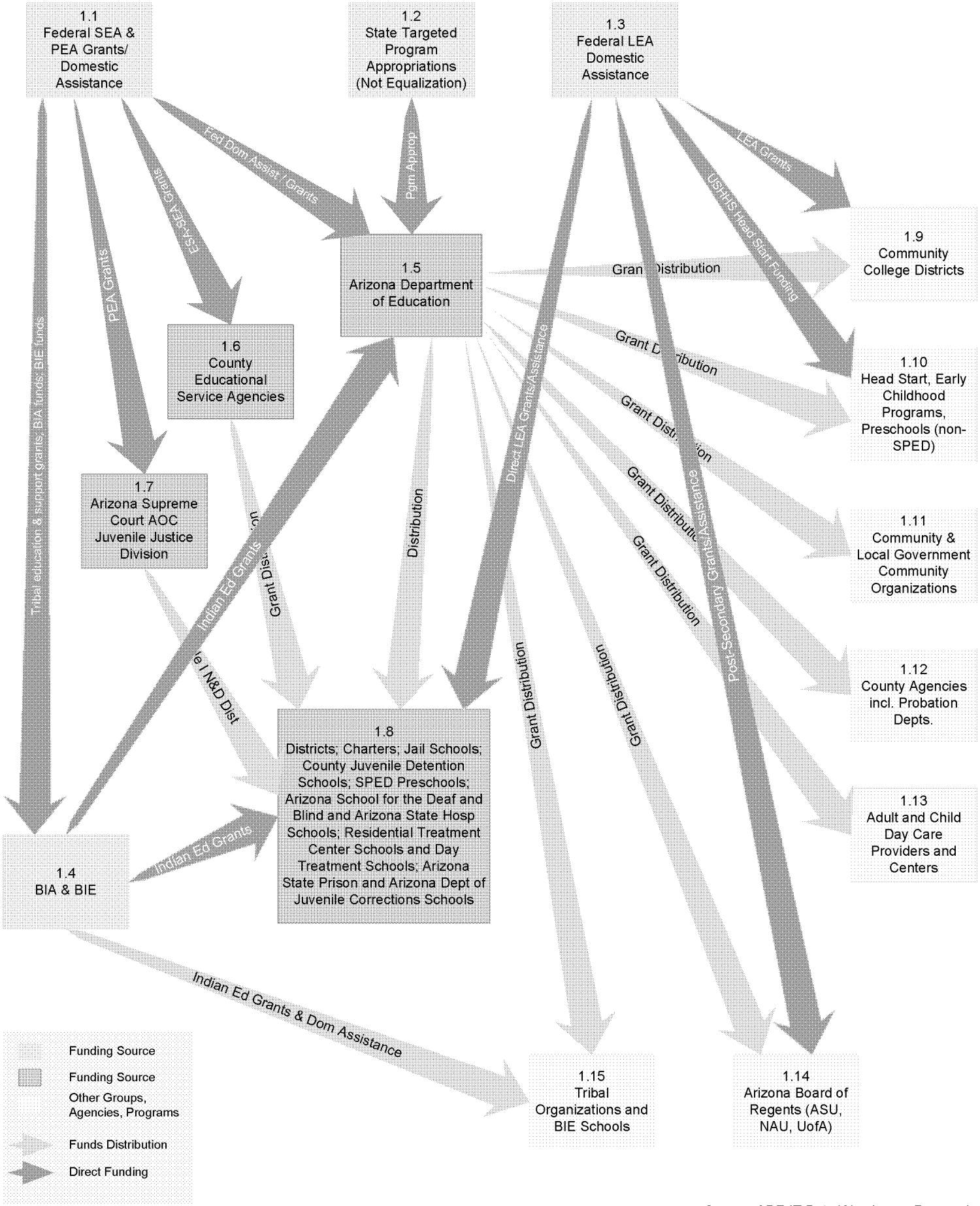
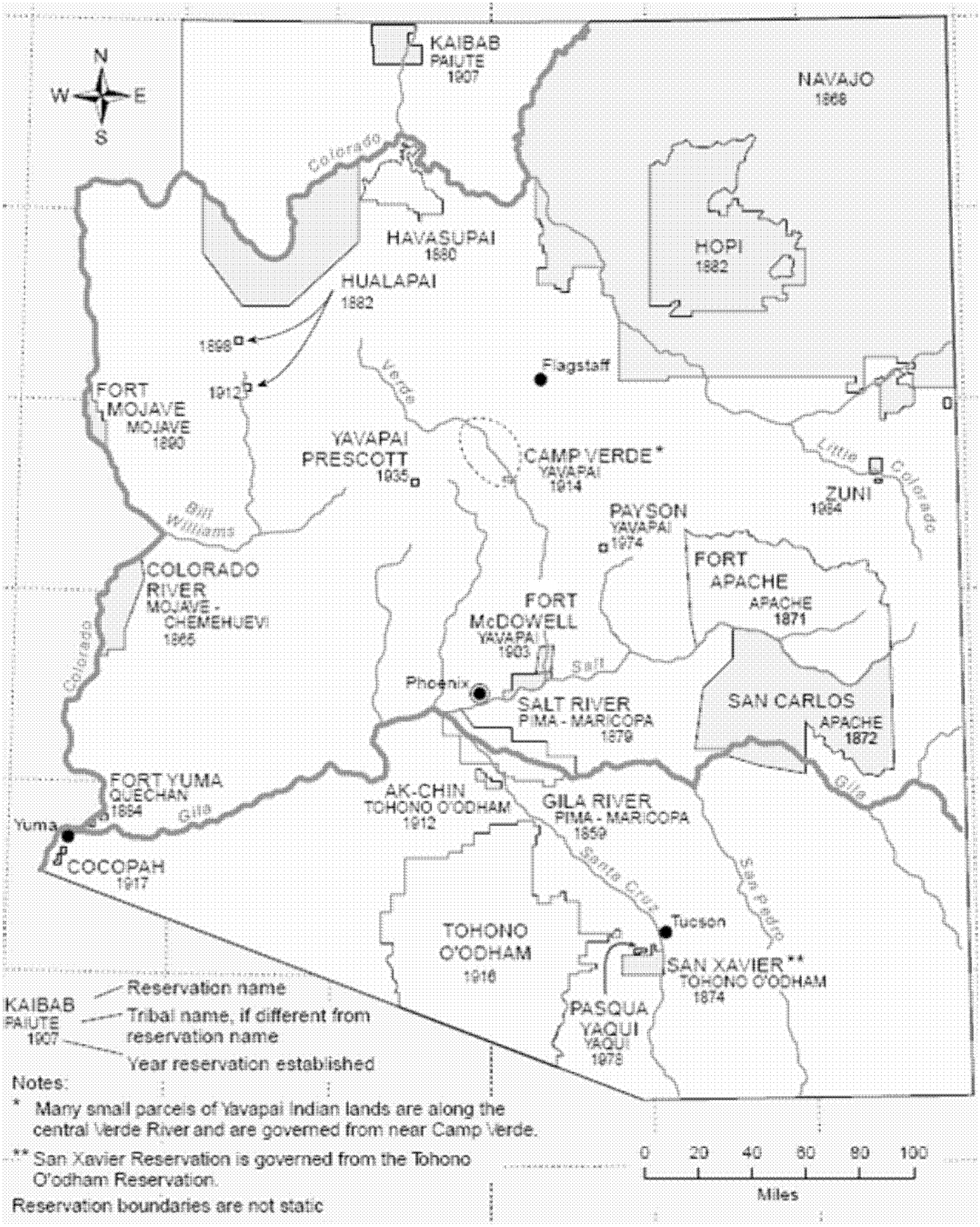


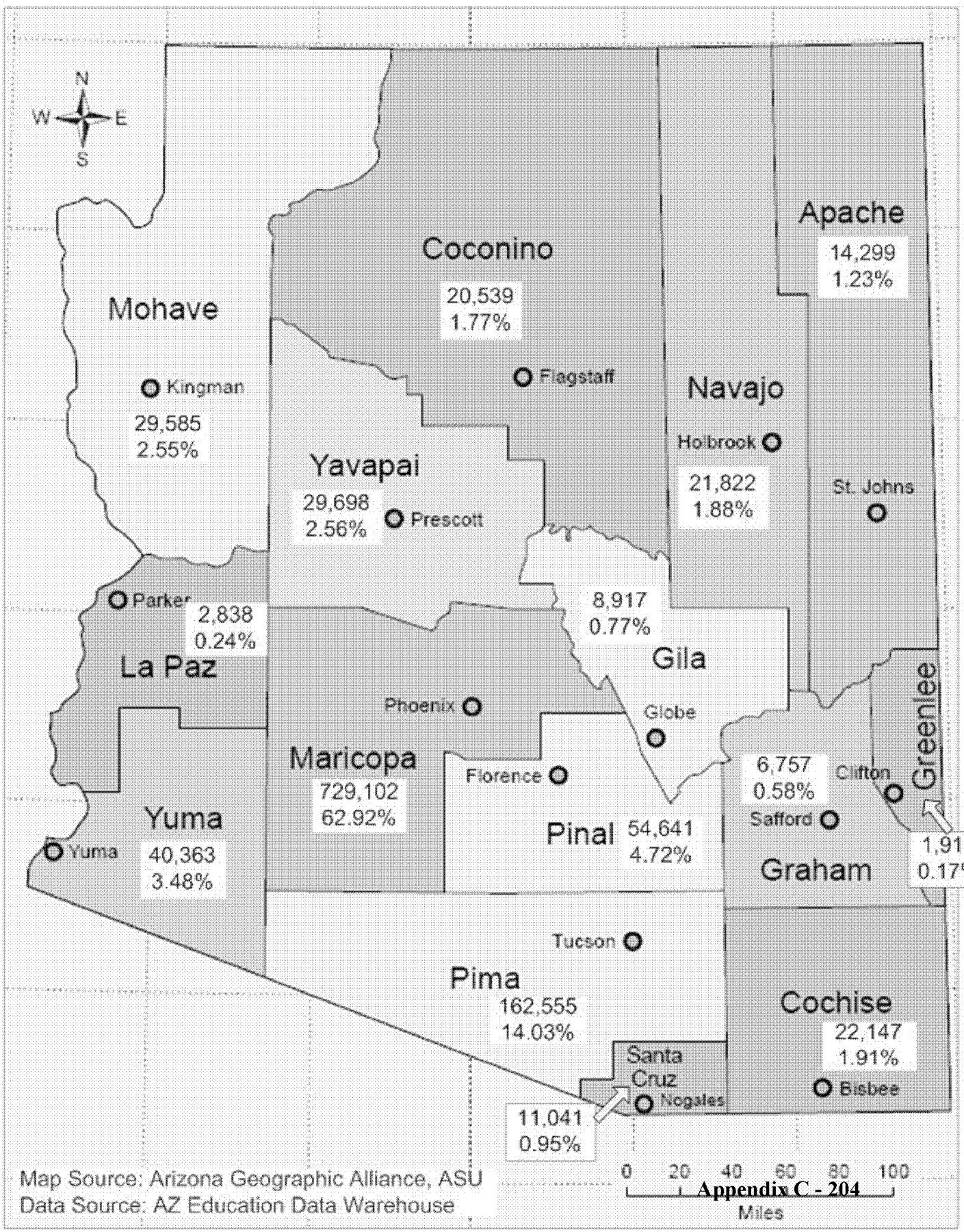

Source: ADE IT Data Warehouse Research

# Arizona Indian Reservations




Map Source: Arizona Geographic Alliance, ASU

# Arizona Student Population by County



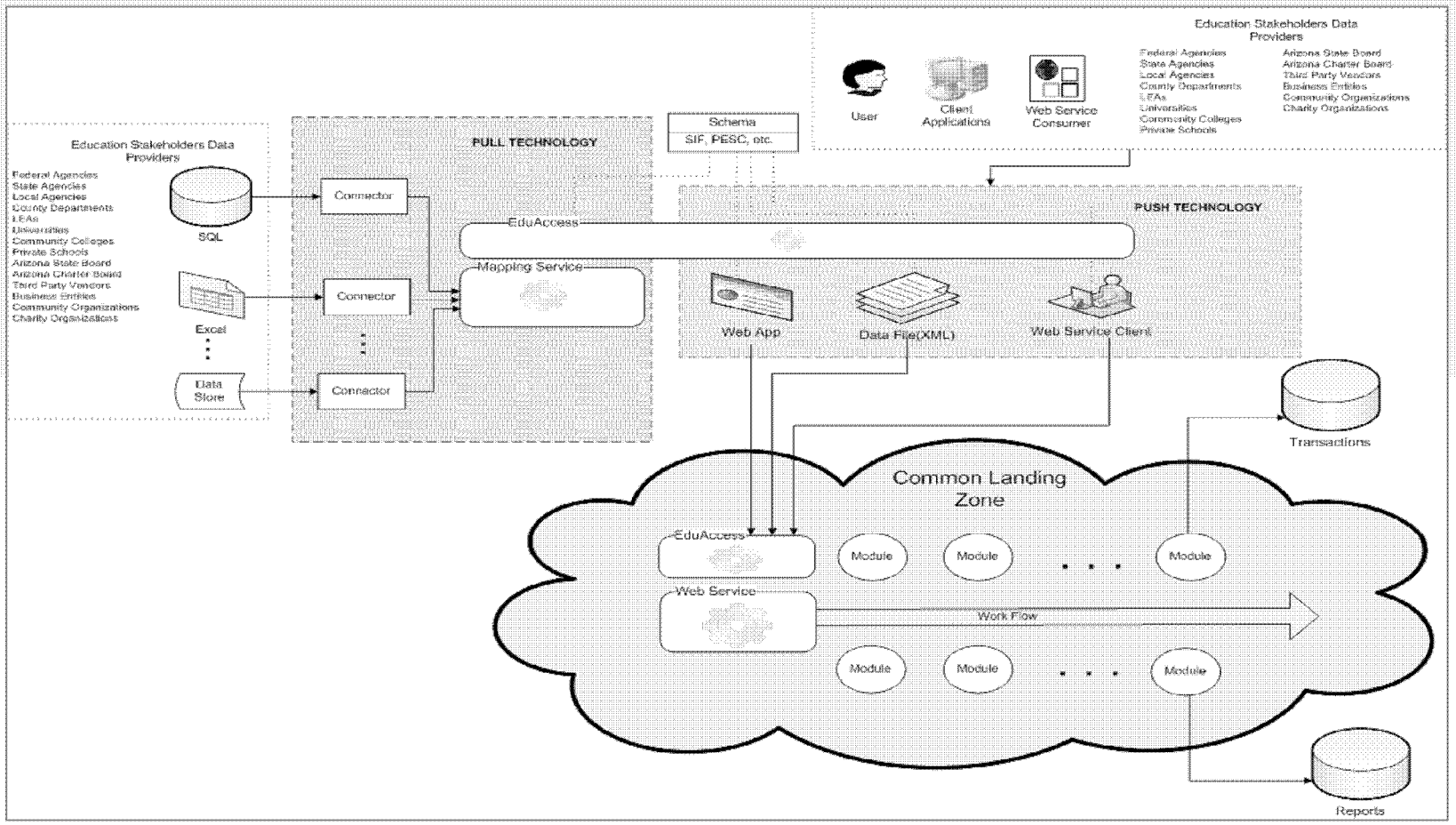

Map Source: Arizona Geographic Alliance, ASU
Data Source: AZ Education Data Warehouse

# Data Collection Processes- Larry Lindain

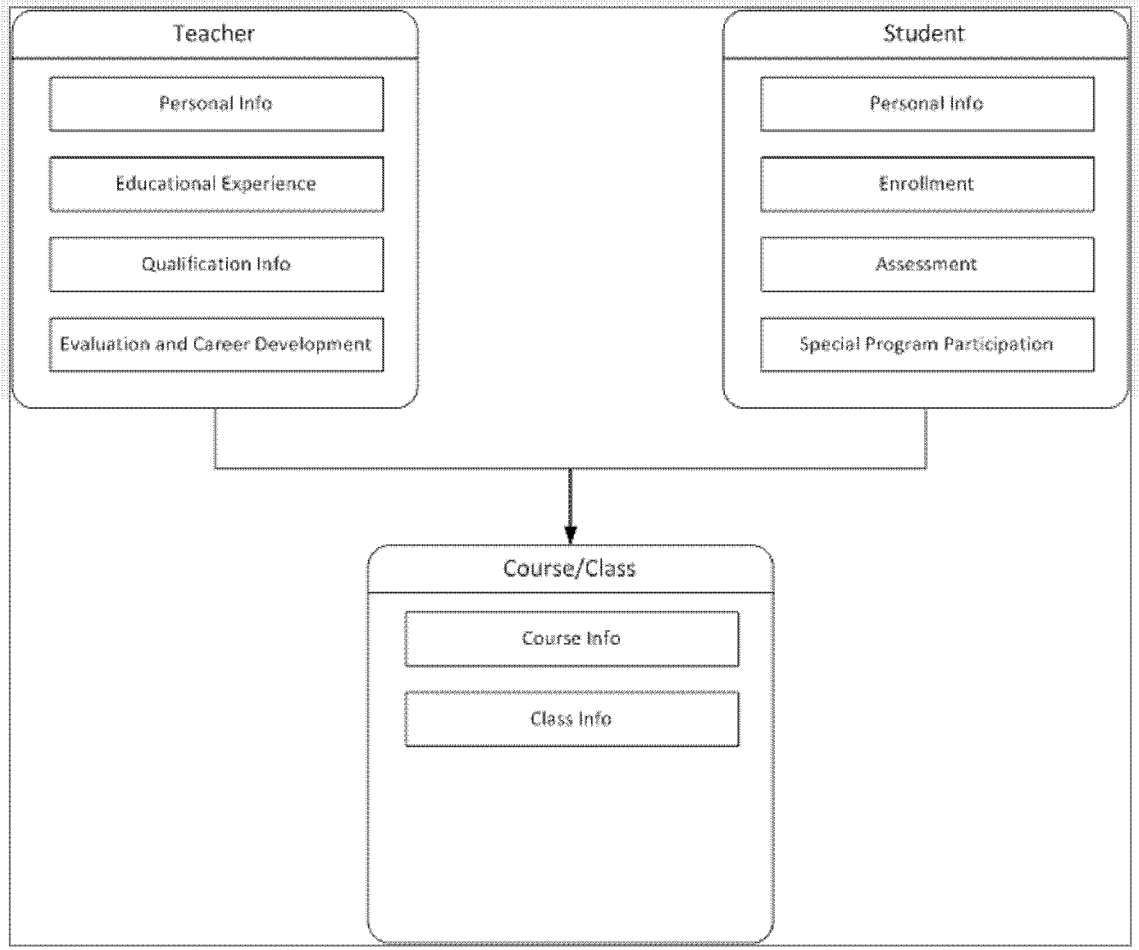
# Technical User eXperience – TUX Overview

- User entry web form
- Templates / standard controls
- Consistent behavior
- Object reusability
- Optimized data validation
- Increased security
- Leverages EDUACCESS

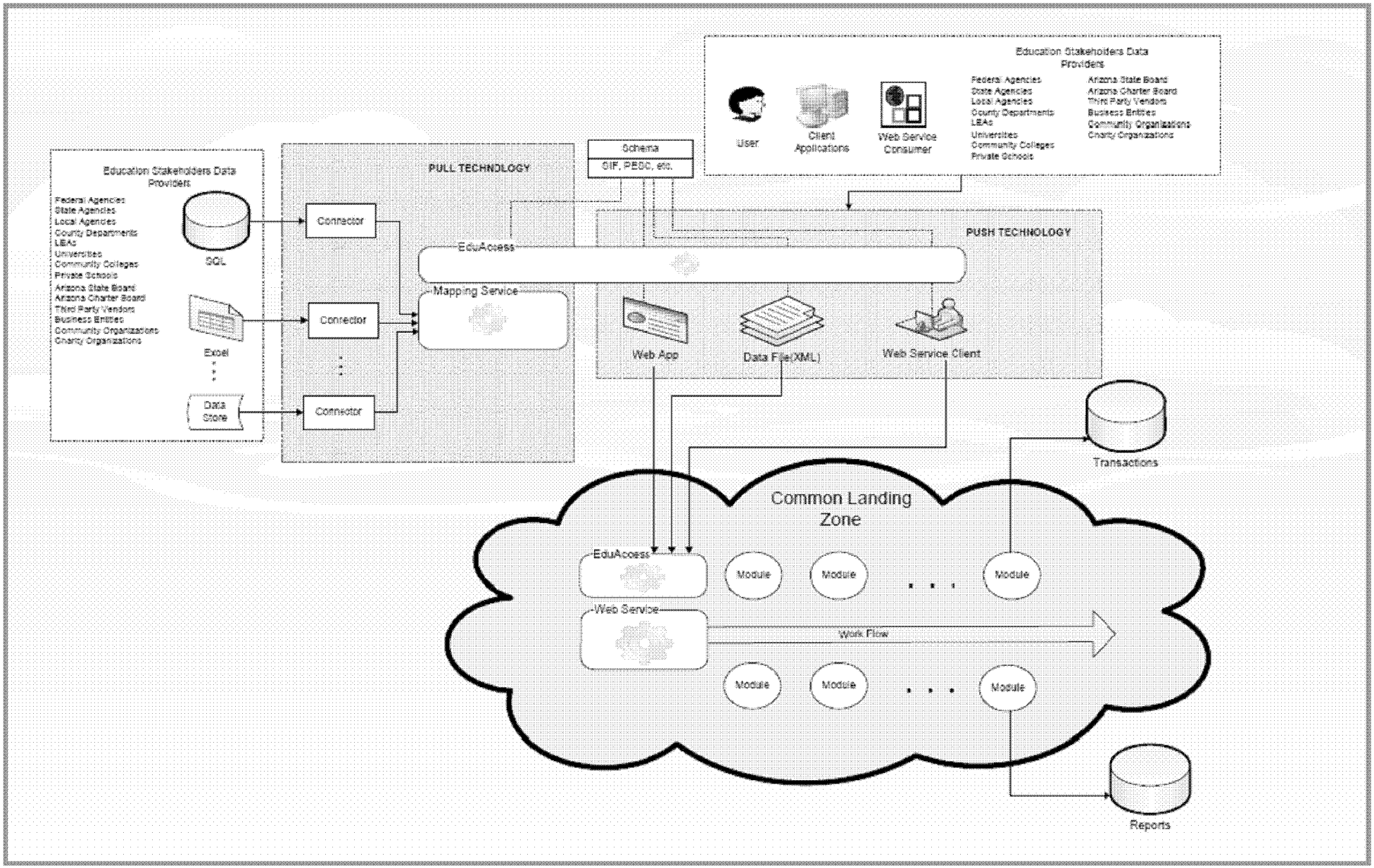
# Data Collection Framework – Architecture



# Future Teacher-Student Connection



# Data Collection Framework



# BREAK TIME!

## NEXT SESSION STARTS AT 9:40

# AEDW Project Overview- Ilana Licht

# AEDW Project Charter

**Drawing on operational data, construct a system to provide:**

- **Longitudinal perspectives of Arizona public education**
- **User independent exploration and analysis to expose trends, phenomena and issues**
- **EDFACT aggregations**
- **Access to education stakeholders – ADE, county ESAs, school districts, schools, education associations, education research institutes**
- **FERPA compliance**

# AEDW Technology - Microsoft

- SQL server 2008
- SSIS (SQL Server Integration Services) for ETL (Extract, Transform, Load)
- SSAS (SQL Server Analysis Services) for data aggregation - Cube Designer, MDX
- Excel 2007 as user tool
- SharePoint for user interface

# AEDW Plan

- **Prototype Phase**: FY 2005-2006 data of high school students - demographics, enrollment/withdrawal, grade, attendance, needs, AIMS results, related schools (5/2007 – 11/2007)
- **Student Phase***:*
  - **Segment 1** – Membership; AIMS Results; Schools (implemented in 10/ 2008)
  - **Segment 2** – Needs; Program/Service Participation; Program Assessments; AIMS Components (implemented in 4/ 2009)
  - **Segment 3** – Student Resources (Attendance/Absence/FTE); DOR/DOA/Special Enrollment/ Payer Factors; Community College Classes (implementation in 3/2010)
- **School Phase**: Finances; Performance Indicators (7/2010)
  - **EDEN/EDFACT** (ongoing along 2009 reports due dates)
- **Teacher Phase**: Employment; Certification; Qualification (7/ 2010)

# AEDW Data Span

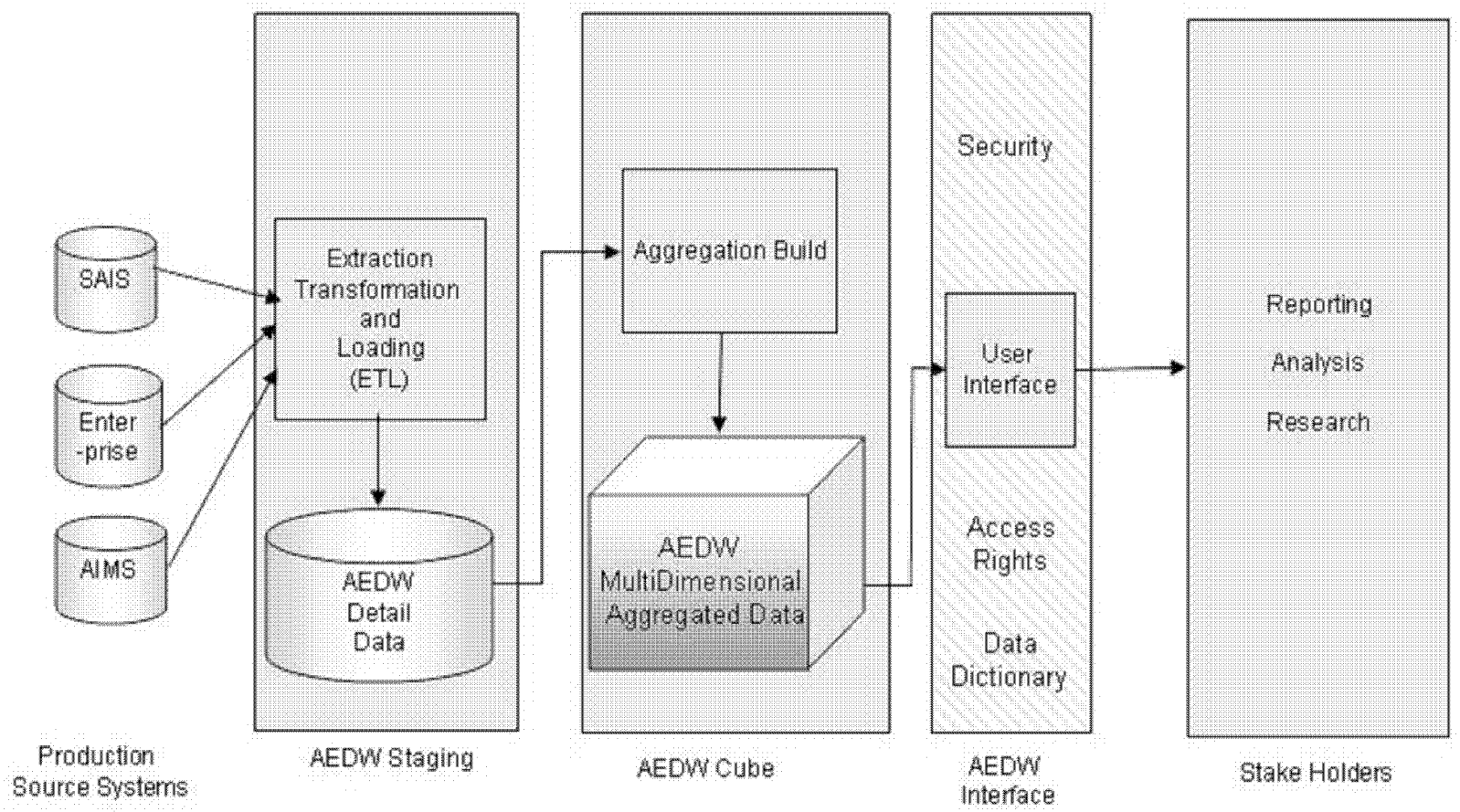
**As of February 2010, the DW includes:**

- **Student Data**
  - Membership, Attendance/Absence/ FTE, Needs, Program Participation for FY's 2003 – 2009
  - AIMS Reading, Writing & Math for FY's 2005 – 2009, Science for FY's 2008-2009 (same data as used by R&E post school fixes)
  - ELL Assessments for FY 2006-2009

- **LEA Data 2003-2009**
  - School, District, County and their relationships
  - LEA types and geographic data
  - School calendars

- **FY 2010 data will be loaded in May 2010 and then in August 2010**
- **AIMS 2010 results for all test levels (Grades 2-10) will be loaded in Fall 2010**
- **Past Terranova test results (Grades 2 & 9) were not included as this test is replaced by Stanford Achievement Test in FY 2010.**

# Arizona Education Data Warehouse



# AEDW Fundamental Concepts

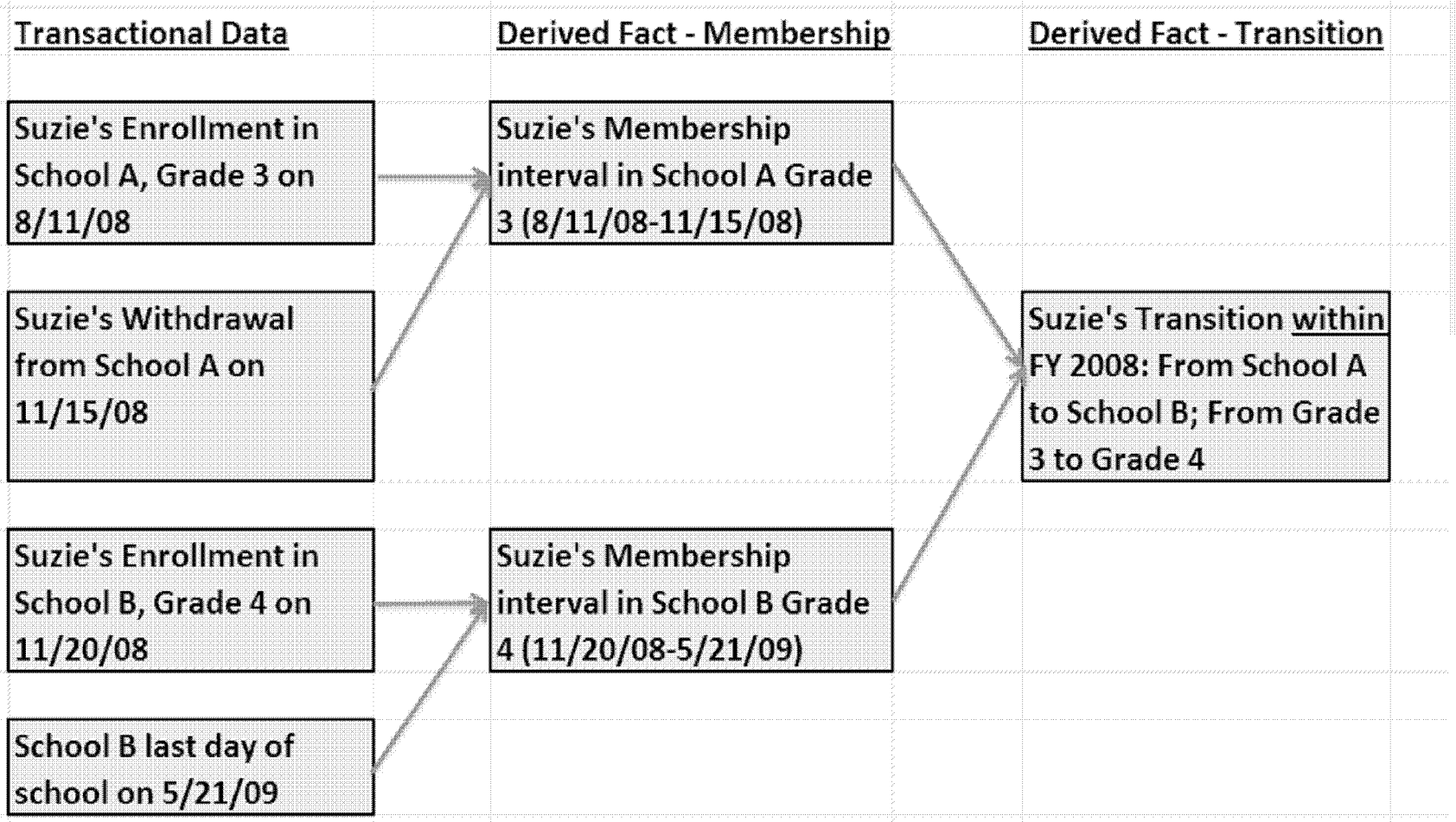
- **ETL Process** – Extraction, Transformation and Loading of data from operational systems to create a coherent clean set of data and store it in ***Fact*** and ***Dimension*** relational tables
- **Straight Fact** – Rendition of quantifiable (counts, sums) operational events e.g. Student Enrollment, Reading Test Result On Particular Test Date
- **Compound Fact** – ***A Fact derived from other Facts,*** e.g. student transition
- **Dimension** and its **Attributes** - Criteria by which to aggregate Facts e.g. Student is Dimension, Ethnicity is Attribute
- **Measure** – ***Multi-dimensional aggregation*** of a ***Fact*** by its relevant predefined ***Attributes*** into ***Cells***.
- **Cell** – An aggregate for every combination of Dimensional Attributes ***predefined*** for a measure - e.g. *"count of Hispanic female 11th grade students that excelled in AIMS Reading, Writing & Math by end of FY 2007, in xyz school".*
- **Cube** – A collection of Measures with all their Cells
- Measures are presented in a **Pivotal Mode** – User can choose for which predefined dimensional attributes to display aggregates. User can choose how to organize the selected information.

# AEDW Development Approach

- **To achieve efficiencies in processing and maintainability we extensively employed User Defined Functions for:**
  - Source data transformation and alignment
  - Construction of derived facts representing business intelligence topics and concepts
- **Constructed the cube by mostly using Cube Designer and occasionally MDX functions**

# AEDW Derived Fact Example

## Construction Of Derived Facts - Example



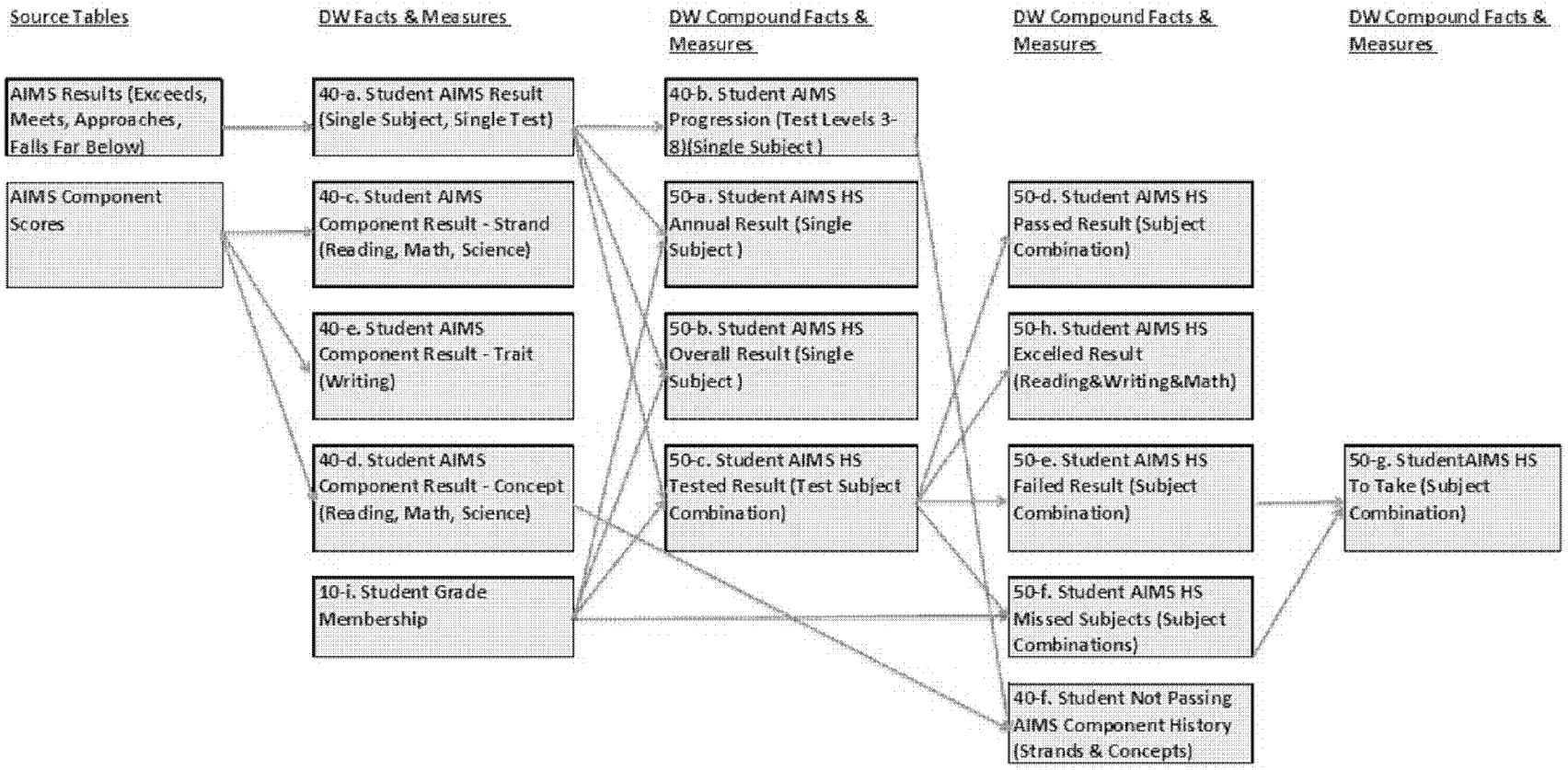
# AEDW Implemented Student Measures

- Membership & Resources – 21 measures
- Needs & Program Participation – 14 measures
- AIMS Achievements– 13 measures
- School Calendar – 1 measure

# AEDW Sample of Measures

- **Student Transition** - enabling student mobility analysis
- **Student Yearend Outcome** – providing head count
- **Student Dropout and Recovery** – broader perspective on dropout
- **Student AIMS Progression** (for grades 3-8) – enabling ongoing identification of students needing remediation
- **AIMS tests to take by high school students** - enabling prompt remediation for graduation
- **Student Cumulative language program participation and Outcome** – enabling analysis of program efficacy

# Student AIMS - Facts And Measures Map



# Implemented Measures

| ID | Measure Name | Purpose |
|---|---|---|
| 10-A | Student Enrollment Transaction | Counts of Enrollment events |
| 10-B | Student Withdrawal Transaction | Counts of Withdrawal events |
| 10-C | Student Summer Withdrawal Transaction | Counts of Summer Withdrawal events |
| 10-D | Student Year End Outcome | Counts of Students by their final situations of yearend, concluded from In Session Withdrawal, Summer Withdrawal, Year End Status and next year Enrollment events |
| 10-E | Student Year End Enrollment | Counts of Students enrolled at yearend (subset of 10-d) |
| 10-F | Student Dropout and Non Dropout | Counts of Students considered dropouts and non dropouts (different view 10-d) |
| 10-G | Student Dropout and Recovery | Counts of Dropout Students that returned to school in subsequent years |
| 10-H | Student DOR-DOA and Payer Factors | Counts of Enrollment events by District of Residence (DOR)/ District of Attendance (DOA), Payer Factors, Special Enrollment |
| 10-I | Student Grade Membership | Counts of Grade Membership Intervals where an interval is defined by membership start and end dates |
| 10-J | Student School and Grade Transition | Counts of Transition occurrences made by students between grades, schools, within and between fiscal years |
| 10-K | Student Community College Membership | Counts of Students taking classes in Community Colleges |
| 10-L | Student Number of Schools Attended | Counts of Students by number of schools and grades attended while in the Arizona public school system |

# Implemented Measures

| ID | Measure Name | Purpose |
|---|---|---|
| 10-M | Student Membership Interval Membership Session Days | Sums of Membership Session Days by school membership intervals |
| 10-N | Student Membership Interval Attendance Session Days | Sums of Attendance Session Days by school membership intervals |
| 10-O | Student Membership Interval Available Session Days | Sums of Available Session Days by school membership intervals where each available day is defined by the membership day weighted by the student FTE (Full Time Equivalency) for the day |
| 10-P | Student Membership Interval Loss Session Days | Sums of Loss Session Days by school membership intervals where Loss is defined as the difference between a students available days and the students attendance days |
| 10-Q | Student Membership Interval Resources Count | Counts of School Membership Intervals by session day categories of membership, attendance, available, loss and by efficiency where efficiency is defined as the ratio of a student interval attendance session days to the student interval available days |
| 10-R | Student Annual Attendance Session Days | Sums of Student Annual Attendance Session Days |
| 10-S | Student Annual Available Session Days | Sums of Students Annual Available Session Days |
| 10-T | Student Annual Loss Session Days | Sums of Students Annual Loss Session Days |
| 10-U | Student Annual Resources Count | Counts of Students by session day categories of membership, attendance, available, loss and by efficiency where efficiency is defined as the ratio of student annual attendance session days to the student annual available days |

# Implemented Measures

| ID | Measure Name | Purpose |
|---|---|---|
| 20-A | Student Needs | Counts of Needs Assignments to students- a student may have multiple assignments in a fiscal year |
| 20-B | Student Multiple Need Group | Counts of Combinations of Need Group Assignments (e.g. SPED-Language-Economic-Disadvantage)- a student may have multiple assignments in a fiscal year |
| 20-C-10 | Student Annual Program Participation Count | Counts of Participants in each of the Programs overseen by ADE-a student may be a participant in multiple programs in the same fiscal year, concurrently or sequentially |
| 20-C-20 | Student Annual Program Participation Session Days | Sum of Participation Session Days in each of the Programs overseen by ADE- a student may participate in multiple programs in the same fiscal year, concurrently or sequentially |
| 20-E-10 | Student Annual Needs and Programs Count | Counts of Needs Assignments Serviced by Programs (a SPED or Support program may serve multiple needs concurrently, a Language program serves only the ELL need) |
| 20-E-20 | Student Annual Needs and Programs Session Days | Sums of Session Days of Needs Assignments Serviced by Programs (a SPED or Support program may serve multiple needs concurrently, a Language program serves only the ELL need) |
| 20-F | Student Annual Concurrent Multiple Program Participation | Counts of Students participating in multiple programs concurrently |
| 20-G | Student Language Assessment Transactions | Counts of Oral, Reading & Writing Assessments taken to determine the English proficiency of students |

# Implemented Measures

| ID | Measure Name | Purpose |
|---|---|---|
| 30-B | Student Cumulative Participation in Program Area | Counts of Participants in each of the Program Areas while in the Arizona public school system - a student may participate in more than one program area (e.g. SPED and Language), but in the Program Area the count is student count |
| 30-C-10 | Student Cumulative Program Participation Count | Counts of Participants in each of the Programs while in the Arizona public school system |
| 30-C-20 | Student Cumulative Program Participation Session Days | Sums of Participants Session Days in each of the Programs while in the Arizona public school system |
| 30-F | Student Cumulative Language Programs Participation and Outcome | Counts of Students in Language Programs while in the Arizona public school system by their participation outcome defined as progress from their first assessment result to their last assessment result |
| 30-G | Student Language Assessment Progress and AIMS | Counts of Language Assessments Progress Steps defined by student results in consecutive pairs of assessment events (e.g. "Basic-Intermediate"; "ELL-RFEP"), accompanied with AIMS results for the later assessment in the pair |
| 40-A | Student AIMS Result | Counts of Student AIMS Results in single tests of single subjects (Reading, Writing, Math and Science) |
| 40-B | Student AIMS Progression | Counts of Students by Cumulative Results in AIMS test levels 3-8 |
| 40-C | Student AIMS Component Result-Strand | Counts of Tested Students by Strand Scores for single AIMS Reading, Math, Science tests (scores expressed in %) |

# Implemented Measures

| ID | Measure Name | Purpose |
|---|---|---|
| 40-D | Student AIMS Component Result-Concept | Counts of Tested Students by Concept Scores for single AIMS Reading, Math, Science tests (scores expressed in %) |
| 40-E | Student AIMS Component Result-Trait | Counts of Tested Students by Trait Scores for single AIMS Writing test (scores expressed in numbers) |
| 40-F | Student Not Passing AIMS Component History | Counts of Students by Concepts Tested across all AIMS Reading, Math and Science tests administered since Fy 2005 |
| 50-A | Student AIMS HS Annual Result | Counts of High School Students by AIMs Results in single subjects and single fiscal years |
| 50-B | Student AIMS HS Overall Result | Counts of High School Student by Consolidated AIMS Results across the entire High School attendance, in single subjects |
| 50-C | Student AIMS HS Tested Result | Counts of High School Students by Tested Subject Combinations across their entire High School attendance |
| 50-D | Student AIMS HS Passed Result | Counts of High School Students by Passed Subject Combinations across their entire High School attendance |
| 50-E | Student AIMS HS Failed Result | Counts of High School Students by Failed Subject Combinations across their entire High School attendance |
| 50-F | Student AIMS HS Missed Result | Counts of High School Students by Missed Subject Combinations across their entire High School attendance |
| 50-G | Student AIMS HS To Take Result | Counts of High School Students by Subject Combinations To Be Taken for graduation |
| 50-H | Student AIMS HS Excelled Result | Counts of High School Students that Excelled in Reading and Writing and Math tests across their entire High School attendance |
| 60-A | School Calendar | Counts of School Calendars by various calendar properties |

# AEDW User Interface

- **The DW User Interface is a SharePoint website with the following features:**
  - Authorization and verification of users
  - Access to measures and invocation of Excel 2007
  - Filterable prebuilt reports created from measures
  - Registration for training classes
  - Training and reference documents
  - Data Dictionary (home grown application)
  - Dashboard – Graphic renditions of noteworthy findings

# AEDW Post Implementation Perspective

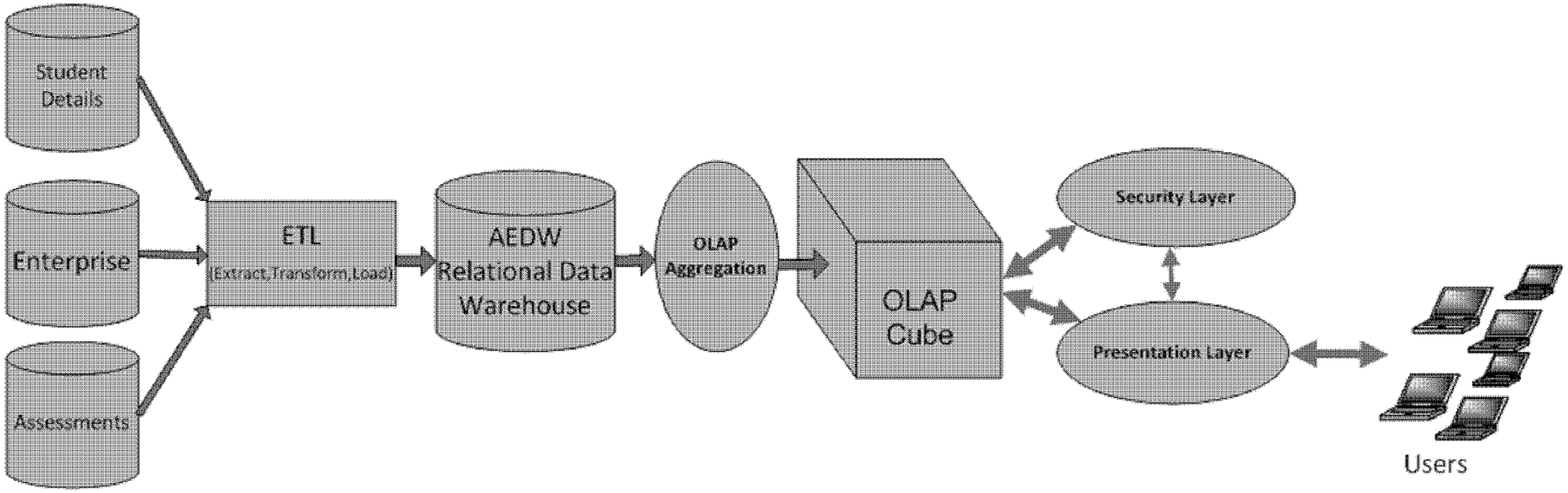
- **Maintenance is assigned to the Data Management Group**
  - Periodical data loads
  - Impact of operational data changes
  - New measures and enhancements
- **Issues to grapple with:**
  - Maintaining the longitudinal perspective intact with ever-changing operational data due to legislation (mostly state level)
  - Providing the proper computing capacity to a growing volume of data and growing user utilization
  - Assuring veracity of analysis users wish to publish

# AEDW Technical Architecture – Surya Vipparthy

# AEDW Technical Framework

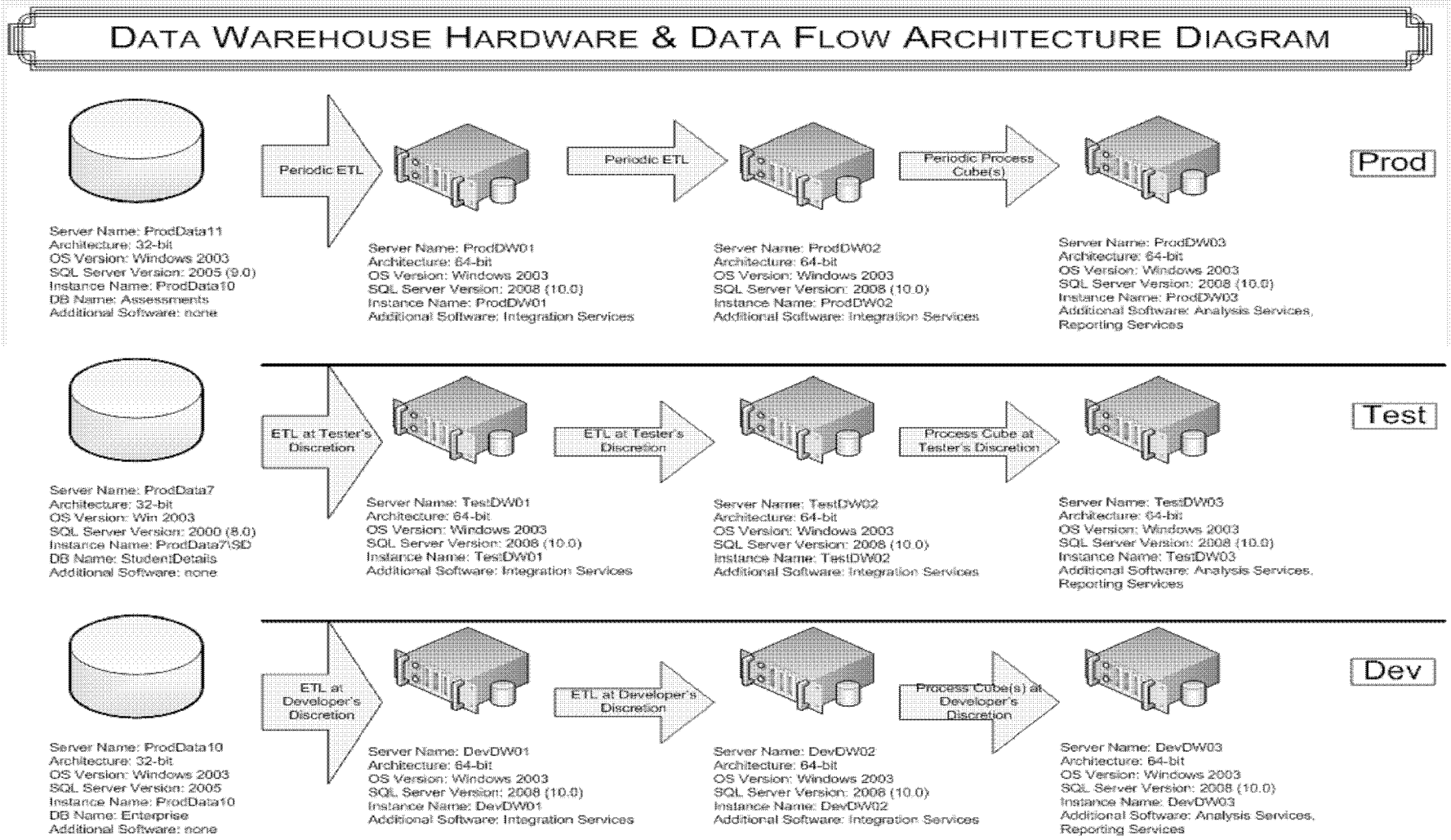
- High-level architecture
- Hardware and software
- SSIS Package Development Architecture
- Data warehouse relational database
- Data loading methods
- Multi-dimensional database

# AEDW High Level Architecture

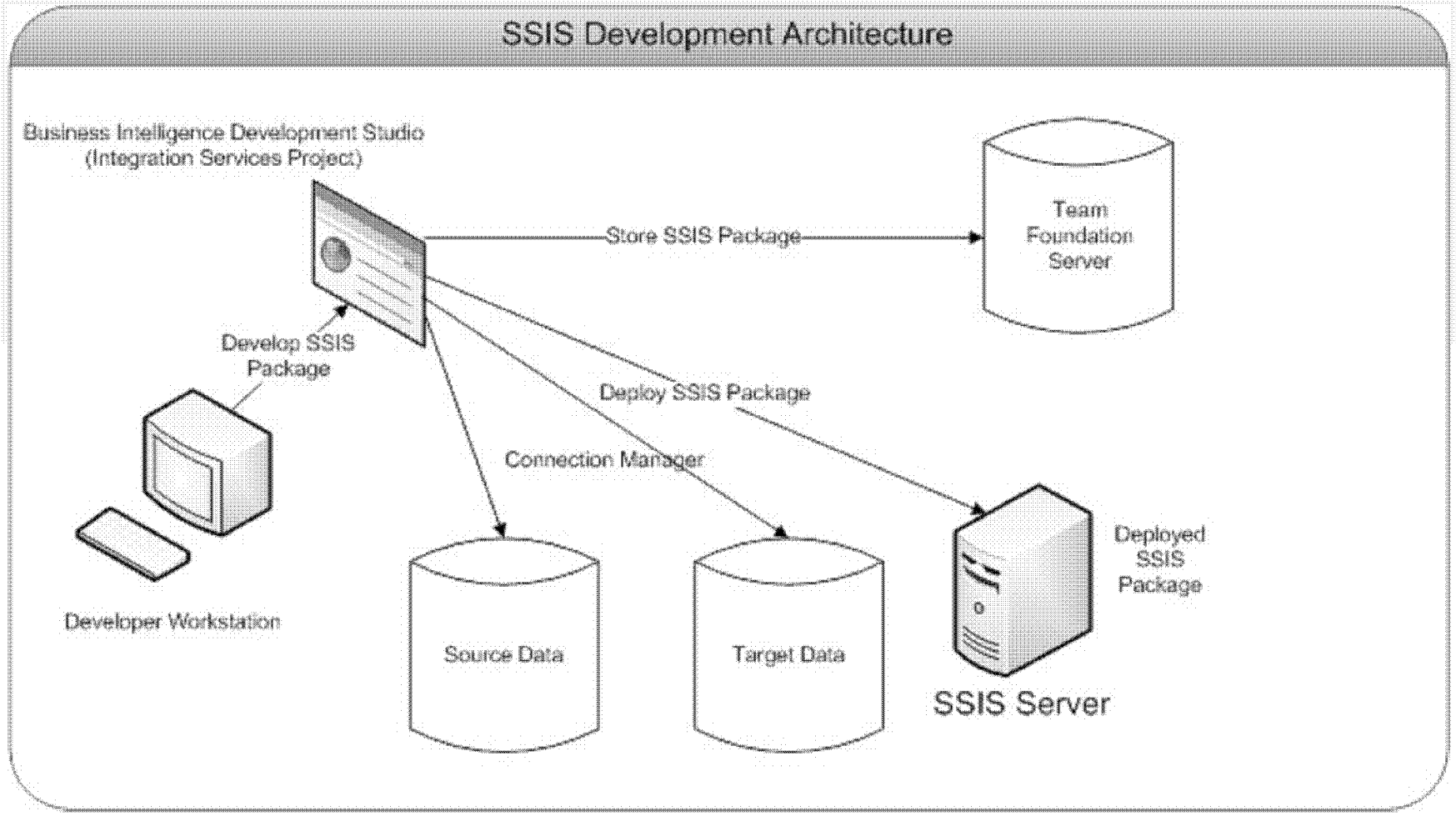



1. ETL Process (SSIS Packages) moves data from the Source databases to the Data Warehouse database.
2. OLAP Aggregation Process (SSAS Process) builds the fact and dimension tables into the Multi Dimensional cubes
3.Presentation Layer (Share Point Portal) retrieves data for the user using the Security Layer(EduAccess).

# AEDW Architecture



# AEDW- SSIS Package Development Architecture



# AEDW SSIS Data Loading Methods

- **Initial Pull**
  - Loads the data warehouse package for the first time
  - Is a complete load
- **Recurring Pull**
  - Performs incremental load of data
  - Expires existing records when updates are available

# AEDW Multi-Dimensional Cube

- **ADE Cubes are MOLAP** (Multi-Dimensional Online Analytical Processing)
- **MOLAP pre-aggregates the data to improve performance in querying and displaying data**
- **SSAS let you pre-determine how much of the aggregation to pre-build for performance purposes**

# AEDW Multi-Dimensional Cubes

- **Unmasked cube**
  - Identifiable student information is visible and delivered to authorized users
  - Cube student level data is restricted to those entities users are authorized to view
- **Masked cube**
  - Identifiable student data is scrambled for use by external researchers

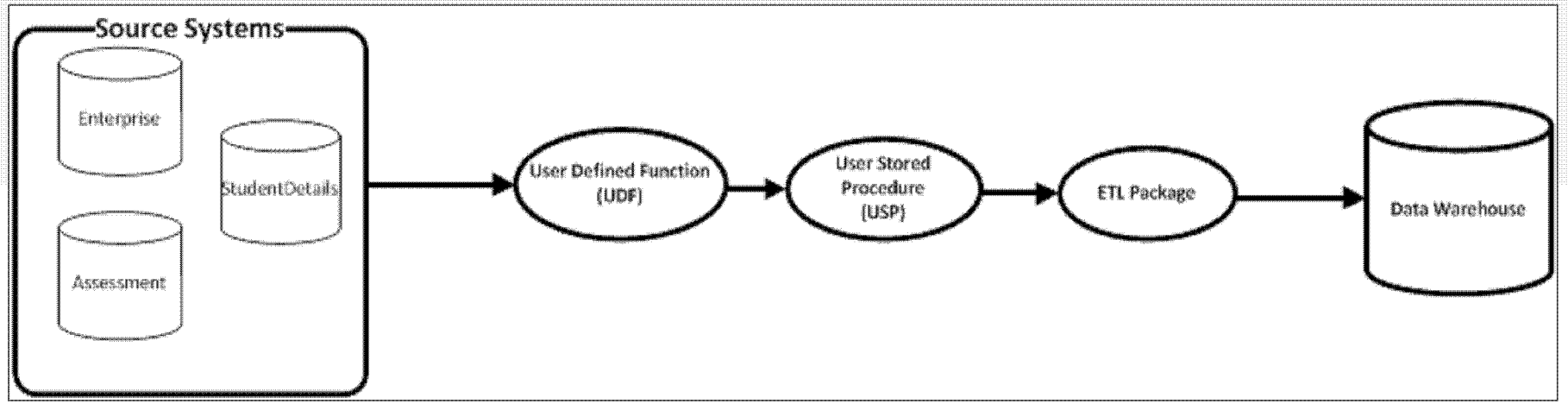
# AEDW Construction – Orion Gebremedhin

# AEDW Nature of Source and Destination Data

| Source: Transactional Data | Destination: Data Warehouse |
|---|---|
| • Relational database with normalized tables | • De-normalized tables |
| • Highly volatile | • Non-volatile with periodic updates |
| • Used for operation and mandatory reporting; *e.g. State Appropriations To Schools and Associated Reports* | • Used for analysis |
| • Functional | • Concept/topic oriented |

# AEDW ETL Package Development

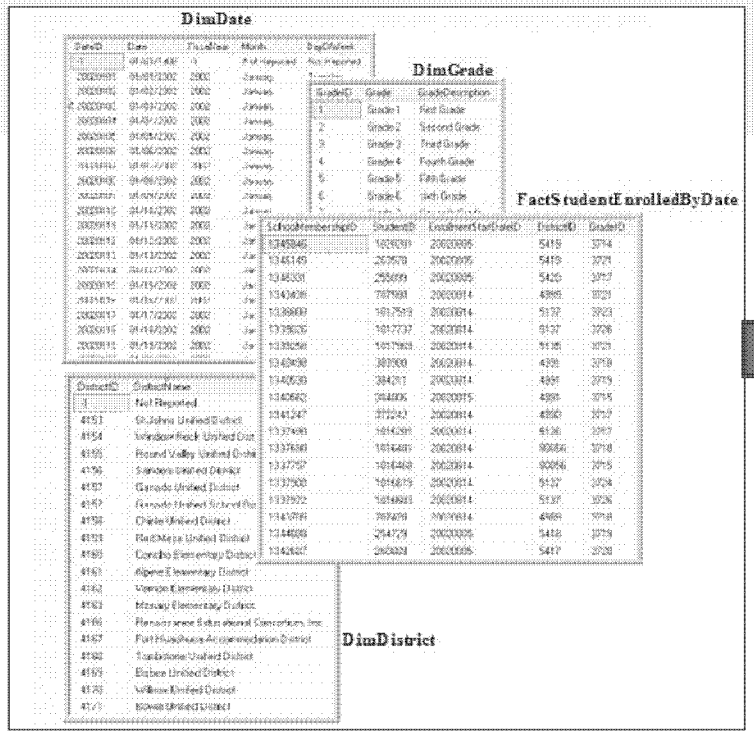
## Creation of Facts and Dimensions



# AEDW Cube Development

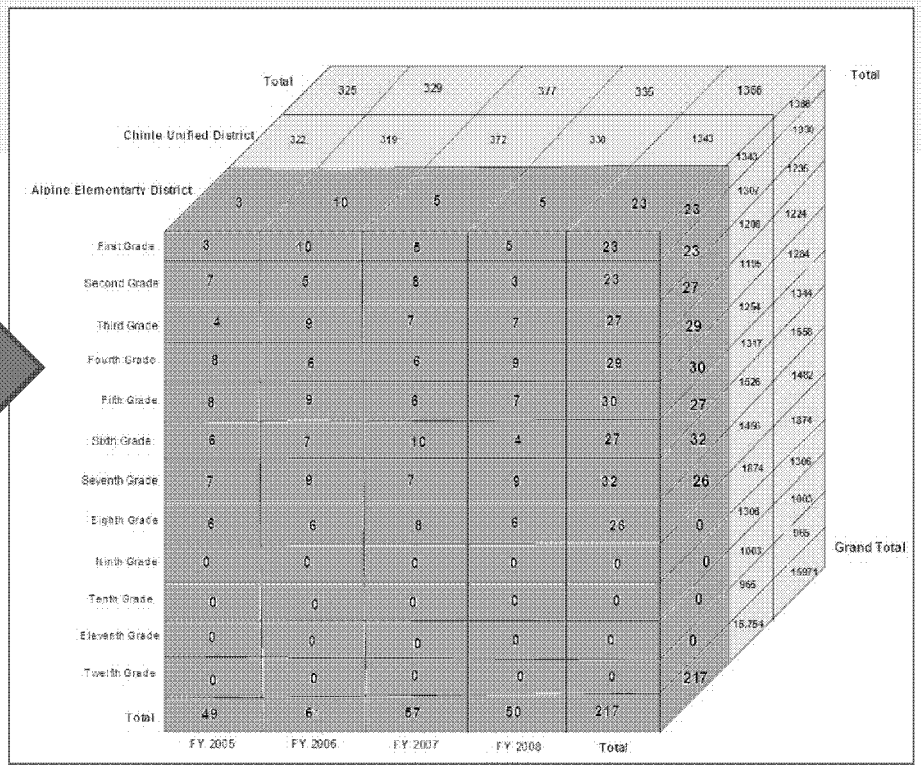
## SSAS & Multidimensional Cube

Relational Tables



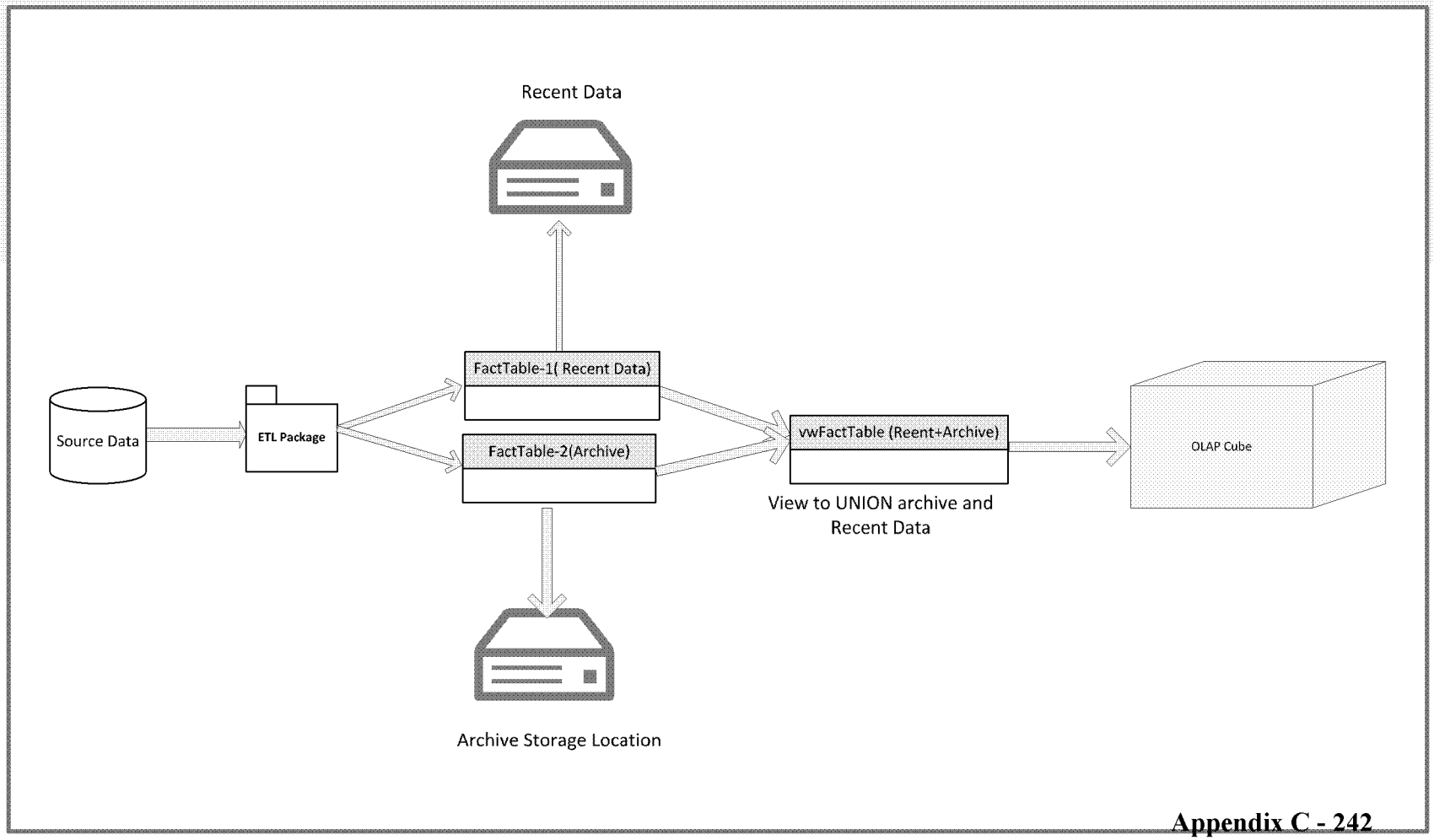

SSAS

Multidimensional Cube



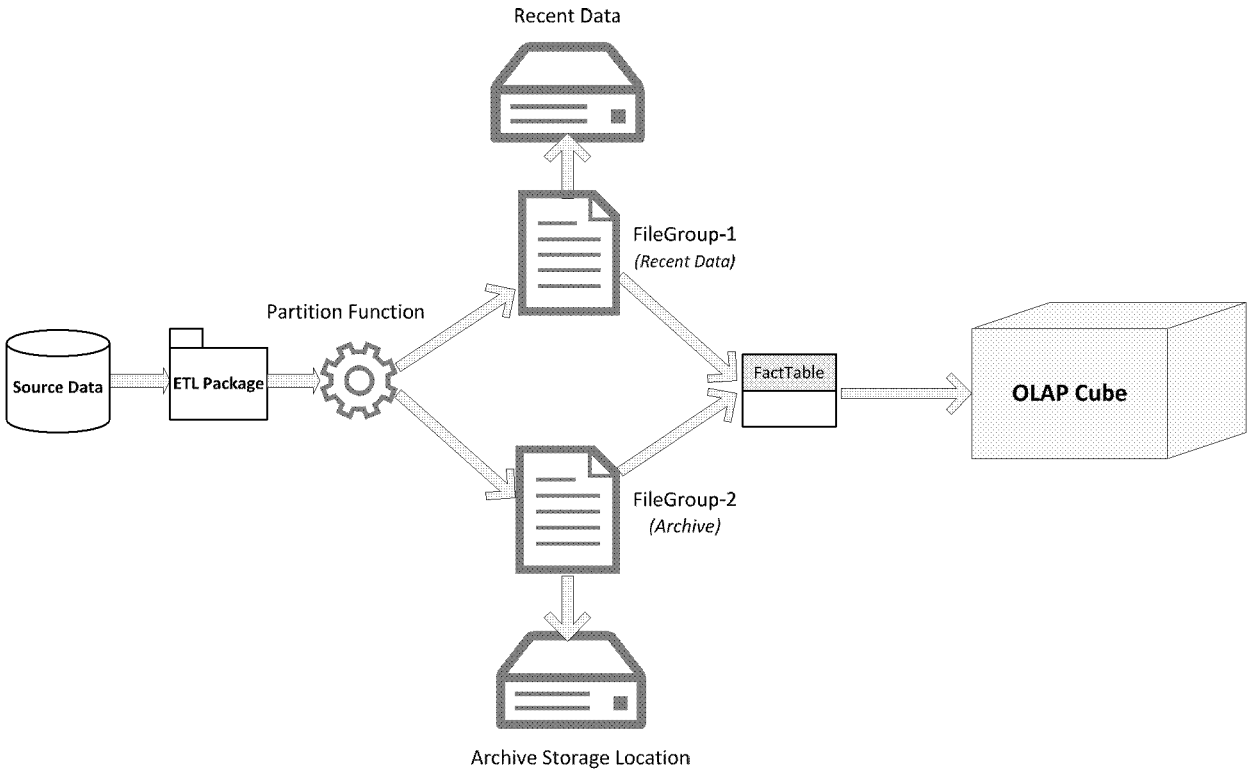
# AEDW Archiving

## Fact Table Mirrors (Partitioned Views) Future Strategy



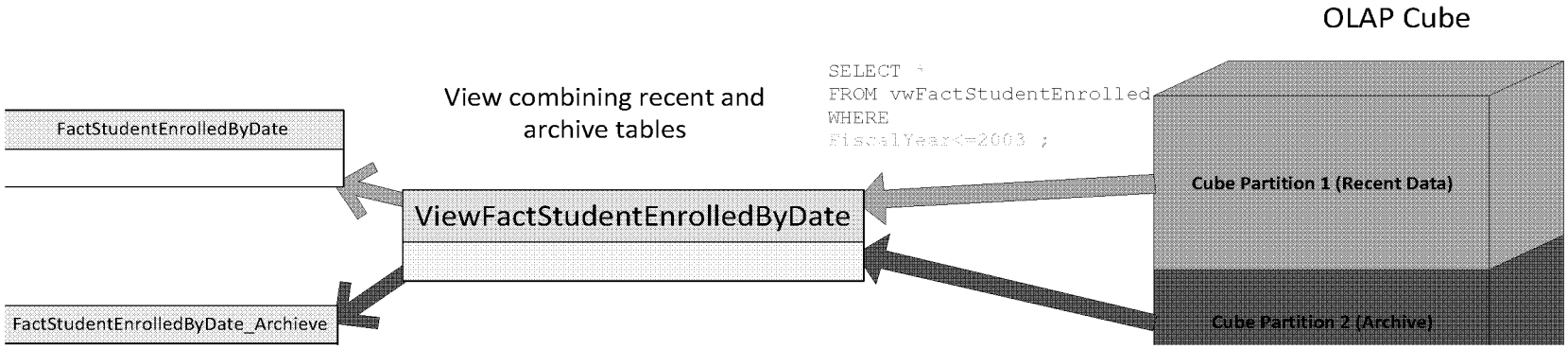
# AEDW Archiving

## Partitioned Fact Table Mirrors Future Strategy



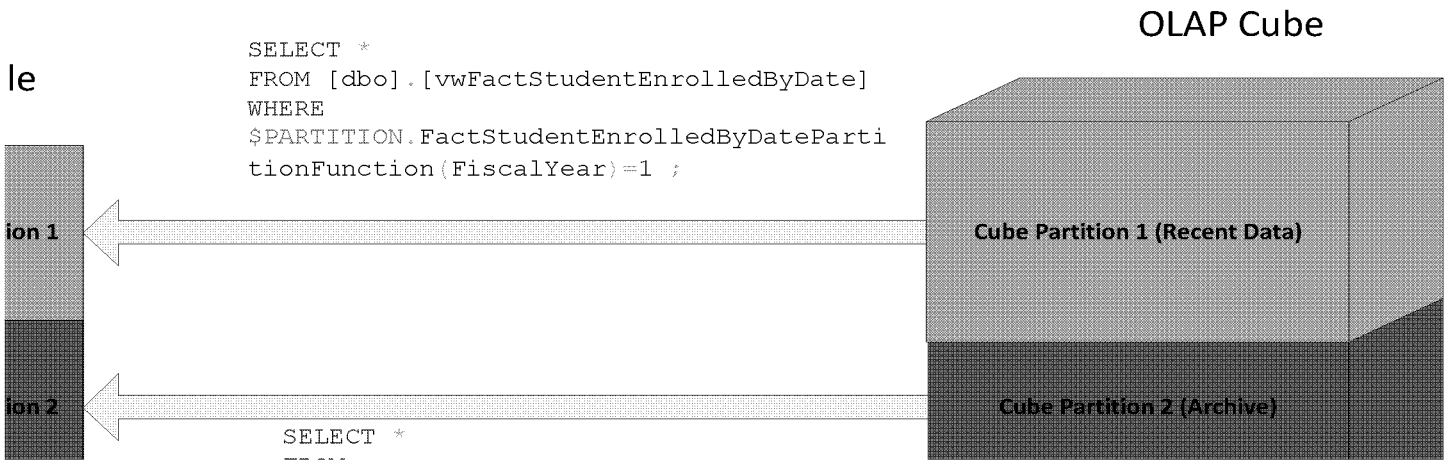
# AEDW OLAP Cube Archiving

## With Fact Table mirrors

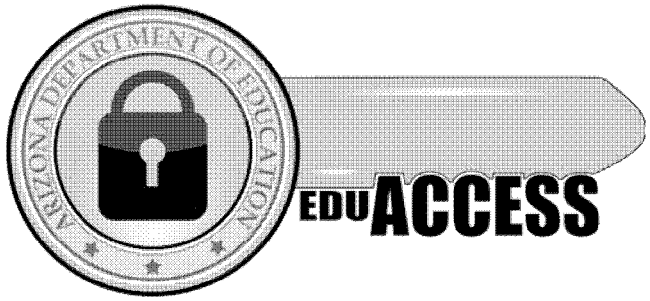


# AEDW OLAP Cube Archiving

## With Partitioned Fact Tables



# EDUACCESS (Secure ADE Access) - Jenner Holden



# Identity Management & the SLDS

- Identity management is the set of business processes, policies and supporting infrastructure for the creation, maintenance and use of digital identities.
- Properly managing access to the SLDS required a complete identity management system. EduAccess was born!

# EduAccess Objectives

- Improve security compliance
- Simplify application deployment
- Accurately, efficiently entitle and empower users
- Empower partners
- Automated policy-driven provisioning
- Delegated management
- Self-service credential management

| New: 02/09 | ARIZONA DEPARTMENT OF EDUCATION<br>GUIDELINE & PROCEDURE | NO. IT - 3 |
|---|---|---|
| Supersedes: N/A | | Sheet 1 of 3 |
| **SUBJECT:** Information Security and Privacy Guideline | | FILING INSTRUCTIONS (Guidelines & Procedures Manual)<br>Section: Information Technology<br>As item: IT - 3 |

I. PURPOSE

The purpose of this guideline is to establish guidelines and procedures for information security and privacy governance activities at the Arizona Department of Education (ADE). The purpose of these activities is to ensure the confidentiality, integrity, and availability of the data entrusted to the ADE by preventing unauthorized access, modification or destruction. Information security and privacy activities include the following:

A. Creating a governance framework
B. Establishing and communicating clear expectations
C. Monitoring compliance with these expectations, including regularly assessing and improving information security and privacy operations.

Information security and privacy governance is important to ensure adequate protection of data entrusted to the ADE, and to ensure compliance with applicable laws, regulations and standards, such as the Family Educational and Privacy Rights Act (FERPA), the Health Insurance Portability Act (HIPPA) and Arizona Revised Statute 15-1043.

II. GUIDELINE

A. Security Governance Framework: Under the direction of the Deputy Superintendent of Public Instruction and the Chief Information Officer (CIO), the Information Security Officer (ISO) and the Information Privacy Officer (IPO), Deputy Associate Superintendent of Administrative Services) has the responsibility and authority to coordinate the various information security and privacy related activities across the Department through the creation and maintenance of a Department-wide information security and privacy program (Security Program).

B. Establishing and Communicating Clear Expectations: Under the direction of the Deputy Superintendent of Public Instruction and the CIO, the ISO is responsible for coordinating the development of specific Security Program related elements. This includes developing information security and privacy related guidelines through the Deputy Associate Superintendent of Administrative Services who will coordinate with Policy Team for final approval in accordance with GE-13, as well as a comprehensive security awareness program.

C. Monitoring Compliance and Assessing Security and Privacy Operations: Under the direction of the Deputy Superintendent and the CIO, the ISO has the responsibility and authority to monitor compliance with and assess the effectiveness of the Security Program.

III. PROCEDURE

A. Governance Framework – Under the Direction of the Chief Information Officer and the Deputy Superintendent of Public Instruction, the ISO will leverage the Management Team and

Executive Team to communicate and coordinate Security Program related information and activities across the Department. The ISO will regularly report on information and privacy related issues to the Deputy Superintendent, CIO, Management Team, and Executive Team as necessary.

B. Establishing and Communicating Clear Expectations: Under the direction of the CIO, the ISO will coordinate a process for regularly updating specific Security Program related elements, as well as coordinate Security Program related activities across the Department. New information security and privacy related guidelines that are prepared will be sent to the Deputy Associate Superintendent of Administrative Services who will coordinate with Policy Team for final approval in accordance with GE-13.

C. Monitoring Compliance and Assessing Security and Privacy Operations: Under the direction of the CIO and the Deputy Superintendent of Public Instruction, the ISO is responsible to monitor compliance with and assess the effectiveness of the Security program. This includes regular Department-wide risk assessments, regular audits/ assessments to ensure compliance, gathering security metrics, and regularly reporting on the effectiveness of the Security Program.

| New: 02/09 | ARIZONA<br>DEPARTMENT OF EDUCATION<br>GUIDELINE & PROCEDURE | NO. IT - 3 |
|---|---|---|
| Supersedes: N/A | | Sheet 3 of 3 |
| **SUBJECT:** Information Security and Privacy Guideline | | FILING INSTRUCTIONS<br>(Guidelines & Procedures Manual)<br>Section: Information Technology<br>As item: IT - 3 |

## Routed and Read by Employees of _____

Department Name

| Signature (no initials) | Date | Signature (no initials) | Date |
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| New: 02/09 | ARIZONA DEPARTMENT OF EDUCATION<br>GUIDELINE & PROCEDURE | NO. IT - 8 |
|---|---|---|
| Supersedes: N/A | | Sheet 1 of 5 |
| **SUBJECT:** Security Program Overview | | FILING INSTRUCTIONS (Guidelines & Procedures Manual)<br>Section: Information Technology<br>As item: IT - 8 |

I. PURPOSE

As described in the Information Security and Privacy Guideline, under the direction of the CIO and Deputy Superintendent of Public Instruction, the Information Security Officer (ISO) and working with the ADE Privacy Officer (DAS Administrative Services), has the responsibility and authority to create and maintain a Department-wide information and privacy program (Security Program). The purpose of the Security Program is to ensure that there is a consistent and coordinated approach to securing the systems and data entrusted to the Arizona Department of Education (ADE) in order to meet privacy and security obligations to educational stakeholders. The Security Program will also ensure that the ADE is in compliance with applicable laws, regulations, and standards. Important regulatory items include:

A. Family Educational and Privacy Rights Act (FERPA) – Federal legislation that governs the use of educational data.
B. Health Insurance Portability and Accountability Act (HIPPA) – Federal legislation that protects the confidentiality and security of health related data.
C. Children's Internet Protection Act (CIPA) – Federal legislation dealing with access to offensive content over the Internet on school and library computers.
D. Arizona Revised Statute §15-1043 – Arizona statute mandates that the ADE complies with FERPA, that personally identifiable information is confidential, proper security measures are employed, and that data is secured from breaches though the implementation of protections and standards.
E. Arizona Revised Statute §44-7501 – Arizona statute that enumerates notification requirements for data breaches.
F. Arizona Revised Statute §12-2291 to 12-2297 – Arizona statute regarding the proper handling of medical records.
G. Arizona Revised Statute §44-7601 – Arizona statute that deals with proper disposal of records containing personally identifiable information.

Elements of the Security Program are organized under three major areas:
1. Security Governance Framework
2. Establishing and Communicating Expectations
3. Monitoring Compliance & Assessing Security Operations

Appendix A contains a diagram of the Security Program elements.

II. GUIDELINE

**A. Security Governance Framework**

A defined framework for the governance of information security and privacy is essential for ensuring a coordinated and consistent approach to securing ADE information assets. The goal of the security governance framework is to provide the mechanisms needed for ADE leadership to set clear expectations and then ensure ADE information system users and stakeholders fulfill

these expectations. The security governance framework is designed to leverage existing ADE institutions, provide leadership with the ability to make well-informed decisions, and properly align the Security Program elements and activities with the overall objectives and goals of ADE. The security governance framework at ADE includes:

1. The Executive Team receives regular (at least annual) reporting of the Security Program effectiveness. The Deputy Superintendent of Public Instruction and the Chief Information Officer (CIO) directly supervise the efforts of the Information Security Officer (ISO).
2. Information Security Officer (ISO) – Under the direction of the Deputy Superintendent and CIO, the ISO has the responsibility and authority for creating and maintaining the Security Program. The ISO is also responsible for providing regular reports on the effectiveness of the Security Program to the Deputy Superintendent, CIO and Executive Team as appropriate.
3. Guidelines developed and/or revised as part of the Security Program are approved through the process described in ADE Guideline 13.

**B. Establishing and Communicating Expectations**

In order for the Security Program to function properly, expectations need to be clearly defined and effectively communicated to all stakeholders. Stakeholders need to understand their role in protecting the information and assets at the ADE. They must be made aware of actions that are potentially dangerous, as well as their individual responsibility for securing the information and assets under their care. They must also be made aware of the consequences of not fulfilling their responsibilities.

The ADE develops and communicates these expectations through establishing and enforcing Department-wide guidelines[1] and a comprehensive security awareness and training program.

**Information Security and Privacy Related Guidelines**

The ADE has a comprehensive set of information security and privacy related guidelines. The guidelines are developed by the IT Guidelines and Procedures Task Force. Each guideline will be processed in accordance to ADE Guideline GE-13. Due to the rapidly changing landscape of external technology and privacy drivers, the ISO, along with the IT Guidelines and Procedures Task Force, will review these guidelines annually to determine if any revisions need to be made. If revisions are made, the revised guideline will be processed in accordance with ADE Guideline GE-13.

**Security Awareness and Training Program**

A key tool for ensuring that all stakeholders are aware of their personal responsibility for securing information at the ADE is a security awareness and training program. The security awareness and training program includes:

[1] ADE uses the term "guideline" for internal facing policies.

1. Mandatory online training – Annually, every employee at ADE will be required to complete a short online course geared towards educating users of key ADE security related guidelines and practices. Employees will be required to confirm that they have read/understood the information presented.
2. Regular security communication – Under the direction of the CIO, the ISO implements regular security related communications to remind employees of their responsibilities and current events that may affect them. This may be accomplished through a variety of means, such as:
   a) Integration of security related topics into new employee orientation and supervisor training.
   b) Regular security newsletter or security related information in the ADE newsletter.
   c) Security related posters, flyers, brochures, etc.
   d) Annual security awareness event (workshop or seminar).
   e) Optional security related training classes focused on teaching concepts that will help employees be more secure at home and at work.
   f) E-mail security alerts – Security alert information will be sent out via e-mail to the appropriate users when necessary. For example, active exploit and patch information could be sent to the Network Services Team, or phishing protection information can be sent to users that received and responded to a phishing e-mail.
3. Security Training for IT – Under the direction of the CIO, the ISO oversees a security training mechanism to ensure that key IT positions receive targeted training that pertain to their areas of responsibility. For example, key developers may be asked to take a secure programming course, and then teach the concepts to other developers.

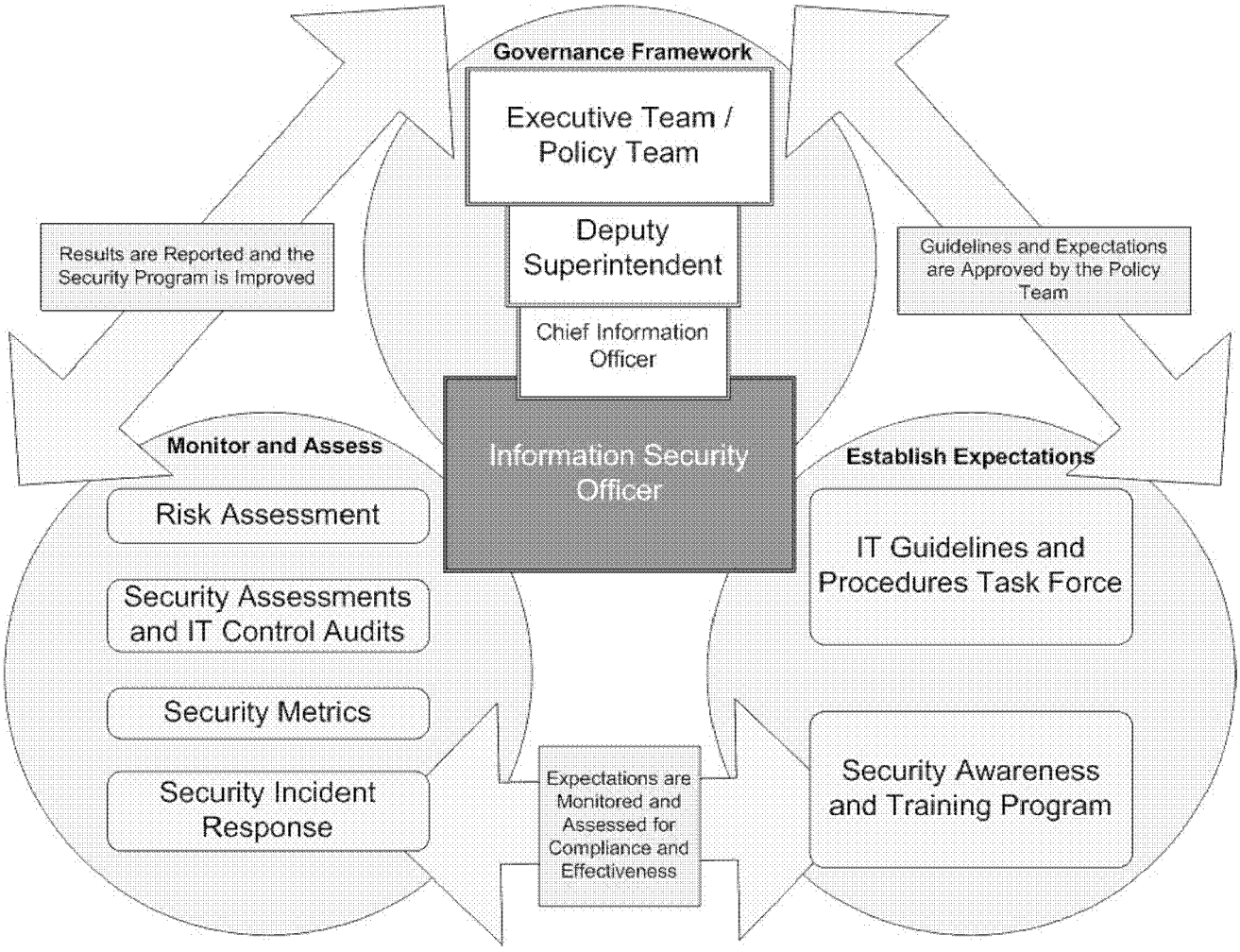
**C. Monitoring Compliance and Assessing Security Operations**

1. Monitoring and assessing the effectiveness of Security Program related activities helps to ensure that consistent and adequate information and privacy protections are employed. Under the direction of the CIO, the ISO has the responsibility over security monitoring and assessment activities. The key elements for monitoring and assessments are:
   a. ADE-wide risk assessment – Conducting regular information risk assessments. The results of these assessments will be used to identify gaps or weaknesses in Security Program areas, as well as communicate the areas that may be over or under – protected to the Deputy Superintendent of Public Instruction.
   b. Security Control Audits – Conducting regular audits of operational security controls and compliance with established guidelines. These audits may be a control specific or broader security assessment that test many controls simultaneously. This also includes automated security vulnerability scanning.
   c. Security Event Monitoring – Monitoring of security related events. Security events will be analyzed from log files, network traffic, event logs, intrusion detection alerts and other sources. Suspicious events will be moved to the incident response status.
   d. Security Metrics – Establishing a set of security metrics that will be used to regularly gauge the overall security posture. This information will also be used to measure the effectiveness of the Security Program and its elements.

e. Reporting – Ensure that security related information is regularly reported to the IT directors, Privacy Officer (DAS of Administrative Services) and the CIO. Summarized reports will also be regularly presented to the Deputy Superintendent. An annual security report will be submitted to the Deputy Superintendent of Public Instruction.
f. Incident Response – Under the direction of the CIO, the ISO leads the Security Incident Response Team. The ISO is responsible for developing and implementing a comprehensive security incident response process.

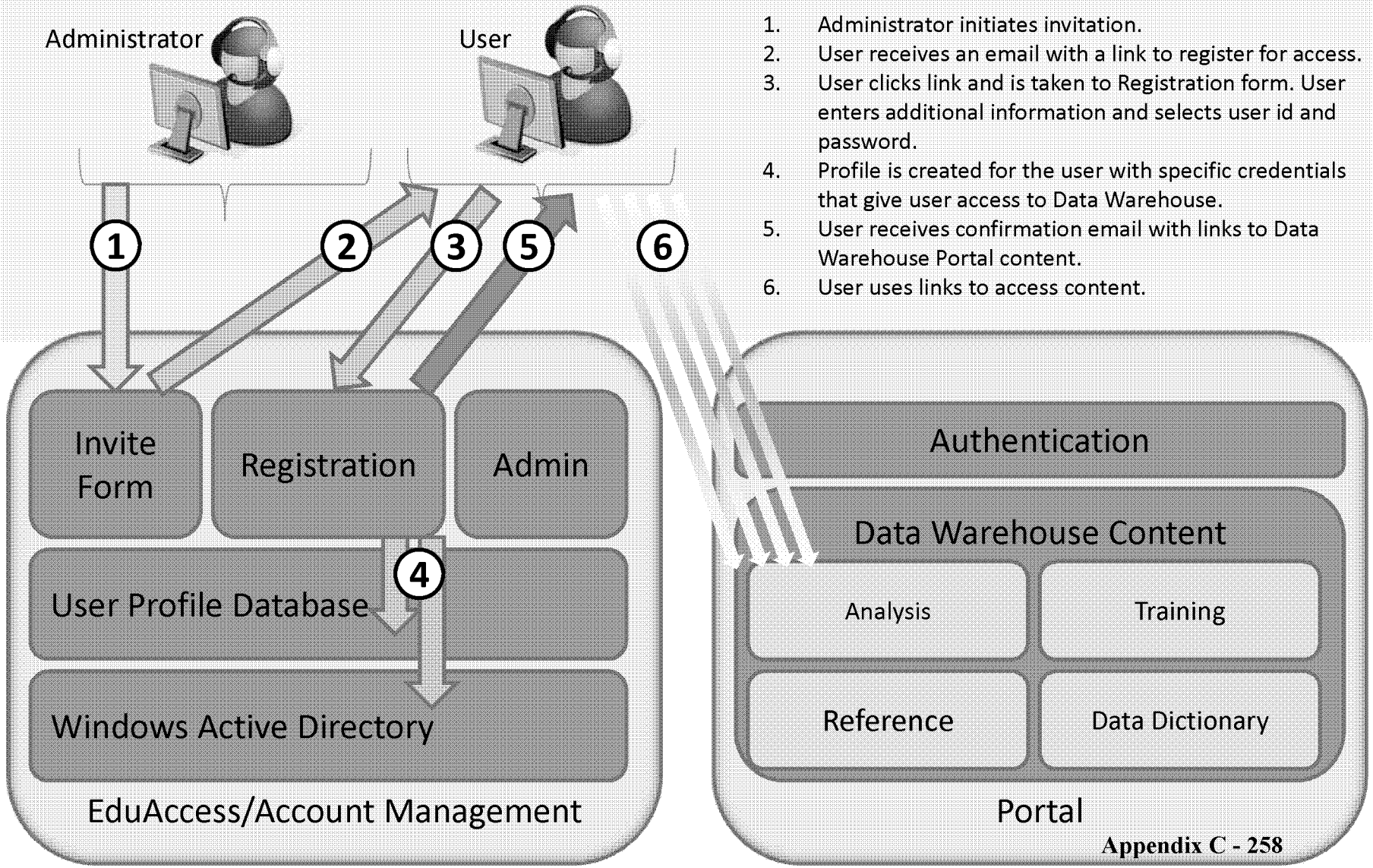
| New: 02/09 | ARIZONA DEPARTMENT OF EDUCATION<br>GUIDELINE & PROCEDURE | NO. IT - 8 |
|---|---|---|
| Supersedes: N/A | | Sheet 5 of 5 |
| **SUBJECT:** Security Program Overview | | FILING INSTRUCTIONS (Guidelines & Procedures Manual)<br>Section: Information Technology<br>As item: IT - 8 |

**Appendix A: Security Program Diagram**



# Secure AEDW Access – Qais Gharib

# Security - Invitation

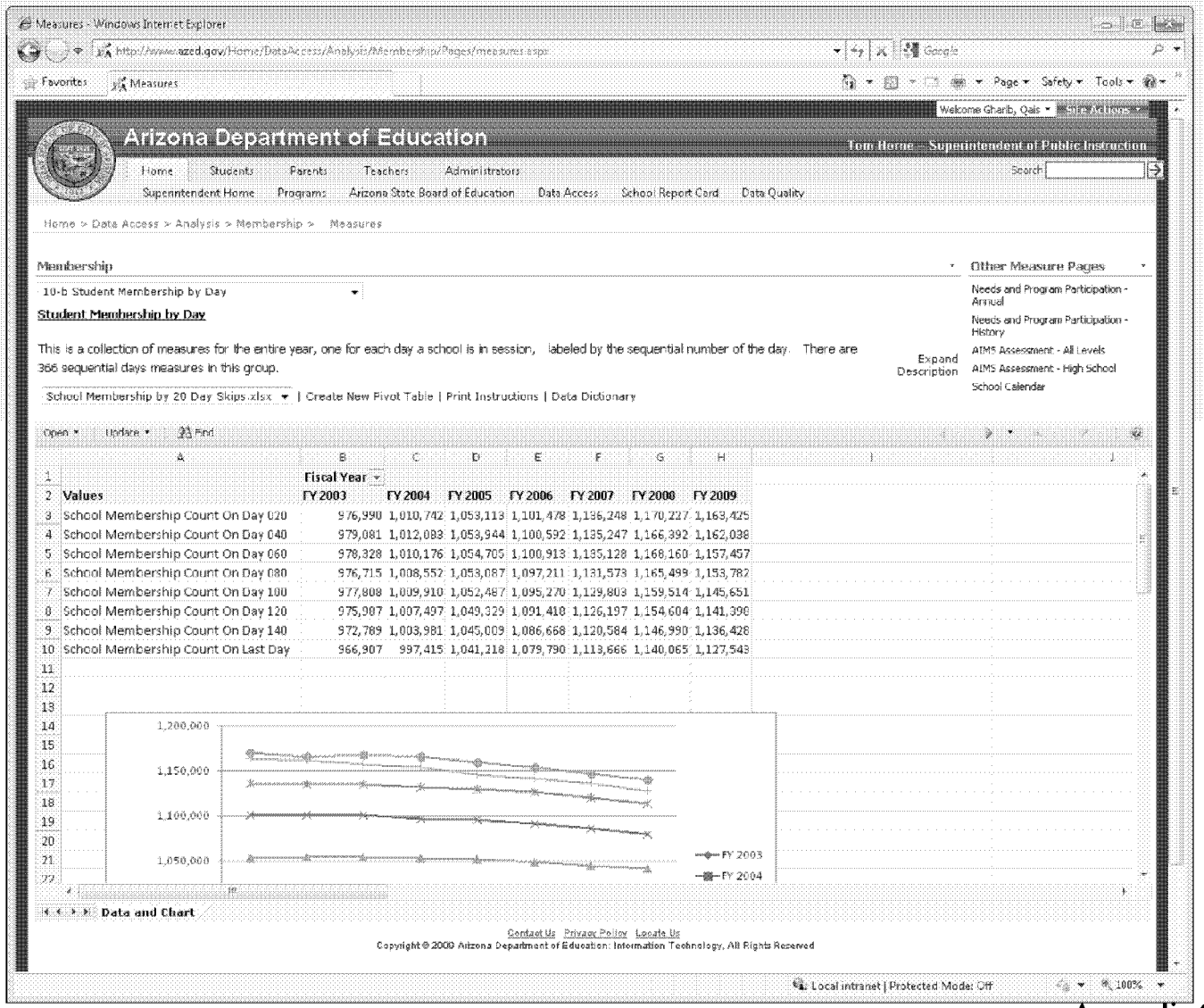



1. Administrator initiates invitation.
2. User receives an email with a link to register for access.
3. User clicks link and is taken to Registration form. User enters additional information and selects user id and password.
4. Profile is created for the user with specific credentials that give user access to Data Warehouse.
5. User receives confirmation email with links to Data Warehouse Portal content.
6. User uses links to access content.

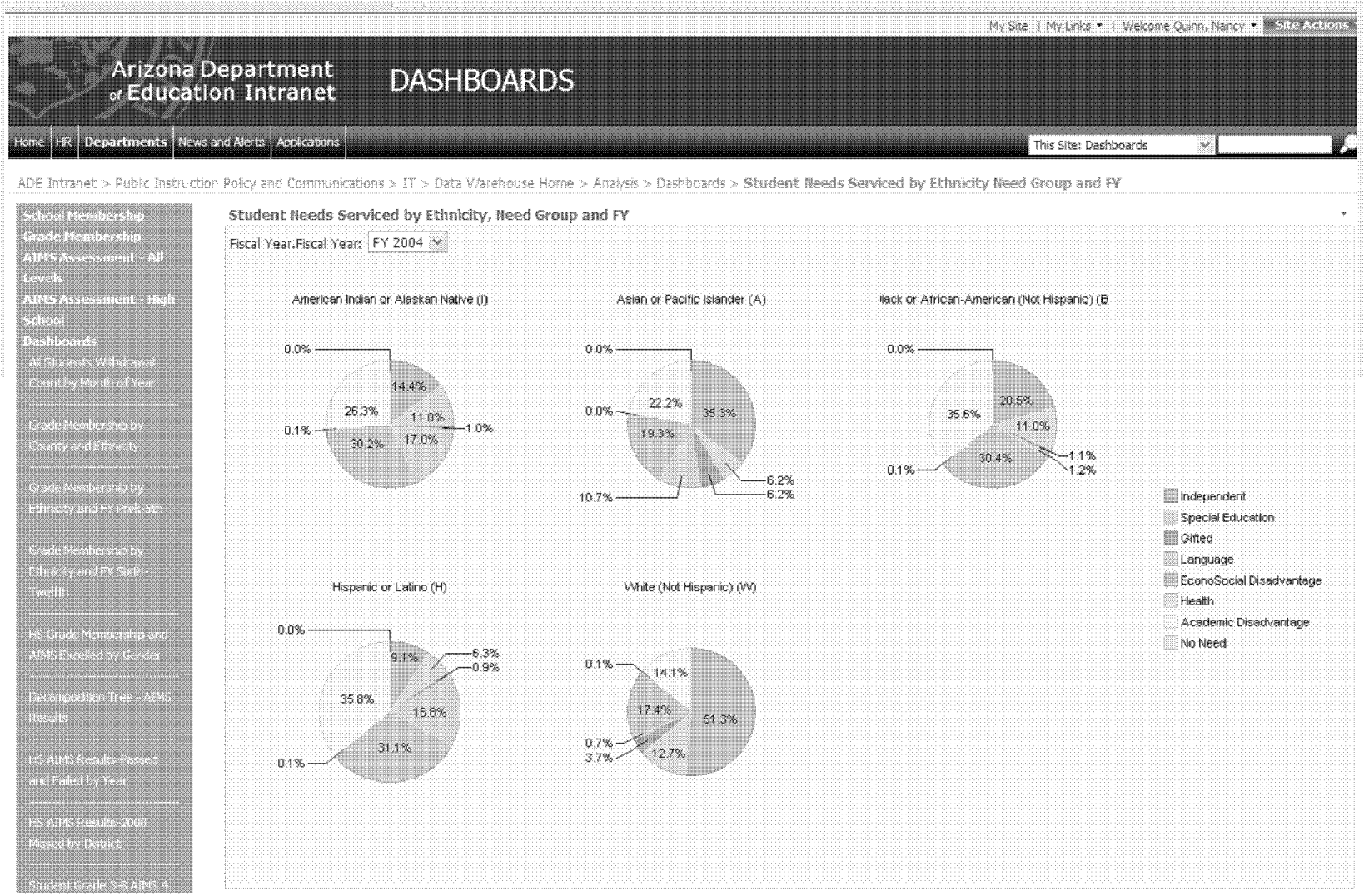
# Security – User Types

- **Readers** – See aggregated views of data and cannot drill down to student level data. This role only has access to Portal content and does not have access to the self-service BI.
- **Report Authors** – Have a restricted view of student level data based on associated entity
- **Auditors** – Have an unrestricted view of statewide aggregated and detailed data
- **Researchers** – Have an unrestricted view of aggregated and detailed data within the cube that has student identifiable information masked

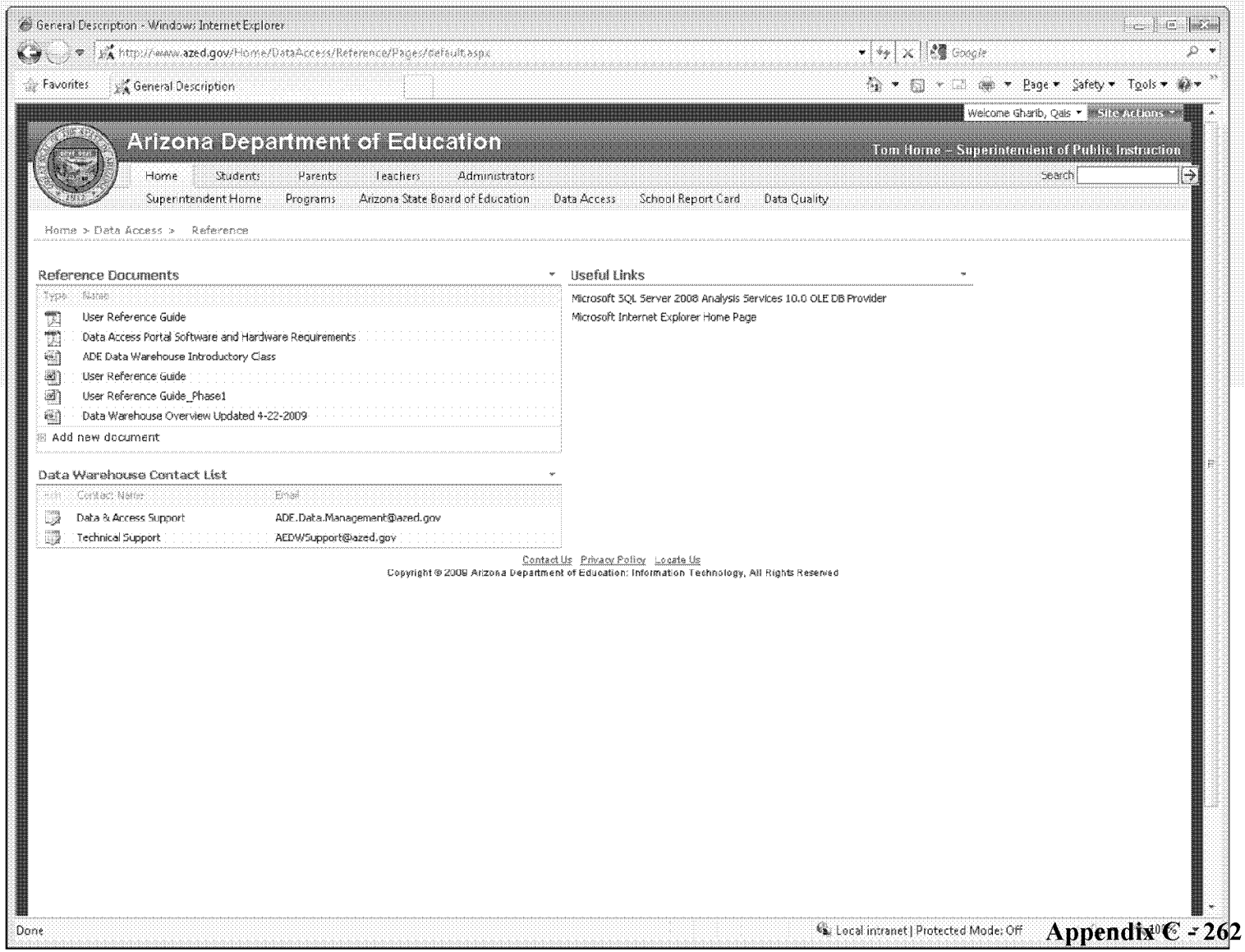
# Business Intelligence



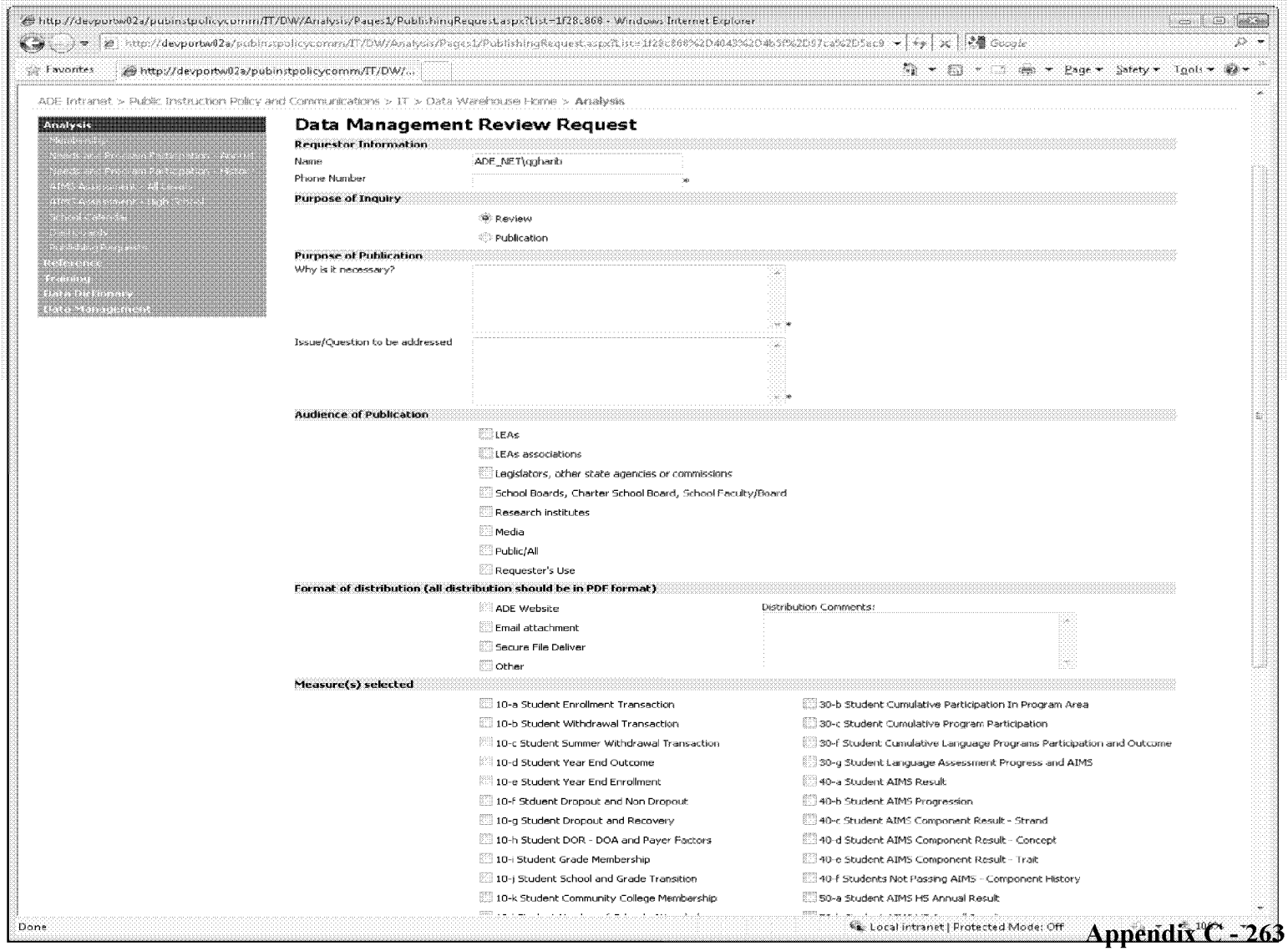
# Business Intelligence



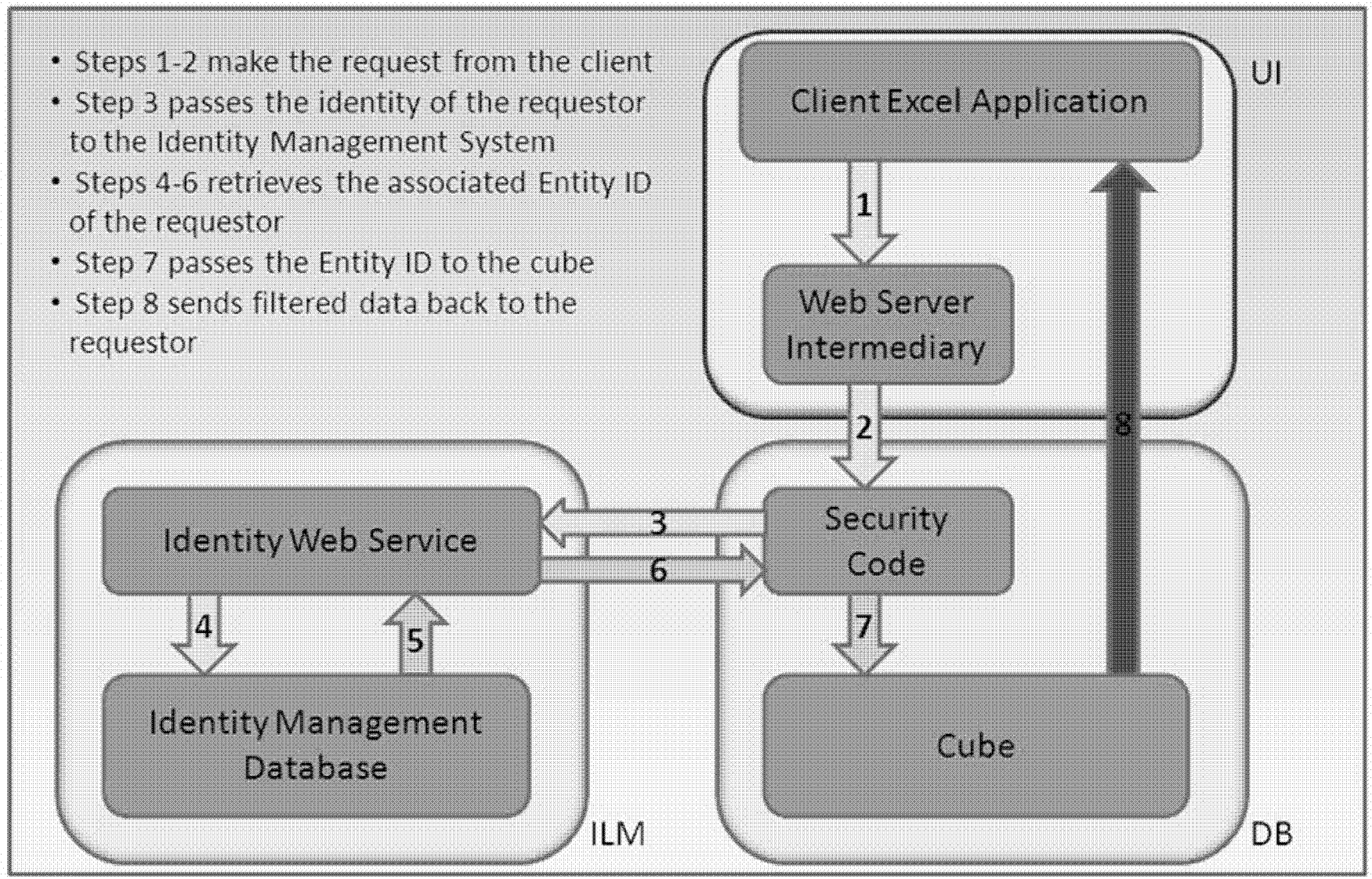
# Collaboration



# Business Forms



# Security – Report Author Filtering

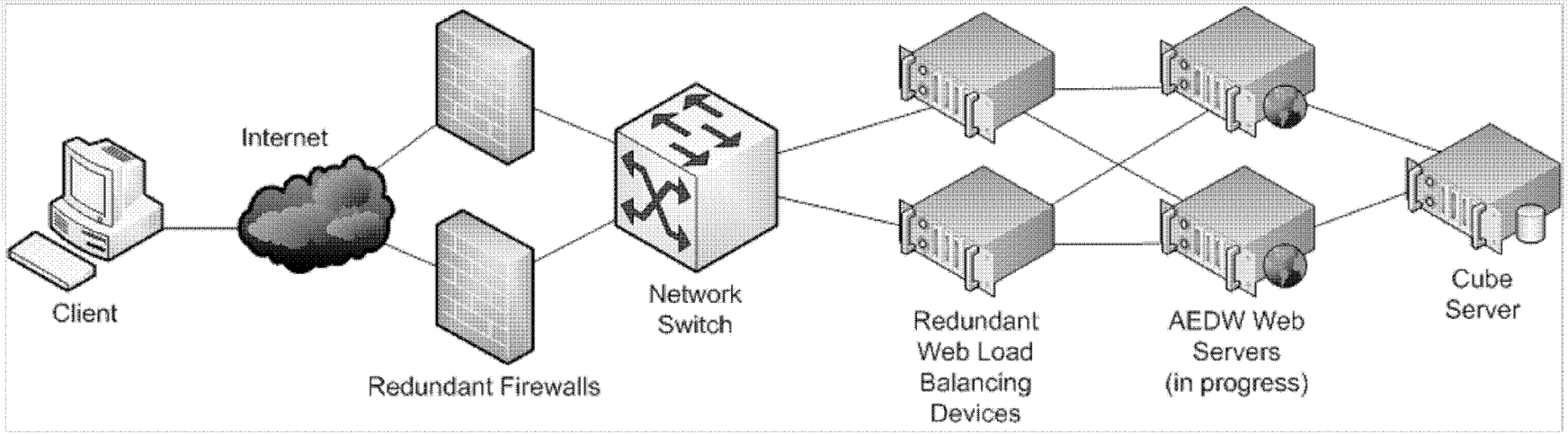


# ADE Infrastructure Technology - Keith Boesel

# ADE Network Architecture

- **Off-site data center**
- **45 Terabyte capacity**
- **Servers**
  - 42 HP Blade servers
  - 22 Non-Blade servers
  - 127 Virtual servers
- **Virtualization**
- **Redundant hardware where possible**
  - Firewalls
  - Web load balancing
  - Failover and load-balance servers

# ADE Network Architecture



# ADE IT Infrastructure Architecture

## Architecture Overview

Keith Boesel

## Facility

The majority of ADE's servers are located in a data center owned by the Arizona Department of Administration (ADOA). The data center is only one block from ADE's main building, allowing for quick access from ADE. The ADOA data center has security and maintenance personnel onsite 24/7/365. Access to the facility is very restricted.

A virtual tour of the ADOA data center is available online at http://isd.azdoa.gov/links/data_center_tour.aspx.

## Network

Our Internet connection and most of our wide area network connections are provided by AZNet, which is an organization contracted by the state to provide voice and data network services. The data center is connected to AZNet via a single connection and the installation of a redundant connection is in progress.

All network traffic from the Internet is routed through a pair of firewalls. The firewalls are configured such that, if one of the firewalls fails, the other will automatically start routing traffic.

Web requests for the Data Warehouse, as well as most other ADE websites, is processed by a pair of web application load balancing devices. These devices can distribute the load of a single site (such as the main ADE website www.azed.gov) to multiple servers automatically. They are configured to detect when a web server is not responding, and route traffic to other servers automatically. The devices are in a redundant pair, and are configured so that, if one fails, the other will automatically take over processing web requests.

## Virtual Environment

ADE is migrating legacy servers to our virtual server environment where possible and all new servers are virtual. The virtual environment allows many virtual servers to run on a single physical system. We have over 120 virtual servers running on seven physical servers. If a single physical server fails, servers are automatically moved to another server. We can also perform maintenance on hardware without shutting down any virtual servers.

## Hardware

All ADE servers are manufactured by Hewlett Packard. Having a single hardware vendor minimizes the number of drivers we need to track.

The majority of the servers are "blade" servers, which are very compact servers that fit in a specialized chassis. We are able to get 48 servers in a single rack. The blades have enough processing power for all of our current workloads.

Our Storage Area Network, or SAN, has 50 terabytes of storage. This storage is used mostly for databases (including the AEDW), and virtual machines.

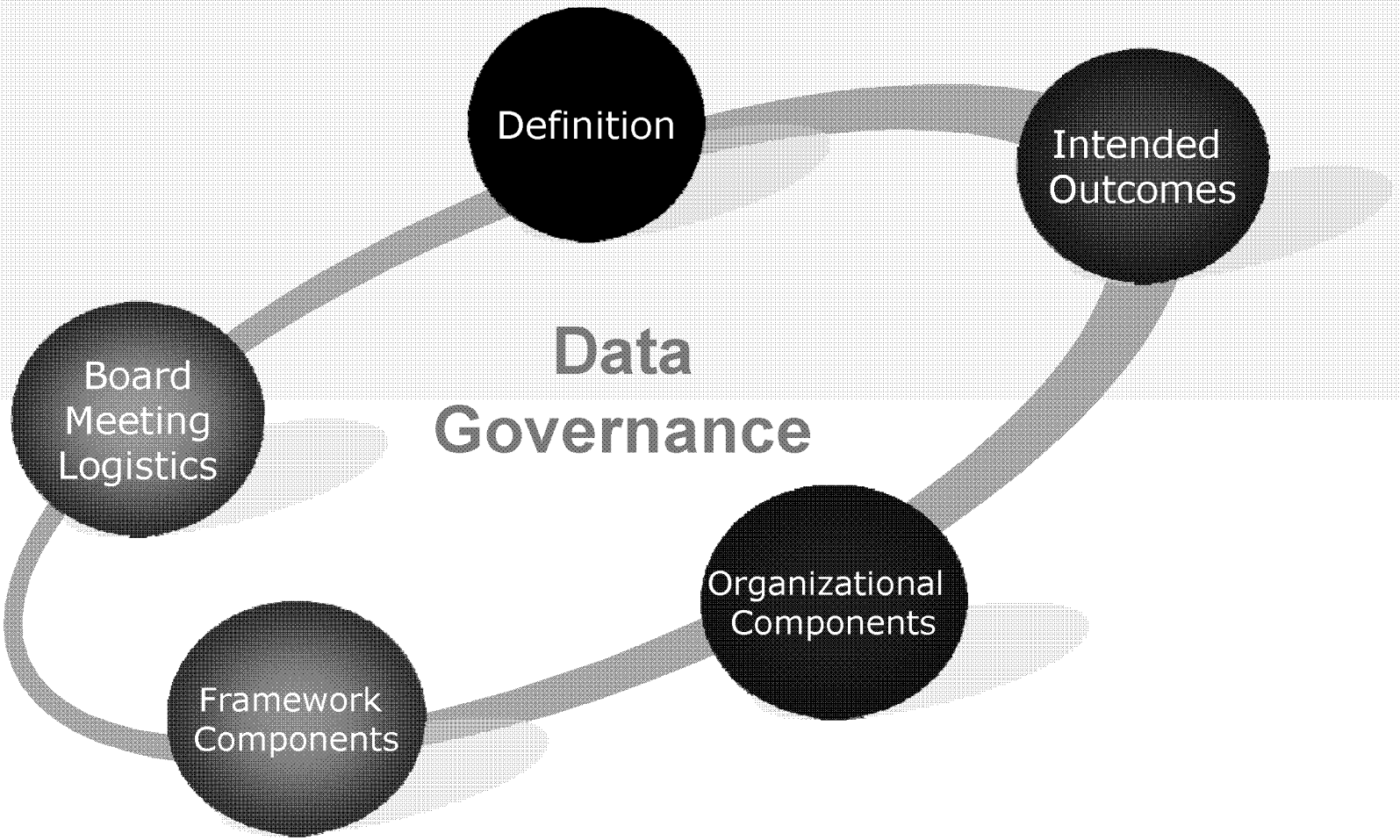
## Software

All ADE servers are Microsoft Windows in varying editions: Windows Server 2003; Windows Server 2008: and a few remaining Windows Server 2000 machines. Microsoft Internet Information Server (IIS) runs the greatest portion of our websites.

Many of our applications use Microsoft SQL server for information storage. The SQL servers are primarily Microsoft SQL Server 2005 Enterprise Edition, with some SQL Server 2005 Standard Edition, SQL Server 2008, SQL Server 2000, and one SQL 7. Several of the databases are configured as a cluster, so that if one server fails, the other is able to take over.

ADE uses Microsoft SharePoint Server for the newest websites, including the AEDW, and has been focusing development of internal products and systems on that platform as applicable.

# Data Governance – Rick Rachkofski Mardy Cruz


Definition
Intended Outcomes
Board Meeting Logistics
Data Governance
Organizational Components
Framework Components

# Data Governance: Definition

- **Oversight of:**
  - People
  - Policies
  - Procedures
- **Positive effects on data:**
  - Availability
  - Usability
  - Integrity
  - Security
- **Accomplished through a governing body and its directives controlling:**
  - People
  - Rules
  - Processes in data collection and usage

# Data Governance: Intended Outcomes

- Integration = Decision support
- Less friction
- Need and responsibilities
- Culture
- Standard processes
- Increase effectiveness
- Transparency
- Standardize definitions
- Transition (systems and ownership)
- Data quality initiatives (R-A-M)
- Roles, rights, accountabilities (access & usage)
- Centralized technology
- Ops integrity for longitudinal data systems

# Data Governance: Organizational Components

- Data Governance Board
- Data Management Team
- Data Stewards

# Data Governance: Framework Components

- **People**
  - Data Governance Board (with operational Data Mgmt team)
  - Data Stakeholders (providers/consumers; internal/external)
  - Data Stewards
- **Rules of Engagement**
  - Mission /Vision: formal document outlining agency transformation under data governance
  - Goals, governance metrics, and success measures
  - Data rules and definitions
  - Decision rights
  - Accountabilities
  - Controls (data risks mitigation)
- **Processes**
  - Data governance processes and practices

# Data Governance: Meeting Logistics

- Membership, attendance, proxies
- Periodicity or triggering events
- Location
- Facilitation
- Agenda construction
- Voting
- Representation of Data Mgmt team, business units, stewards, other stakeholders

# Arizona Department of Education

| | | | |
|---|---|---|---|
| **Document:** | Data Governance Charter and Master Guideline | **Guideline No:** | IT XX-YY-0906161500 |
| **Scope:** | ADE and major external data stakeholders | **Effective:** | |
| **Expiration:** | This document is to be reviewed, and either revised or allowed to renew unchanged by: | | |
| | | **Key Contact(s):** | R. Rachkofski |

## I. COMPONENTS OF DATA GOVERNANCE CHARTER AND GUIDELINES DOCUMENT

Data Governance:
- Definition
- Intended outcomes
- Organizational components
- Framework components
- Meeting logistics

## II. DATA GOVERNANCE DEFINITION:

Data Governance refers to the oversight of people, policies, and procedures that affect the availability, usability, integrity, and security of the data assets of an organization. A successfully functioning Data Governance program is usually accomplished through a governing body with the authority to create formal directives controlling people, rules, and processes in the data collection and usage domain.

## III. DATA GOVERNANCE INTENDED OUTCOMES:

The Establishment of a Data Governance program within the AZ Department of Education's business units, the agency as an enterprise, and data stakeholder groups and partnerships, will target these goals:

1) Better decision-making anchored in the integration of available data assets into a single version of reality.
2) Reduced operational friction between the agency's business units through an agency-wide adoption of an enterprise view of all data assets.
3) A commitment to the needs and a clarification of the responsibilities of all data stakeholders whether they are data providers, data consumers, or both.
4) An agency-wide culture that moves all levels of management and staff to seek out and adopt common approaches to data issues.
5) Standardized, repeatable, and auditable data processes.
6) Reduced costs and increased effectiveness in the data arena through the coordinated efforts of all business units and stakeholders.
7) Transparency of all data related business rules and the processes that execute them.
8) Standardized data definitions across the complete data domain, with input from internal and external Subject Matter Experts.
9) Transition of business units from narrow-use data silo operations to broad-use enterprise data systems, and the evolution of their role as "data owners" to stewards and suppliers of quality data to the enterprise.
10) Establishment of direction and measurement of Data Quality initiatives, including the definition of responsibilities and accountabilities of business units and their Data Stewards.
11) Creation of roles and their decision rights and accountabilities to: 1) establish safeguards and controls for Data Privacy compliance, and 2) control Access Management to meet usage standards.
12) Centralized technology architecture to mitigate data integration challenges between cross-functional business units in order to meet the data and information needs of all education stakeholders.
13) Maintenance of the operational integrity of the Education Data Warehouse through the enforcement of Change Management standards and rules for all data processes that support this and other longitudinal data system components.

## IV. DATA GOVERNANCE ORGANIZATIONAL COMPONENTS:

In order to achieve the outcomes above (section III), the Arizona Department of Education is initiating and will support the following Data Governance organizational hierarchy:

1) The Data Governance Board is established under the sponsorship of the agency's Executive Team. The Executive Team will have representation on the Board and will appoint or approve other Board membership representing internal data stakeholders. Invitation for Board membership may be extended to representatives of external data partnership groups as deemed appropriate by the sponsors.
2) Under the auspices of the Data Governance Board, the agency's Data Management business unit will be the functional extension of the Board and will be empowered and supported in its execution of the Board's guidelines and decisions. The Data Management Team will provide status reports and metrics to the Board for all assigned initiatives.
3) While maintaining their current lines of authority within their respective business units, a group of subject matter experts will be identified and given the designation and responsibilities of "Data Stewards". Each will represent the business unit of origin and will participate in those Data Management Team meetings that will need specific data expertise for the enterprise-based directives of the Data Governance Board.

## V. DATA GOVERNANCE FRAMEWORK COMPONENTS:

The agency's Data Governance initiative will adopt a framework with 3 categories and 10 essential elements:

A) *People and Organizational Bodies*:

1. A Data Governance Board (DGB) with its operational Data Management Team.
2. Data Stakeholders (providers and consumers; internal and external).
3. Data Stewards – those subject matter experts bearing data responsibilities within business units on behalf of the agency as an enterprise.

B) *Rules of Engagement*:

4. Mission / Vision – formal statements painting a clear before-and-after picture for stakeholders depicting the current data environment versus a new environment with a Data Governance program that will transform the agency into an information-based enterprise driven by integrated, quality data assets.
5. Goals, Governance Metrics, and Success Measures – goals include the intended outcomes above. To address them it is necessary to:
    - recognize the weaknesses in the business areas that need to be rectified
    - define what processes and practices will be affected – and how – within the areas of data management, business, and technology
    - determine the metrics that will indicate success within the enterprise when completed
6. Data Rules and Definitions – to enable the integration, availability, usability, integrity, and security of the data assets at all levels of the enterprise, Data Governance must codify rules for people and processes in the data arena. Particular focus is placed on data definitions, meta-data, standards, requirements, business rules, data quality rules, data usage rules, and data access rules. Additionally, Data Governance must advocate for all stakeholders who need representation in data decisions and rules-related processes.

7. Decision Rights – to determine who has the right to make what types of decisions, when, and following what types of protocols. As a governing body, the DGB will also focus on the agency's ongoing practices and processes that affect how data are structured, organized, defined, made available or restricted, disseminated, and even created or collected.
8. Accountabilities – assignment of clear accountabilities for work within the Data Governance, Data Management, and Stewardship programs. These are accomplished by formalizing roles and duties for program participants tied to any section of data flow, especially where there are gaps in current responsibilities.
9. Controls – because all data are at risk in a variety of ways – including loss, inappropriate usage/publication, corruption, inaccuracies, and incompleteness – deploying controls to operationalize risk management for data is essential. These controls will focus on risks to data either by preventing events or detecting and correcting events. Controls can be automated, manual, or a mix of both; the Data Stewards will assist in specifying, designing, implementing, or performing data related controls. Controls can exist within guidelines, training, processes, best practices, or management directives.

C) *Processes*:

10. Data Governance Processes – the nine components above (sections V-A and V-B) refer to people and how they interact with data and each other in service to the concept that data are assets of the enterprise, providing education stakeholders with availability, usability, integrity, and security of those assets. The vehicles for attaining those goals by Data Governance include the following processes or practices:

* Aligning Guidelines, Requirements, Controls
* Establishing Decision Rights
* Establishing Accountability
* Performing Stewardship
* Managing Change
* Defining Data
* Resolving Issues
* Specifying Data Quality Results
* Building Governance into Technology
* Providing Stakeholder Care
* Communications and Program Reporting
* Measuring and Reporting Progress

## VI. DATA GOVERNANCE BOARD – MEETING LOGISTICS:

During the first meeting, the affirmation of authority by the Senior Management will be cited. The logistics for subsequent meetings will be determined and will include, but not be limited to:

- Membership, attendance, and proxies
- Meeting periodicity or triggering events
- Location
- Facilitation
- Agenda construction
- Voting
- Representation of Data Management Group, Business Units, Data Stewards, other Stakeholders

At the conclusion of the first Data Governance Board meeting, the resolution of the logistics issues will be documented and replace this section (VI).

| Document: | Data Governance Charter and Master Guideline | Guideline No: IT XX-YY-0906161500 |
|---|---|---|
| Scope: | ADE and major external data stakeholders | Effective: |
| Expiration: | This document is to be reviewed, and either revised or allowed to renew unchanged by: | |
| | | Key Contact(s): R. Rachkofski |

ROTED TO AND READ BY THE _____ UNIT:

| Signature (no initials) | Date | Signature (no initials) | Date |
|---|---|---|---|
| | | | |
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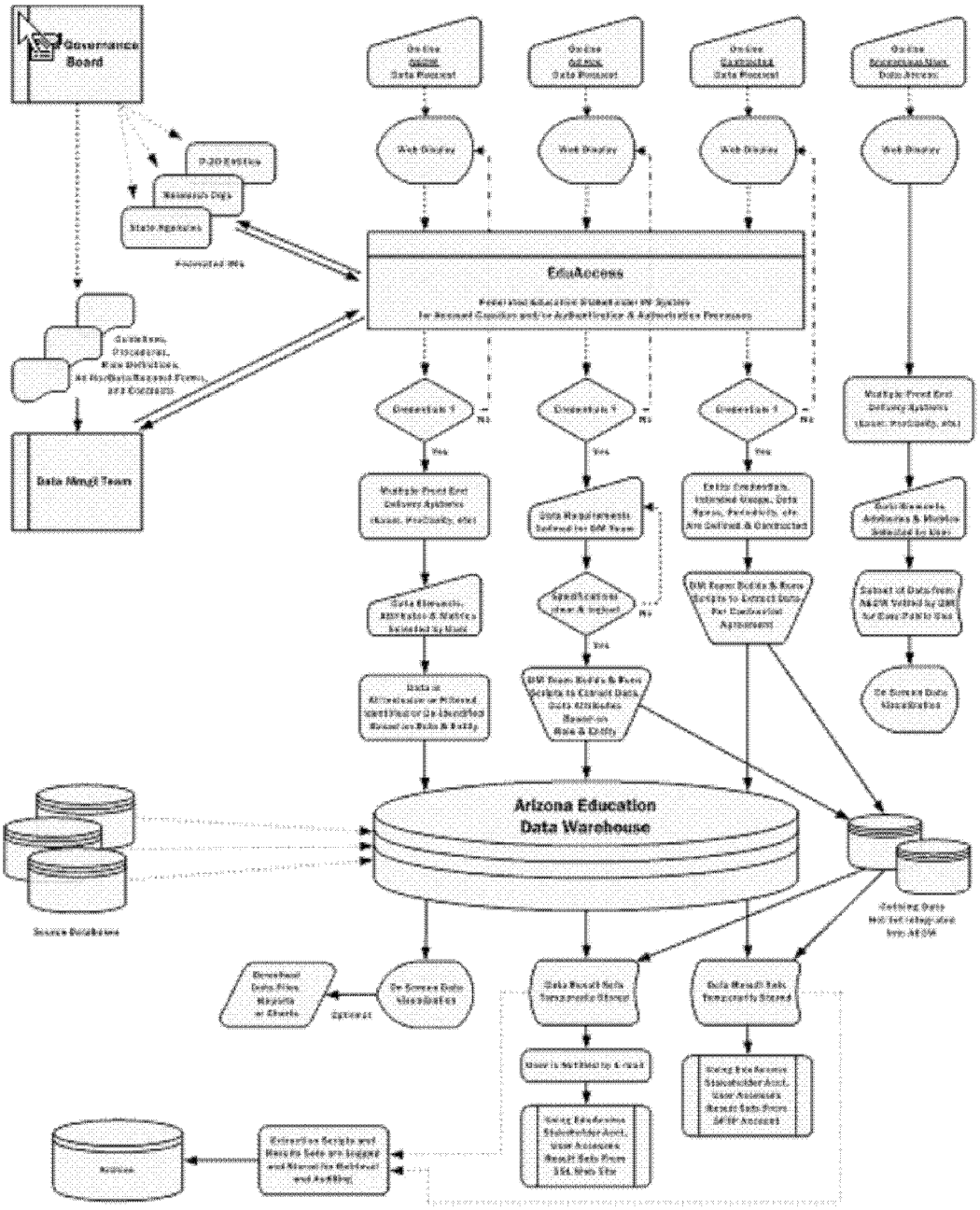
**Arizona Department of Education**

**Data Governance Projected Model for Authorized Data Request and Retrieval Methods**



State of Arizona

Department of Education

# DATA SHARING AGREEMENT

This Data Sharing Agreement ("the Agreement") is between The Arizona Department of Education ("ADE") and_____

The Agreement is for the purpose of _____

_____

_____

Certain proprietary information ("Data") as described in Appendix A, which is attached to and made a part of this Agreement, is to be released to _____

By _____

[*check one*] ☐no other appendixes apply, or ☐the following additional appendix(es) is (are) attached and made a part of this Agreement: _____

_____

**Conditions**

_____ understands that ADE cannot guarantee, nor may _____ hold ADE liable for, the accuracy, correctness, or timeliness of the data. ADE shall not be held responsible for how the data is used or analyzed, or how any analysis of the data may be interpreted.

_____ affirms that its staff has the skills to use, analyze, and interpret this data properly, and that ADE may not be held responsible for assisting _____ in the use of or the interpretation of this data, except as may be separately agreed by both parties.

**Data security**

_____ certifies that it has in place sufficient security and privacy procedures to protect the data in a manner and to a degree that satisfies all

federal and statutory requirements, and affirms that the data will be protected from the time that it is received to the time it is returned or destroyed.

_____ affirms that data either in hard copy form or in the form of non-encrypted removable media will be locked, and that data in electronic form will be stored using encryption that will meet federal and statutory standards.

The data shall be [*check one*] (A) ☐returned to ADE or (B) ☐destroyed when no longer needed or by

[*date* _____], whichever is earlier.

If the data is destroyed, _____ will supply ADE with certification that proper destruction has been conducted.

The data is not meant to be copied, however, any copies that may be made are to be handled with the same level of access and security as the original data, and returned or destroyed as described above.

_____ understands that the data it is to receive by from ADE under this agreement may be sensitive or confidential in whole or in part, and may include individual records about public school enrollment or other data that may be regulated by state or federal law, such as FERPA for student data or HIPPA for health data.

_____ affirms that it will have in place confidentiality agreements for all staff that will be using the data or have access to the data.

_____ understands that it may be possible that individuals could be identified from small portions of the data (e.g., any geography with fewer than 10 cases), and agrees to apply appropriate suppression rules so as to avoid identification of any individuals.

**Release of data, analysis, or interpretation to third parties**

Except as may be provided in this Agreement, _____ agrees that it will not share, publish or otherwise release any findings, conclusions, analyses, reports, or products of any nature derived from the Proprietary Information without prior written approval from ADE.

_____ certifies that any products of the Data released to third parties will be used solely for the purpose(s) described in this Agreement.

_____ shall obtain no right of any kind in the Data, which remains the property of ADE. At completion of the Agreement or termination of the

relationship between _____ and ADE,

_____ shall return all Data to ADE and/or shall destroy all Data (including all computer or electronic files).

ADE retains all rights to the use of the Data. _____ agrees that it will not sell the Data and, except as described in this Agreement, will not share the Data with other parties.

**Source identification:**

_____ will state on any reports that it is solely responsible for any analysis or interpretation of the data.

_____ [*check one*] (A) ☐shall or (B) ☐shall not identify ADE as the source of the data on any reports released or published.

**Renewal schedule**

The duration of data sharing under this agreement shall be from [*date* _____]

to [*date* _____], unless both _____ and ADE agree to extension or renewal.

**Amendment and termination process**

Any amendment to this agreement shall be in writing and by mutual consent of _____

_____ and ADE.

The agreement may be terminated at any time by either party for any reason.

Within [*specify length of time* _____], _____

shall return or destroy the original data supplied and any copies of the data as described above.

**Signature Page**

_____

[NAME OF DATA SHARING ENTITY]

_____ _____

[SIGNATURE] [DATE]

_____ _____

[PRINTED NAME] [TITLE OR FUNCTION]

**Arizona Department of Education**

_____ _____

[SIGNATURE] [DATE]

_____ _____

[PRINTED NAME] [TITLE OR FUNCTION]

**APPENDIX A**

**Data description, content, format, and transmission**

File format (e.g., comma-delimited text file)

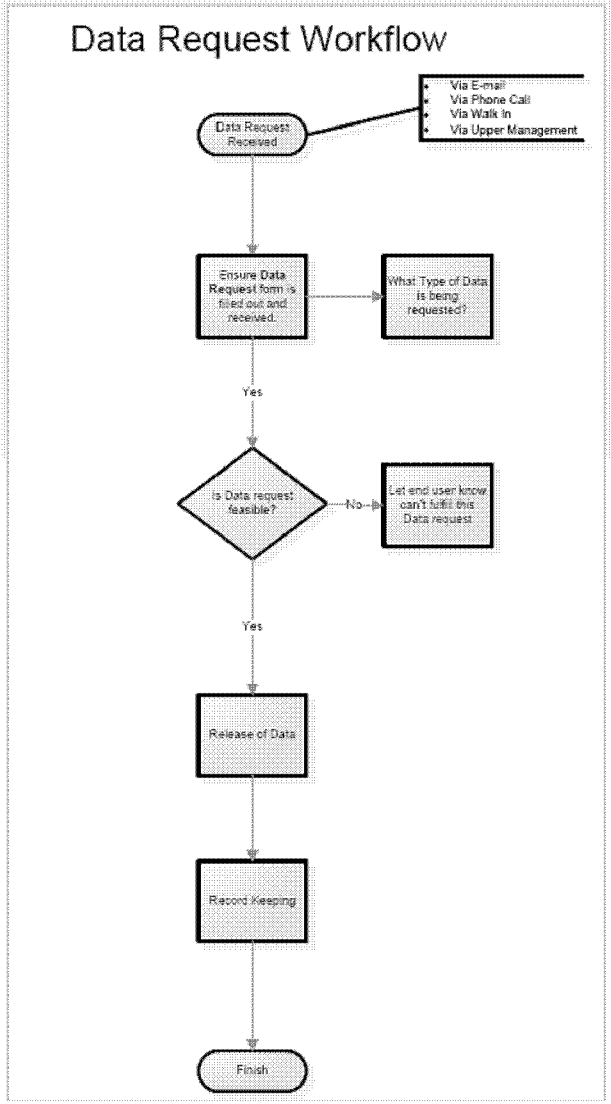
Method(s) for transmission (*e.g., email of non-confidential data, mailing of DVDs, picked up by in-person*)

Timing of the data delivery (*e.g., one time, weekly, monthly, annually*)

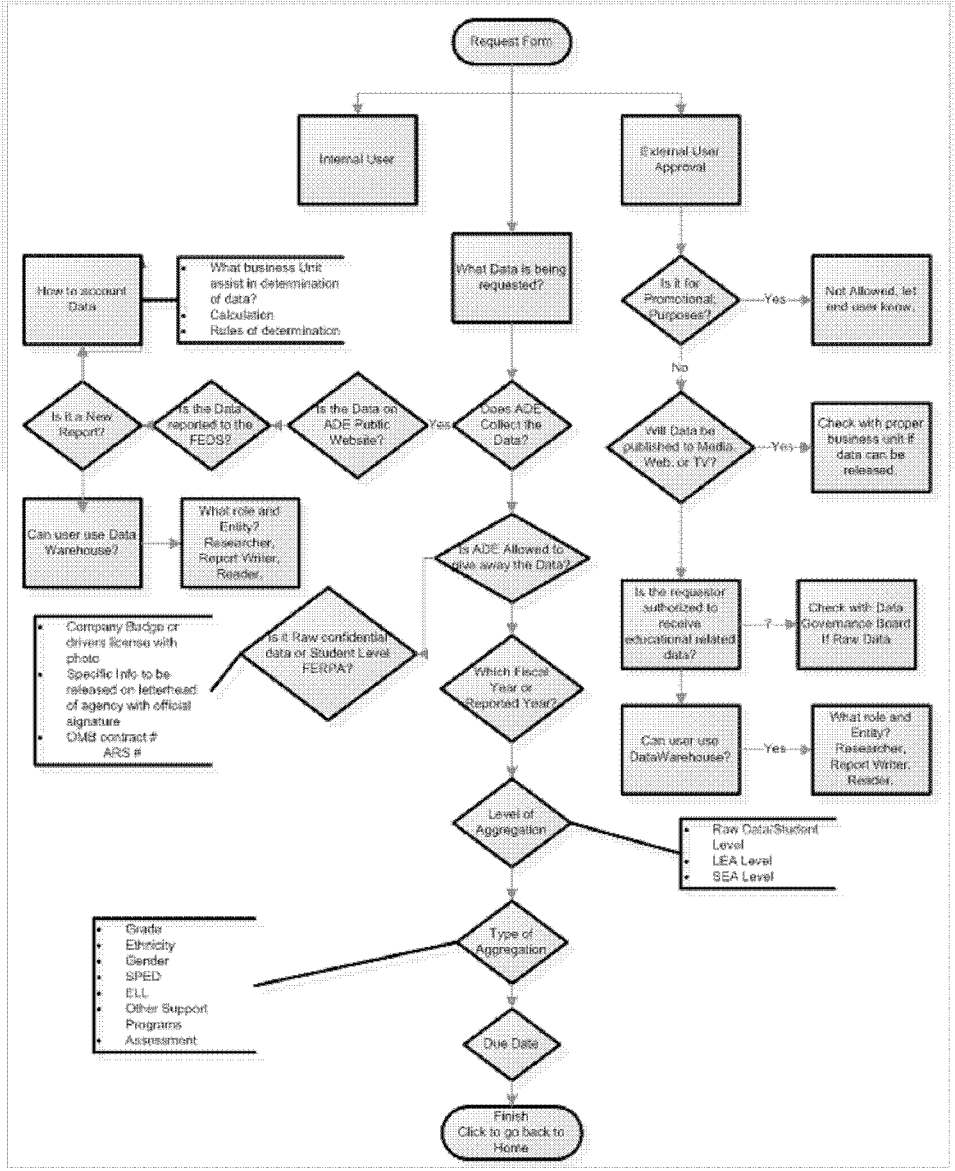
Fields to be included

Time period the data is to represent

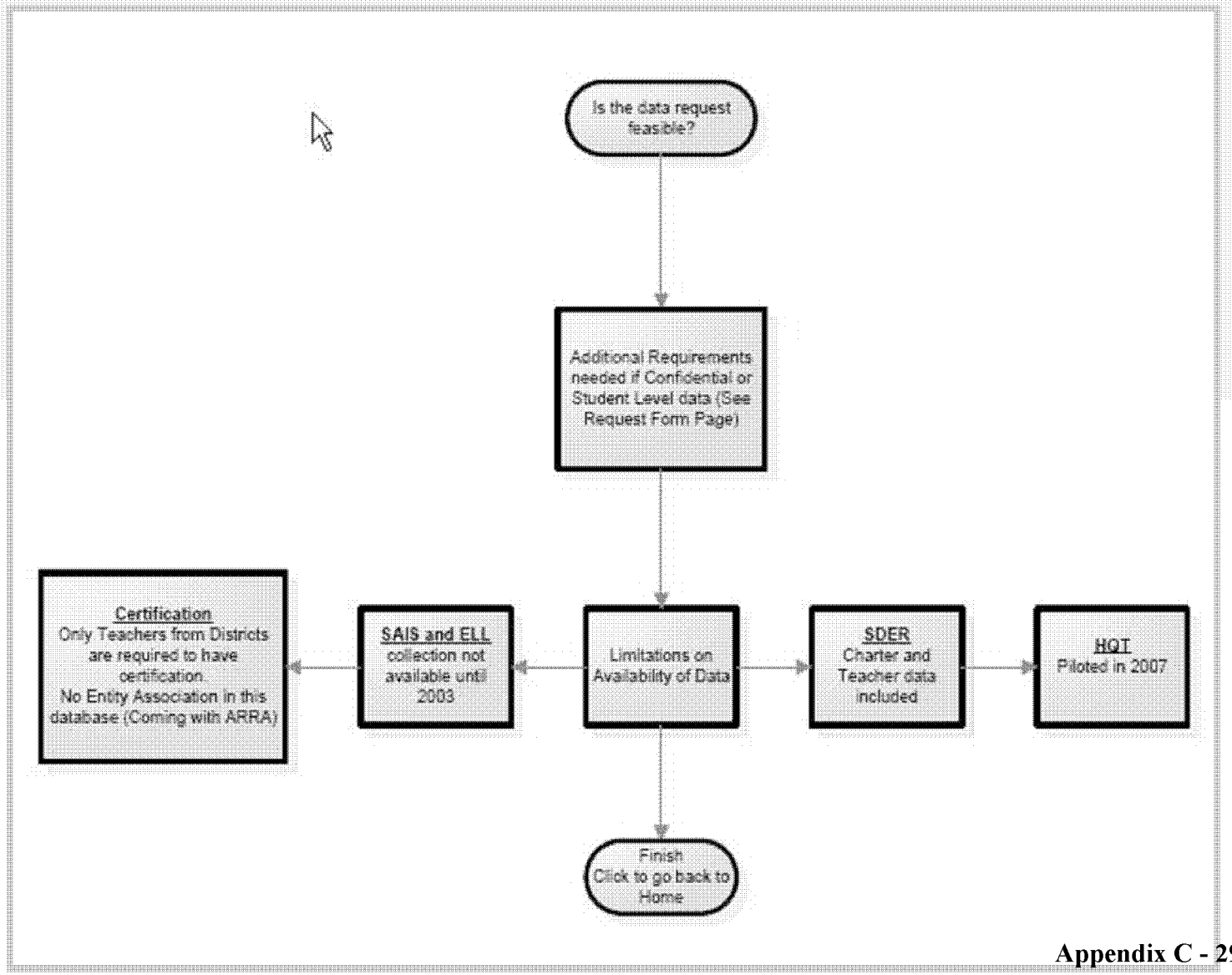
# Data Management High-Level Workflow



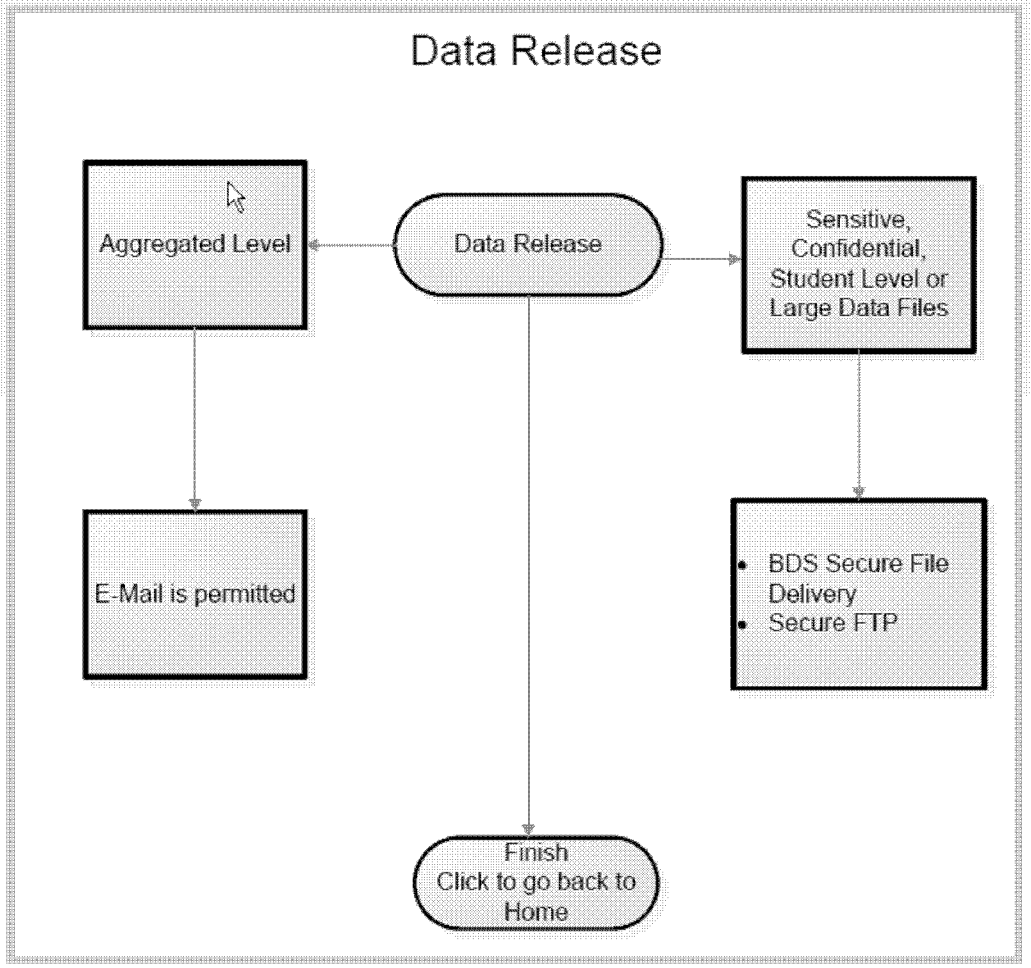
# Request Form

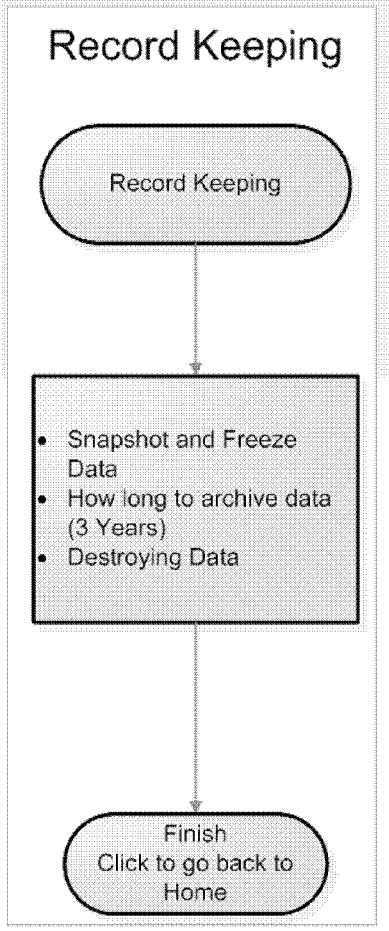


# Is the Data Request Feasible?



# Data Release and Record Keeping



# Arizona Department of Education

| | | | |
|---|---|---|---|
| **GUIDELINE:** | Data Extract Request and Release Guidelines | **Guideline No:** | IT XX-YY-0906171500 |
| **Scope:** | ADE | **Effective:** | |
| **Expiration:** | This guideline is to be reviewed, and either revised or allowed to renew unchanged by: | | |
| | | **Key Contact(s):** | R. Rachkofski, M. Cruz |

I. PURPOSE

The purpose of this guideline is to establish the authority and procedures for releasing data extracts of sensitive and confidential student detail information or aggregated data created from this data to associated schools, school districts and charter schools, and to such agencies or entities that may have a legitimate need to view them, and the legal right to do so.

II. GUIDELINE

It is the Arizona Department of Education's (ADE) operating principle to safeguard sensitive and/or confidential information pertaining to a student's identity, and the associated data related to the identified student when it is extracted from ADE databases and physically or electronically delivered to the appropriate school, local education agency (LEA), charter school entity, or other duly authorized agency. Legal mandates require that data be submitted by educational entities to ADE. Those data or subsets of data are to be made available to those entities, or to any legally authorized agency, upon request. The chief administrator or a designated senior official of the educational entity should make a formal request. When other agencies, such as the Attorney General or Auditor General have a need and the right to possess any student-level data collected by ADE, both the process of requesting and the delivery of data should be properly documented for public inspection and auditing purposes to ensure that the transfer of information followed proscribed procedures.

III. PROCEDURE SUMMARY

**Note**: For a more detailed description of the Data Request Workflow please refer to Appendix A.

A. The LEA or other agency requiring a data extract notifies ADE's Data Management Team of the specific data request and its intended use. This should be done by means of a letter on the LEA's or agency's letterhead, signed by the agency head, chief administrator, or a senior official. An alternate method of request can be via e-mail with a recognizable and verifiable e-mail return address. The requester will be sent the Request/Release form attached below. Pending the completion and return of the form along with the identity verification of the requester (i.e. photocopy of driver's license or employee badge), the request will be vetted by the Data Management team and the result of this process will be to authorize, reject (with cause), or further clarify the requirements with the requesting agent.

B. If the request is rejected, a Data Management representative will notify the requester and explain the reasons for that decision. Adjustments to the request may be made and resubmitted if appropriate.

C. If the request is authorized either directly or after needed clarifications have been made, an estimate of the delivery time will be made. The complexity of the request, workload, and staffing levels may all be contributing factors to this estimate.

D. The Data Management analyst will generate the extract and load it into a package on an encrypted Web server. A notification (with full instructions) will be sent to the recipient. The recipient will navigate to the site and click a link and enter the username and password previously assigned. Using this SSL (Secure Socket Layer) technology, the file will then be decrypted for the recipient.

E. For later reference, quality control inspection, and audit purposes, the original request, the extraction script, and the result set will be archived.

# Arizona Department of Education

## RELEASE/RECEIPT FOR DATA EXTRACT OR RELEASE

**Directions:** **Please complete all portions of this form. The completed form must be retained as a permanent record.**

**Section A: Requestor Information**

***Date of Request:*** _____

***Name and Title*** _____

***Address:*** _____

***Email Address:*** _____

***Phone Number:*** _____ ***Fax Number:*** _____

**Section B: Please check what type of data user you are:**

☐ Internal ADE Employee ☐ External User

**Section C: Check the following fields that apply regarding the data request**

| | | |
|---|---|---|
| ☐ Data will be published | ☐ Data resides on ADE Public Website | ☐ New Report Request |
| ☐ Data is reported to FEDS | ☐ Data Warehouse User (Section E) | ☐ Other |
| ☐ Data is for Promotional Purpose | ☐ Authorized to receive Educational Data | ☐ ADE collects the Data |
| ☐ Data is Student Level (Section G&I) | ☐ Data is Confidential (Section G&I) | ☐ Raw Data |

**Section D: Precise Description of the Data Requested, and its Intended Use:**

**Full description of data request (include attachment if necessary):**

_____

_____

_____

**Intended use for data:**

_____

_____

**Which Fiscal Year or Reported Year?:**

_____

**Due Date:**

_____

**Level of Aggregation:**

☐ Raw Data/Student Level ☐ School Level ☐ LEA Level ☐ SEA-Level

**Type of Aggregation:**

| | | |
|---|---|---|
| ☐ Grade | ☐ Ethnicity | ☐ Gender |
| ☐ SPED | ☐ ELL | ☐ Other Support Programs |
| ☐ Assessment | ☐ Other (Please Describe):_____ | |

## Section E: Data Warehouse Users

If you are a trained Data Warehouse User do you see student level non masked data? ☐ Yes ☐ No

If **Yes** what is the Entity Name and ID number? _____

AEDW Role Assigned: ☐ Researcher ☐ Report Author ☐ Reader ☐ Auditor

**Users must:**

1. Be responsible for the information obtained, use it appropriately, and only for authorized purposes;
2. Only use individual records or anything that could generate personally identifiable information for the validation of queries/programming;
3. Destroy student level records that have been provided from the Data Warehouse student information pursuant to a formal agreement within time limitations defined in the agreement and provide certification to the Data Management staff that such records have been destroyed;
4. Provide to the Data Management team, prior to publication/release, any documents generated as a result of using data received from the Data Warehouse, for review and verification that the stated purpose has been honored;
5. Understand that deliberate or accidental misuse of information may result in one or more of the following: loss of access, disciplinary action, prosecution under the scope of all applicable federal and state laws;
6. Ensure the data obtained is stored and transmitted securely and not available or disclosed to unauthorized parties; and
7. Encrypt the data on mobile computing devices containing any data retrieved from the Data Warehouse that pertains to an individual's level, status, or identity (student or staff).

**Users must not:**

1. Use the results of information provided by or generated from AEDW data to determine the identity of any student or employee;
2. Allow any unauthorized use of information provided by or generated from the AEDW data;
3. Share any data with any other individual(s) that has the potential to be personally identifiable; and
4. Publish reports with cell sizes of less than 10. (Reports must mask these cells so that personal identities cannot be extrapolated.)
5. Before any data is published it must be submitted to the Data Warehouse Group for approval

## Section F: ADE Employee Who Is Authorizing the Release of Data:

The undersigned ADE employee (a) understands that the information described above may include sensitive, personal, or confidential data, (b) affirms that she or he is duly authorized to release ADE information, and (c) hereby authorizes its release to the entity/person below.

_____ _____
(ADE Employee Signature) (Date)

_____ _____
(ADE Employee Printed Name) (ADE Department or Unit)

## Section G: Person Who is Requesting the Data:

The undersigned acknowledges receipt of information as described above, understands that it may include sensitive or personal or confidential information, and accepts responsibility for safeguarding it as appropriate. The undersigned is aware of the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. §1232g; 34 CFR Part 99), understands that it is a federal law that protects the privacy of student educational records, and recognizes that there are severe penalties for its violation. Also, contained in the Arizona Title 15-Education; Section 15-537; http://www.azleg.gov/ArizonaRevisedStatutes.asp?Title=15 is the adherence of state laws governing school employees confidential information.

_____ _____
(Signature) (Date)

_____ _____
(Printed Name) (Requesting Agency, Department or Educational Entity)

## Section H: ADE Employee Who Is Actually Releasing the Data:

The undersigned ADE employee affirms (1) that the person receiving the data extract described above was properly identified by photo credential as checked below, and (2) that ADE has received proper authorization from the

responsible local education agency to release its data, as checked below. Proper written authorization is a letter of release on the requesting agency's letterhead signed (by the agency head, chief administrator, or a senior official), or other appropriate formal document including identifiable and verifiable e-mail.

1) I identified the person who is receiving the information by the following photo credential:

☐ *driver's license* ☐ *employee badge* ☐ *other (describe):*_____

2) I have attached a photocopy of the photo credential:

3) The responsible LEA/agency authorized release of this information by:

☐ *written authorization* ☐ *other (describe):*_____

_____ _____
(ADE Employee Signature) (Date)

_____ _____
(ADE Employee Printed Name) (ADE Department or Unit)

**Section I: FERPA**

The purpose of FERPA is two-fold: to assure that parents and eligible students can access the student's education records, and to protect their right to privacy by limiting the transferability of their education records without their consent. 120 Cong. Rec. 39862. As such, FERPA is not an open records statute or part of an open records system. The only parties who have a right to obtain access to education records under FERPA are parents and eligible students. Journalists, researchers, and other members of the public have no right under FERPA to gain access to education records for school accountability or other matters of public interest, including misconduct by those running for public office. Nonetheless, as explained in the preamble to the NPRM, 73 FR 15584–15585, we believe that the regulatory standard for defining and removing personally identifiable information from education records establishes an appropriate balance that facilitates school accountability and educational research while preserving the statutory privacy protections in FERPA. The simple removal of nominal or direct identifiers, such as name and SSN (or other ID number), does not necessarily avoid the release of personally identifiable information. Other information, such as address, date and place of birth, race, ethnicity, gender, physical description, disability, activities and accomplishments, disciplinary actions, and so forth, can indirectly identify someone depending on the combination of factors and level of detail released.

# LUNCH & OPEN DISCUSSION

Demo Session starts at 1pm in B2

# Data Warehouse Demo & Training Overview – Nancy Quinn B-2 (Basement Training Room)

# Stakeholders – Ilana Licht

# AEDW Stakeholders Considered Potential Active Users

| Stakeholder | Estimated Users |
|---|---|
| **LEAs** | |
| **Teachers** | **60,000** |
| Curriculum Coordinators | 200 |
| Programs coordinators | 400 |
| Social/Psychological officers | 200 |
| Business/Financial officers | 200 |
| Information Technology officers | 150 |
| County Education Support Agencies | 40 |
| **School Principals** | **1500** |
| District superintendents | 150 |
| County superintendents | 10 |
| **State & Federal Agencies** | |
| AZ Department of Education | 50 |
| State Education Boards (SBE, CBE, SBOR, SFB) | 10 |
| Economic Security, Health, & Secure Care Agencies | 15 |
| Legislation Assistants | 5 |
| Bureau of Indian Education | 5 |
| American Indian Tribal Agencies | 15 |
| **Researchers** | |
| Education Associations | 25 |
| Post secondary Institutes | 25 |
| Total | 63,000 |

# Stakeholder Exchange Attendees

| | | |
|---|---|---|
| Art Harding | ADE Legislative Liaison | In Person |
| Emily Ackman | ASU College of Education Arizona Education Policy Initiative Graduate Student | In Person |
| Jeff Stowe | ADE EDFACT - Business Liaison | In Person |
| Karen Jones | Tucson Student Information Systems Manager | Call In |
| Kerry McConnell | Arizona Charter Schools Association Success Center Director | Call In |
| Kristina Gomez | First Things First Evaluation Analyst | In Person |
| Mary Veres | Tucson Student Information Systems Trainer | Call In |
| Nancy Lees | First Thing First Senior Program Analyst | In Person |
| Nancy McFarland | Tolleson USD IT director | In Person |
| Rebecca Gau | Arizona Charter Schools Association Vice President | Call In |

Mary Lou Fulton College of Education
ARIZONA STATE UNIVERSITY

To: Donald Houde
Chief Information Officer
Deputy Associate Superintendent for Information Technology
Arizona Department of Education

From: David R. Garcia
Mary Lou Fulton Institute and Graduate School Education
Arizona State University

Date: August 17, 2009

Re: Summary of research projects

Thank you again for your willingness to allow four of my graduate students to train on the Data Warehouse and to use it to conduct a series of research projects. The Data Warehouse is a powerful and informative tool for advancing knowledge; with regard to both my graduate students and Arizona public education more broadly. The purpose of this memo is to provide an overview of the research projects and the intended use of the results.

Student Reenrollment

The common assumption in the academic literature and policy discussions is that students making the choice to exit a school to attend another are making an affirmative decision based on improving their educational conditions. This study is intended to examine the inverse of the school choice paradigm where students make an affirmative decision to remain in the same school when, in theory, other school choice options are available.

The data warehouse will be used to extract data on eligible students that reenroll at a school. Where, an eligible student$_i$ is defined as enrolled in school$_j$ in grade$_x$ at the end of year$_y$ and:

a. the subsequent grade$_{x+1}$ is available at school$_j$ in year$_{y+1}$.
b. student$_i$ reenrolled in school$_j$ in year$_{y+1}$

School and student level data will be extracted from the Data Warehouse. All individual student identifiers will not be included but student demographic information will be extracted.

The school level data will be released through the Morrison Institute's Arizona Indicators Project. I will be certain to send ADE an advanced copy of any materials to be released. In addition, the school and student level data will be included in a presentation at an academic conference and journal manuscript submission. I am willing to send a copy of the conference paper and journal manuscript to ADE in advance.

DIVISION OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES
PO Box 872411, Tempe, AZ 85287-2411
(480) 965-6357 Fax: (480) 965-1880 http://coe.asu.edu

GED

This study will explore a unique group of Arizona students that are continuing their education outside the public school system. The project will focus on students that are getting a GED during the years when their respective graduation cohort is still enrolled in high school. The unit of analysis is the school level with student descriptive statistics. The Data Warehouse will be used to extract the percentage of students, by school, that have exited to get a GED for as many years as are available in the data warehouse. In addition, summary descriptive statistics about the student population pursuing a GED will be extracted. The school level data and the summary descriptive statistics will be released through the Morrison Institute's Arizona Indicators Project.

Language Analysis

From my conversations with Andrea Whitsett from the Morrison Insitute, she has been in contact with ADE to gather academic data by student language program status (e.g. ELL, FEP, etc.) and school. The Morrison Institute will release the results through the Arizona Indicators Project. If the graduate student sessions can be used to extract the data requested by Andrea, I will connect with her to connect the three of us and to make certain that the graduate students are extracting the appropriate data to meet Morrison's request.

My graduate students have a copy of the Data Warehouse User Reference Guide and the Powerpoint presentation on the Data Warehouse Development. They are studying the student codes in advance of meeting with your staff. I will work with them over the next two weeks to help them understand the ADE codes. The graduate students will then be available to meet with your staff at the end of August to get trained on the Data Warehouse and begin the analyses. Melinda Harrah will be in contact with you to schedule the exact date and time for the initial training and subsequent meetings along with any other logistical matters.

Thank you again for your willingness to allow access to the Data Warehouse to address these important topics. In all releases, I will certainly acknowledge the ADE for their cooperation. Please let me know how I can improve visibility for the Data Warehouse through my work.

Sincerely,

(b)(6)

David R. Garcia, Ph.D.
d.garcia@asu.edu

cc: Melinda Harrah

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POLICY POINTS

POLICY POINTS BRINGS RELEVANT DATA TO TIMELY PUBLIC POLICY ISSUES IN ARIZONA

# School Reenrollment: Choosing to Stay

Few other states have embraced school choice as readily as Arizona. Due to the combination of strong statutes that encourage charter school development, open enrollment, tuition tax vouchers, and homeschooling options, analysts have described Arizona as "the first real education market in the country" (Gresham, Hess, Maranto, & Milliman, 2000). Of these choices, charter schools are the most expansive option available to parents. In 2008, 477 Arizona charter schools enrolled 8% of the total student population (Arizona Education Network, 2009).

Policy makers enact school choice policies as a way to reform public education by encouraging parents to "vote with their feet" by leaving low-quality schools and enrolling their children in better schools. If students can leave poorly performing schools, the policy assumption is that the threat of student exit will motivate all schools to improve the quality of education in order to maintain student enrollment. As a result, the success of school choice policies is most often measured by the number of students that leave their home school to take advantage of choice options.

But what about the other side of the equation? What about students who stay in the same school, even though other options are available to them? This issue of *Policy Points* introduces a unique perspective on school choice by examining students who reenroll in the same school from one academic year to the next.

## Can reenrollment be a measure of school quality?

The percentage of students who return to the same school might be considered as a measure of school quality. When businesses have a high rate of repeat customers, they often interpret it as a sign that the quality of their product or service is satisfactory. In fact, businesses often focus on improving quality as a means to encourage customer loyalty. School-choice opponents would likely agree. Once a student decides to enroll in a charter school, the assumption is that they made that choice because they found the school to be of sufficient quality. The same logic applies to their decision to reenroll in charter schools – those charter schools that parents perceive as higher-quality should have a higher reenrollment rate than the charter schools perceived to be lower-quality.

Interestingly, the same assumptions are not made when students reenroll in traditional public schools, particularly those schools that the state has deemed as low quality. In these cases, the prevailing assumption is that these students are "trapped" in their schools either by systematic restrictions, individual inertia, or other barriers.

## What percentage of Arizona public school students reenroll in their school?

At the beginning of the 2009 academic year, 85% of eligible elementary school students reenrolled in the same school they attended at the end of 2008. Students were considered eligible to reenroll if the next grade was offered at the school. So, 6$^{th}$ graders in a K-8 school would be considered eligible to enroll in that school, while 6$^{th}$ graders in a K-6 school would be considered ineligible.

Some might assume that the reenrollment rates for urban schools would differ than the reenrollment rates of rural schools because more school choice options are available in urban

ARIZONA INDICATORS

VOLUME 2 / ISSUE 4
APRIL 2010

arizonaindicators.org

Arizona Indicators is an online information resource and analysis tool that centralizes data about the state and its communities. Arizona Indicators presents interactive visualizations, clear data descriptions, and public opinion data in a broad range of content areas.

This project is made possible by generous support from the Arizona Community Foundation, and Arizona State University.

For more information, contact Andrea Whitsett at (602) 496-0217 or andrea.whitsett@asu.edu.

Arizona Indicators is a project managed by Morrison Institute for Public Policy.

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ASU Morrison Institute for Public Policy
ARIZONA STATE UNIVERSITY

areas. In fact, the reenrollment rate for urban schools (those in Maricopa and Pima counties) is 84%, which is not much different than the reenrollment rates for rural schools (87%).

For those students who move in the middle of an academic year, especially between traditional public schools, the assumption is that these more mobile students may be in unstable family circumstances that prompted or contributed to their decision to change schools. In the average Arizona elementary school, 8% of students eligible to reenroll at the end of 2008 had entered the school sometime during the school year. The percentage of mid-year transfers was slightly higher for charter schools (9%) than traditional public schools (7%). The number of mid-year transfers, however, has very little influence on school reenrollment percentages. School reenrollment rates are not uniformly lower for schools with high numbers of students moving in to the school midyear.

### Are students more likely to reenroll in charter schools or traditional public schools?

In general, Arizona's elementary students are more likely to reenroll in traditional public schools. In traditional public schools, 87% of eligible students reenrolled from 2008-2009, while 77% of eligible students reenrolled in charter schools.

### Are students more likely to reenroll in higher quality elementary schools?

The AZ LEARNS school achievement labels provided by the Arizona Department of Education are the primary measure of school quality to inform school choice decisions. Interestingly, there is no clear trend toward either more parents reenrolling in higher-quality schools or fewer parents enrolling in lower-quality charter schools. For example, reenrollment rates for Highly Performing schools (88%) are close to reenrollment rates of Failing/Underperforming schools (84%). The lowest reenrollment rates (82%) are among Arizona's Performing elementary schools. The weak trend between measures of school quality and reenrollment rates is likely disconcerting news to Arizona's school choice advocates who are invested in the idea that parents will take advantage of higher quality school choice options. They are not moving in ways that school choice advocates would expect.

Reenrollment in Elementary Schools by AZLEARNS Label, 2009

| | Schools | Mobility | Reenrollment |
|---|---|---|---|
| Excelling | 257 | 4% | 91% |
| Highly Performing | 211 | 6% | 88% |
| Performing Plus | 335 | 8% | 84% |
| Performing | 489 | 10% | 82% |
| Failing/Underperforming | 166 | 8% | 84% |

Source: Arizona Department of Education, original analysis.

### What is the difference between the reenrollment rates of high-quality charter schools and high-quality traditional public schools?

Traditional public school parents in high-quality schools are more likely to reenroll their students in the same school. While 89% of traditional public school parents reenrolled their students in Highly Performing schools, 80% of charter school parents did the same.

Reenrollment in Highly Performing and Excelling Elementary Schools, 2009

| | Traditional Public Schools | | | Charter Schools | | |
|---|---|---|---|---|---|---|
| | Schools | Mobility | Reenrollment | Schools | Mobility | Reenrollment |
| Excelling | 211 | 4% | 91% | 46 | 4% | 87% |
| Highly Performing | 178 | 5% | 89% | 33 | 7% | 80% |

Source: Arizona Department of Education, original analysis.

### What is the difference between reenrollment rates of low-quality charter schools and low-quality traditional public schools?

The largest differences between traditional public and charter schools are among low-quality schools. Charter school parents are considerably less likely to reenroll their student in a low-quality charter school than traditional public school parents. This is

Reenrollment in Failing and Underperforming Elementary Schools, 2009

| | Traditional Public Schools | | | Charter Schools | | |
|---|---|---|---|---|---|---|
| | Schools | Mobility | Reenrollment | Schools | Mobility | Reenrollment |
| Failing/Underperforming | 145 | 8% | 86% | 21 | 13% | 71% |

Source: Arizona Department of Education, original analysis.

likely welcome news to school choice advocates because it provides evidence that charter parents are taking advantage of their choice options to exit low-quality schools.

In either case, however, most students who attended a low-quality school in 2008, charter or traditional public, reenrolled in the same school the next academic year. Charter school opponents could point to these results as evidence that the effort placed on promoting school choice policies is disproportional to the low rate in which parents actually use school exit as a means of improving the academic standing of their student.

### What are the policy implications of student reenrollment?

There are many implications for using reenrollment rates as a measure of school quality but two rise to the top:

- For nearly two decades, Arizona education policies have focused on promoting school choice options and encouraging parents to take advantage of them. Yet, most parents, even those in low-quality charter schools, decide to reenroll their students in the same school rather than leave. The results indicate that policy makers should not overemphasize school choice as a means of reforming public education and instead, work toward policies that improve the schools students are in already. Such policies could include safer schools, increasing afterschool opportunities or linking the delivery of other social services to schools. This shift translates into a reinvestment in public schools, an idea that is overlooked in discourse that becomes preoccupied with school choice.
- The weak relationship between school-quality indicators and reenrollment rates may indicate that parents rely on measures of school performance besides AZLEARNS labels. Factors such as safety, neighborhood cohesion, and extracurricular offerings may also play a role. Yet, state and federal policies continue to promote school labeling as the primary way to inform parents of school choice options. Research on how parents make school choice decisions indicates that parents rely on informal sources, such as interpersonal contacts and parent networks, to make school choice decisions and that parent networks are more established and effective in higher socioeconomic status communities. As a more effective strategy to inform parents, state policies should supplement school labels and report cards with more personal options such as parent information centers.

### What about my school?

Morrison Institute's Arizona Indicators project has posted the reenrollment rates for all Arizona public schools online at http://arizonaindicators.org/. Parents and other stakeholders are encouraged to review reenrollment rates for their school and surrounding schools. We encourage parents to discuss reenrollment rates with other parents in informal settings and to discuss them in more formal venues, such as board meetings. Parents should consider the reasons why the reenrollment rates among individual schools may differ. Also, parents should ask educators and administrators what is being done to encourage students to reenroll and improve their school.

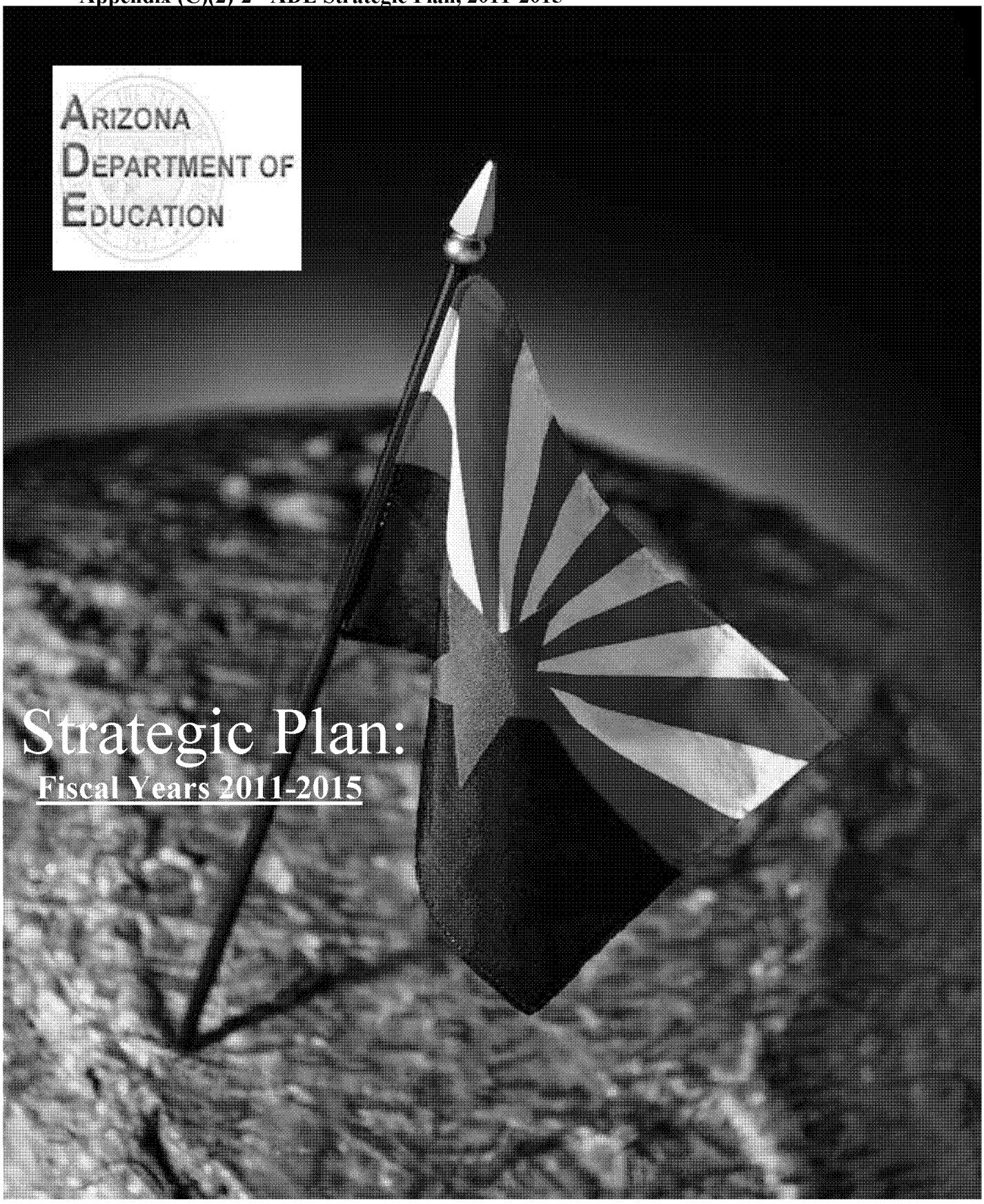
**About this reenrollment study:**

Data for this report were collected from the Arizona Department of Education data warehouse. Analysis included 653,227 individual student records from 1,463 elementary schools statewide. Reenrollment rates were calculated using original analyses of student movement patterns.

# BREAK TIME!

## NCES courtesy meeting with Margaret Garcia Dugan starts at 3:30 in Margaret's office

# Courtesy Meeting with Margaret Garcia Dugan


ARIZONA
DEPARTMENT OF
EDUCATION
Strategic Plan:
Fiscal Years 2011-2015

# *Department of Education Mission*

**" To ensure academic excellence for all students"**

(b)(6)

# *Statement from Superintendent Tom Horne*

*"Over the past seven years the Arizona Department of Education has been working fastidiously for improvements in the areas of Academic Achievement, Educational Services and Resources, School Effectiveness, Accountability, Standards Development and Assessment, School Finance and Business, and Federal Relations to ultimately benefit the Arizona's kids. As a result, schools are seeing higher test scores and in 2009 the college placement test scores for SAT and ACT were above the national average. TerraNova national test scores of students second through ninth grade also exceeded the national average. The support system implemented and developed by the department under my tenure is in place and will continue to offer the support our schools and parents need for years to come under these four major themes: the use of student assessment data to design instruction and interventions; schools' willingness to implement systemic change through strategic planning; targeted instructional intervention that meets the needs of every child; and targeted professional development. My goal during my final year in office is to continue and pursue excellence in the quality of education for the students of Arizona."*

*This five-year strategic plan reflects our continued effort to work on existing and new initiatives along with many other objectives the department undertakes to carry out its mission. The five-year strategic plan continues to provide an appropriate framework on how the department does business and how we will ensure progress. To live this plan, Arizona Department of Education- in partnership with schools, teachers, parents, and others, will continue to collect other ideas from all parts of the educational community and the general public as we strive for one overriding goal - that our students receive the necessary skills to compete in the twenty-first century business world and become leaders.*

***Tom Horne, Superintendent of Public Instruction***

***January 1, 2010***

# *Department of Education Strategic Goals*Goal One:

## Provide leadership by initiating and advancing improvements to public education.

*Superintendent of Public Instruction Tom Horne began his term with an entirely new top executive team for the Department of Education. These positions have been filled with experienced educators and emphasize one of our principal themes: the Department of Education continues to provide educational leadership, including drawing on talented teachers, principals, and administrators to help all of our schools achieve academic excellence. This type of leadership must continue to raise the bar and improve academic performance in Arizona's public schools.*

## Goal Two: Offer support and assistance to public schools and providers for exemplary performance.

*Superintendent Tom Horne has committed the Department of Education to be primarily a service organization, helping school districts, charter schools, and contracted educational providers achieve more academic success. To do this, the department has established a broad range of support for schools and educators in their efforts to build strong foundations for our students. The department will continue to provide training, school improvement assistance, evaluation, dissemination of information, and funding that will assist schools with targeted issues. The department also serves as the primary source of current, reliable, and accurate information on the latest innovations in public education. This includes information on scientifically based programs and the design and implementation of prevention and intervention strategies.*

## Goal Three: Ensure maximum academic and financial accountability in public education.

*A system of real school accountability is important to improving our educational system. However, it must be fair with expectations clear and understandable. With the passage of Arizona LEARNS and the federal requirements of No Child Left Behind, the department has taken and continues to take steps to develop an accountability system that will provide students and their families with the information they need. The department is committed to ensuring: 1) academic accountability -- all students have the skills and knowledge they need to succeed; 2) financial accountability -- getting the most from every dollar spent on public education; and 3) educator accountability -- high quality teachers and administrators along with student safety.*

## Goal Four: Deliver high quality customer service.

*There has been a shift toward emphasizing the importance of customer service in the Department of Education since Superintendent Tom Horne took office. Along with this service orientation, the department is committed to improving employee morale and productivity, along with creating a spirit of teamwork. Improving service and productivity will require attention, commitment, and innovation with a focus on results. The intent of the Department of Education is to be a model of good, effective government and be known for its responsiveness and high quality of services.*

# *Department of Education Strategic Objectives*

## Goal One: Provide leadership by initiating and advancing improvements to public education.

1.1 Set fair and reasonable ***guidelines and standards*** which foster excellence in public education.

1.2 Improve ***communication and involvement*** with the education community and other stakeholders.

1.3 ***Advocate and promote*** ideas and initiatives that will advance innovation and enhance resources for public education.

## Goal Two: Offer support and assistance to public schools and providers for exemplary performance.

2.1 Provide technical assistance and training for schools to improve ***effectiveness and school climate***.

2.2 Provide technical assistance and training for schools on federal and state ***compliance issues***.

2.3 Offer ***professional development*** opportunities to educators and administrators.

## Goal Three: Ensure maximum academic and financial accountability in public education.

3.1 Implement assessment of all Arizona ***students*** and report results to the public.

3.2 Review, monitor, and report on the performance of Arizona's ***public schools and providers***.

3.3 Ensure the quality of Arizona's ***educators*** through evaluation, investigation, and certification.

## Goal Four: Deliver high quality customer service.

4.1 Provide timely, reliable ***support services***.

4.2 Provide accurate and helpful ***information*** to the public.

4.3 Promote a positive and productive ***work environment*** that cultivates teamwork and motivates employees.

# *TABLE OF CONTENTS*

# *Introduction*

## MISSION STATEMENT
## AGENCY DESCRIPTION
## CONTINUED COMMITMENT

# *Introduction*

Mission Statement

*"To ensure academic excellence for all students."*

The Arizona Department of Education's vision is to ensure "access to extraordinary education." The above mission statement describes how the department will work to make this vision a reality. This statement captures the essence of how the department improves the quality of public education - "ensuring academic excellence for all students." That is the charge of every employee in the Arizona Department of Education.

## Values

For schools to be successful and for the Arizona Department of Education to accomplish its mission, the department believes the following:

- Schools need strong leadership with vision.
- Learning and curriculum must be challenging but appropriate.
- Students need highly qualified and engaging teachers.
- Schools and administrators must make effective use of data to make informed decisions.
- Public education needs adequate and equitable human and financial resources.
- Schools must cultivate a safe, healthy, and nurturing learning environment for students.
- Family and community involvement must be cultivated and maximized.

Internally, the department believes in emphasizing certain principles in carrying out its work:

- Quality comes first
- Teamwork is fundamental
- Improvement is essential
- Partnerships and Collaboration are vital

# Agency Description

Arizona's education code, Title 15, charges the Department, along with the State Board of Education, with specific powers and duties in its stewardship of over a million students from kindergarten through twelfth grade. The Arizona Department of Education operates under the direction of the Superintendent of Public Instruction Tom Horne to provide direct services to 1,724 schools in 241 locally governed school districts and 507 charter schools. The agency works with the State Board of Education and the State Board of Vocational and Technological Education. The Department of Education implements state academic standards; administers statewide assessments; disseminates information; administers and allocates federal and state funds; and provides program improvement assistance to schools and districts.

In addition to the Superintendent's Office, the department is currently organized into divisions. Each division represents a diversity of programs and services. The following is a brief overview and description of each area. To see a more complete picture see the Arizona Department of Education 2008-2009 strategic plan.

| Division | Description | Major Units |
|---|---|---|
| *Administrative Services* | Administrative Services is responsible for providing human resource, procurement, and building operation support services to the agency. Human resource services include: personnel and payroll functions. Procurement services include: contracts management, purchasing. Building Operations includes facilities, print shop, and central distribution functions. These administrative functions are centralized to ensure efficient operational support to the agency, and consistent application of state, federal and agency rules, regulations, guidelines, and procedures. | ▪ Payroll<br>▪ Facilities<br>▪ Print Shop<br>▪ Central Distribution<br>▪ Procurement |
| *Information Technology* | The Arizona Department of Education's Information Technology (ADE IT) Division is purposed with supporting access to the varied technologies that empower all of Arizona's learners to realize their social and economic potential through quality educational experiences.<br><br>Transforming data into information and insight is foundational to measuring the effectiveness of education based programs and entities. ADE IT provides vision, leadership and technical expertise in designing, building, testing, deploying and sustaining Arizona's statewide education technical assets. Commencing with student, district, school, teacher, education stakeholder data collection systems through complex transformations to multi-level reporting solutions, ADE IT assures Arizona's educational data assets are equality, used accurately, successfully managed and protected. | ▪ Data Management<br>▪ Project Management<br>▪ Business Analysis<br>▪ Quality Assurance<br>▪ Technical Development<br>▪ Support Call/ Customer Service Center<br>▪ Operations<br>▪ Technical Infrastructure Management<br>▪ Technical Architectural Management<br>▪ Information Privacy and Security<br>▪ Business Intelligence/ Data Warehouse |
| *Academic Achievement* | The Academic Achievement Division provides funding, technical assistance and resource coordination to County Superintendents and local educational agencies, and public/private organizations in their administration of programs aimed at increasing academic excellence. It also provides professional development opportunities to teachers and administrative professionals. The division's programs focus on efforts aimed at:<br>▪ Providing assistance and funds to educational providers to increase academic achievement for at-risk students.<br>▪ Ensuring the attainment of proficiency standards in the educational field by assessing the knowledge and proficiency of certification applicants.<br>▪ Ensuring the quality of professional preparation programs by reviewing these programs and making recommendations for approval to the State Board of Education. | ▪ Title I<br>▪ Highly Qualified Professionals( Title II, Pay for Performance Programs, National Board Certified Teachers, & Certification)<br>▪ Innovative/Exemplary Programs ( Title V)<br>▪ Program Operations<br>▪ Health & Nutrition Services |

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| | ▪ Certifying educators in accordance with statute and Administrative Code.<br>▪ Providing assistance and funds to candidates for National Board Certification.<br>▪ Providing assistance and funds to educational providers to improve the effectiveness of professional development.<br>▪ Providing assistance with the state pay for performance programs.<br>▪ Dropout prevention programs and High School Renewal Programs.<br>▪ Programs for Native Americans.<br>▪ Support for English Language Learner Programs.<br>▪ Fiscal and compliance support for all ED programs.<br>▪ Acts as Agency Liaison for NCES and ED Facts the US Dept of Ed effort to consolidate all federal reporting.<br>▪ Responsibility for annual teacher loan cancelation report, which allows us up to $17,500, loans forgiveness for teachers teaching in high need areas.<br>▪ Providing health and nutrition resources to improve and/or create a healthy learning environment and support for school based programs that actively promote learning and the development of lifelong healthy behaviors in schools and communities.<br>▪ Identifying and recognizing outstanding innovative/exemplary programs and models that improve student achievement. | |
| *Accountability* | The Accountability program improves student achievement through academic, technical skill attainment, program evaluation, research, and professional development/ leadership. Provides technical assistance, resources, and information to schools regarding gifted education and advanced placement programs. Advocates and promotes increasing the number of students accessing rigorous courses through a comprehensive curriculum. Provides English Acquisition Services. | ▪ Research & Evaluation<br>▪ Gifted Education /Advanced Placement<br>▪ Office of English Language Acquisition Services ( Title III)<br>▪ Internal & External Leadership/ AZLEADS/ Wallace Grant |
| *Business & Finance* | Business & Finance oversees the administration and allocation of funds for public education. Staff monitors the expenditures of school districts and charter schools for statutory compliance and assists them in the resolution of non-compliance issues. It provides customers, both internal and external, with services in the following areas:<br>▪ Deliver first class customer service, while processing and analyzing student level and financial data, administering state aid apportionment, and processing public schools budgets, as well as ensuring compliance with statutory requirements and accountability to the public.<br>▪ Accounting and Grants Management<br>▪ Budgeting & Fiscal Accountability<br>▪ Legislative Guidelines primary goal is to simplify Title 15 statutes for Local Education Agencies to fully understand the intent of the law. The Strategic Planning team is responsible for recommending and ensuring that each section of the agency's internal/external plan is aligned with the goals of Superintendent Horne and the agency's budget.<br>▪ International Education encourages schools to become international by embracing global awareness across the curriculum, include foreign language for all students, and prepare students with the necessary skills to compete in a global economy.<br>Finally, Business & Finance serves as the primary source of current, reliable, and accurate information on the status and needs of the public school system. | ▪ Accounting & Grant Management<br>▪ Budgeting & Fiscal Accountability<br>▪ Legislative Guidelines & Strategic Planning<br>▪ School Finance<br>▪ International Education |
| *Education Services and Resources* | Education Services and Resources provide quality services and resources to schools,<br>agencies, community groups, and staff to enable them to achieve their goals. Its five commitments is quality comes first, teamwork is fundamental, improvement is essential, and partnerships are necessary. The division's programs include efforts aimed at:<br>▪ Adult Education provides: Adult Basic Education ( ABE); Adult Secondary Education ( ASE); English Language Acquisition for Adults (ELAA); Civics; test preparation for GED; GED Testing Services; eTranscripts and GED verification; preparation for transition to | ▪ Adult Education Services (AES)<br>▪ Career & Technical Education (CTE)<br>▪ Discipline Initiative<br>▪ Exceptional Student Services (ESS)<br>▪ Joint Technical Education Districts (JTEDs) |

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| | workforce; post secondary and other training; distance learning class; workplace literacy class and Arizona high school equivalency diploma.<br>▪ Career and Technical Education prepares Arizona students for workforce success and continuous learning by providing industry-validated standards; integration of academic skills; work-based learning opportunities; articulation with postsecondary; business and industry partnership; leadership and personal development. Arizona Tech Prep enhances employability and technical skills; supports high academic standards; offers career pathways leading to employment; provides articulated programs leading to postsecondary success; and prepares for a successful career in competitive economy.<br>▪ Exceptional Student Services provides technical assistance to schools; offers a wider range of professional development opportunities in compliance with federal and state requirements; collaborates with schools, universities and professional organizations to develop highly qualified personnel; and monitors school Districts and Charter Schools to ensure compliance with state and federal laws regarding Special Education. ESS ensures that Child Find activities are implemented; Students are educated in the least restrictive environment (LRE); Eligible students are provided a free appropriate public education (FAPE); Students participate in statewide assessments; the rights of students are protected.<br>▪ Discipline Initiative provides workshops and institutes on discipline: Effective Classroom Management Strategies; Preventing Disruptive Behavior in the Classroom; Creating a Climate for Learning; Motivating Hard to Reach and Uninterested Students; Effective Intervention Strategies; Preventing Classroom Discipline Problems. Resources and Supports: Distribution of brochures on discipline to parents; teachers, and administrators; Arizona Positive Behavior Support Project; Technical assistance to schools, and Parent support and problem solving.<br>▪ Joint Technical Education Districts (JTEDs) were enacted to provide enhanced preparatory Career and Technical Education for students in ninth through twelfth grades. JTEDs prepare high school students for technical and advanced careers in Arizona; to move rapidly into high-income careers and college curriculum and for the future economy of Arizona. JTED's offer programs of high caliber that lead to industry certification; courses that will prepare Arizona youth for major career and opportunities related to industry needs; up-to-date industry equivalent equipment and materials for students to learn the latest technical knowledge and skills; programs with high academic rigor and technical skills for careers such as bioscience, auto, engineering technologies, or advanced manufacturing; end of program assessments and credentials that are recognized by Arizona industry and business. | |
| *School Effectiveness* | This division was formed to focus the department's efforts at increasing school performance through information, training, and technical assistance that provide a framework for excellence in public education. The division's efforts revolve around four themes: Leadership; Curriculum, Instruction and Professional Development; Assessment; and School Culture, Climate and Communication. The division supports schools within our state by:<br>▪ Providing all Arizona schools critical information and guidance on how to improve student performance.<br>▪ Deploying School Improvement Teams (Solution Teams and ASSIST Coaches) to assist underperforming schools.<br>▪ Analyzing schools designated as "Failing to Meet the Academic Standards" to determine needs of those schools as related to the five outcomes and supporting schools' efforts to improve student achievement.<br>▪ Providing research based professional development and technical assistance to support the effective implementation of K-12 literacy instruction.<br>▪ To promote the use of educational technologies to increase student achievement, support on-going, meaningful professional development for teachers around technology and to help students become technology literate.<br>▪ Providing technical support and monitoring for educational entities that | ▪ School Improvement & State Intervention<br>▪ K-12 Literacy<br>▪ Early Childhood<br>▪ Special Population/Projects |

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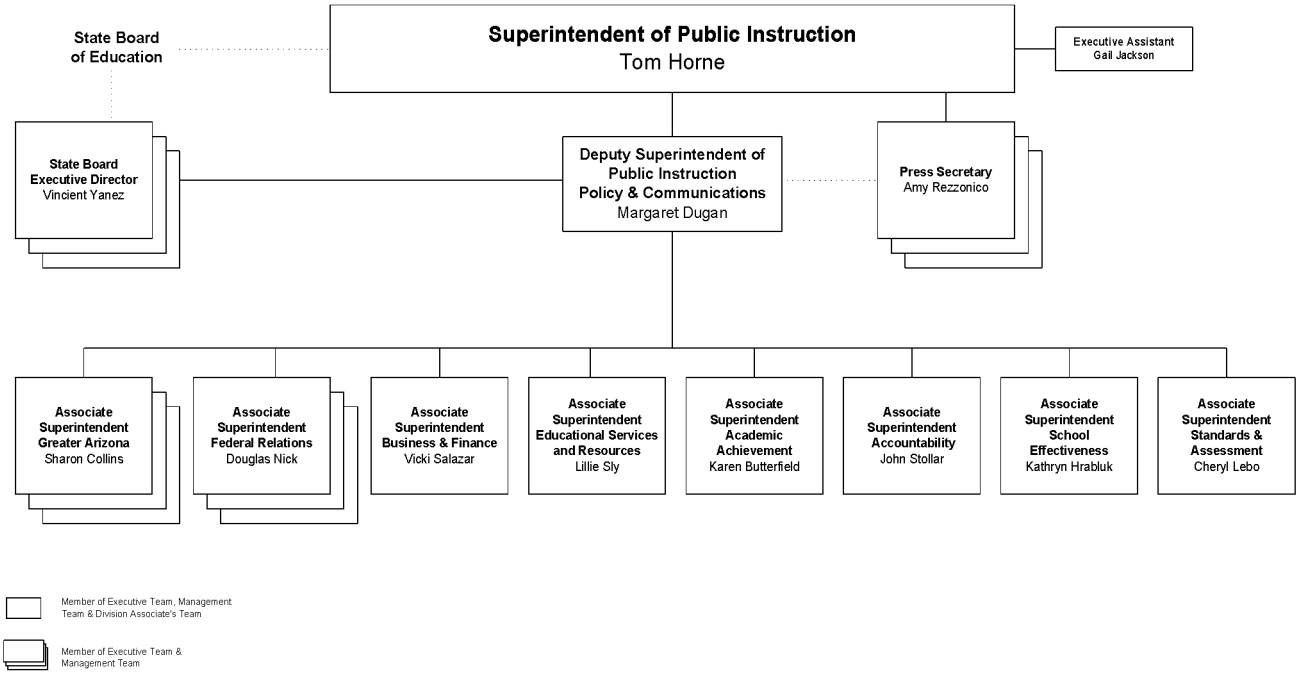
| | serve the homeless, migrant and refugee program populations.<br>▪ Providing Arizona schools critical information and guidance on how to improve literacy.<br>▪ Providing early childhood educational guidance and information. | |
| *Standards & Assessment* | This division focuses on the following: Assessment and standards development, standards implementation, academic and instructional support for schools, school safety, and prevention. It supports education within our state by:<br>▪ Developing and administering all statewide assessments; providing resources and material to support classroom preparation for the assessments; and developing and maintaining a formative assessment item bank for Arizona educators.<br>▪ Directing, in collaboration with educators, the revision and updating of Arizona's Academic Standards. During the revision process, current research, national standards, and guiding frameworks are considered.<br>▪ Providing leadership, support, assistance, and professional development for implementing Arizona Academic Standards in reading, writing, mathematics, science, and social studies.<br>▪ Providing professional development opportunities for Arizona educators aligned with Arizona Academic Standards and based on Solution Team findings, statewide test data, and current research. All opportunities are grounded in research-based best practices.<br>▪ Providing resources for safe and healthy learning environments, and support for school-based programs that actively promote learning and the development of healthy behaviors in schools and communities. | ▪ Standards Development & Assessment<br>▪ Arizona Academic Standards<br>▪ Academic & Instructional Support<br>▪ School Safety & Prevention |
| *Superintendent's Office* | Functions under the Superintendent's Office include key roles that are critical to providing educational leadership and effective management of the agency. They include:<br>▪ Providing regular communication and information to the public.<br>▪ Maintaining important relationships with federal and state officials.<br>▪ Developing and promoting ideas and changes in guidelines and regulations.<br>▪ Advancing and implementing with schools important initiatives of the department and the State Board of Education.<br>▪ Offering assistance to constituents and the public on their issues, needs.<br>▪ Providing outreach to all parts of the state to deliver important information and receive critical feedback.<br>▪ Offer education and training to instill in youth the six pillars of positive character.<br>▪ Providing a single online location through IDEAL for all Arizona stakeholders to access educational data, resources and services.<br>▪ Audit of electronic attendance information reporting by all school districts and charters, ensuring accurate data at the classroom, school, district, and ADE levels. | ▪ Press Secretary<br>▪ Federal Relations<br>▪ Special Projects/ Constituent Services<br>▪ State Government Relations<br>▪ Information Technology/ CIO/CTO<br>▪ Character Education<br>▪ State Board<br>▪ Audit<br>▪ Educational Technology<br>▪ Greater Arizona<br>▪ Action for Education Leadership |

# *Organizational Chart*

**As of January/2010*



# *Strategic Issues*

## STATE OF EDUCATION IN AZ
## GOAL DEVELOPMENT
## PROGRAM ALIGNMENT TO GOALS

# *State of Public Education in Arizona*

## Good News from *the Arizona Department of Education for Public Schools in Arizona*

- **Arizona students perform above the national average in the *TerraNova* test taken by all students, grades second through ninth.** In the **SAT** and **ACT** college entrance exams Arizona students perform above the national average. For the 2008-2009 school year, the mean Critical Reading scores were 526 compared to 516 nationally, Mathematics was 532 in Arizona compared to 528 nationally, and Arizona's Writing scores equaled the national average.

- **High Quality Standards:** The History Channel ranks Arizona as having the highest history standards of all the states in the country. The Fordham Foundation gave Arizona the highest possible grade for having high standards in history, geography, and science. * Fordham Foundation, "The State of State Standards."

- **Transparency in Depth:** Technology makes it possible to report to teachers, administrators, and the public not only how students are doing, but how they are doing with respect to every concept that is tested. The information is gathered in what is referred to as a data Warehouse. Two years ago, the ADE was given 2.5 million dollars by the state legislature to develop this data warehouse. Last year the federal government set aside 25 million dollars for the same purpose and invited states to compete. Arizona submitted the best application in the country and was awarded 6 million dollars, the largest award. ADE is in the process of creating this warehouse using the 8.5 million.

- **Education and Career Action Plans for the Students in Arizona:** One of Superintendent Tom Horne's goals continues to stress that every student should have a personalized learning and career plan. This has evolved into the Education and Career Action Plan also known as the ECAP. This is important because nine out of ten seventh and eighth graders aspire to go to college, but only two out of ten will actually complete college. Students who develop an ECAP will be more likely to plan for college and will take the more rigorous curriculum that leads to success in college, or in high skilled occupations. The ADE in the past year has been actively engaged in professional development on ECAP. An entire summit for high schools was dedicated to personalizing instruction. The October 2008 Middle and High School Renewal conference attracted approximately 500 participants all engaged in discussing strategies for keeping students in schools, including the utilization of ECAPs. On February 25, 2008, the State Board of Education adopted Board Rule R7-2-302.5 establishing an Arizona Education and Career Action Plan (ECAP) is completed for every student in grades 9-12 effective in the fall of 2009, with the entering Class of 2013. Plans must incorporate a student's academic goals, career goals, postsecondary education goals, and extracurricular activities. Since that time over 3,000 educators have received professional development around ECAP implementation strategies and resources, including use of the AZCIS electronic system.

- **Digital support:** ADE has pilot projects designed so that every student has a laptop. It is proven that digital tools enhance teaching and learning and it is anticipated that every high school will have a laptop for every student.

- **Professional Enterprise Class Information Technology and Data Management Organization**: Requisite to Arizona being positioned to construct, implement, operate and sustain an enterprise class pre-K through Post Secondary (P-20) and Career Data System, Arizona's steadfast commitment to the many transformative initiatives leading the Arizona Department of Education's (ADE) evolution into a professionally managed information technology organization has been foundational. In that transformation, with respect to organizational, technical, and business process requirements, ADE has and continues to provide expert support and oversight in the critical areas of data management, information security, business analysis, project management, operations, infrastructure support, end-user support, call center management, and professional solutions development/sustainability. When addressing the requisite cultural requirements ADE has established and nourished essential partnerships with post secondary institutions, districts and schools, the business community, legislative committees, and many other educationally focused entities.

  As a result of that focus, evidence of Arizona's ability to realize the self-imposed reformative data management goals lies directly in ADE's successful ground up development of a centralized sustainable enterprise class K-12 data warehouse. For years the Arizona Educational Data Warehouse (AEDW) was discussed as a future concept. Today, the AEDW is discussed in the present tense by beginning its maturation from a conceptual phase to a

critical tool in informing educational stakeholders on how to improve Arizona's children's educational experience while being transparent to all stakeholders and fiscally responsible to all taxpayers. Leveraging the aforementioned partnerships, a natural extension of the investments and successes of the AEDW is the integration of the varied P-20/career data information requirements and the coalescing of the requisite varied authoritative disparate sources of detailed data.

To assure AEDW's success, essential organizational and cultural changes have been incorporated and aligned with new process driven workflows and dataflows. A fundamental requirement of all of these initiatives is to have the native agility and extensibility to naturally expand to include the P-20/career data systems requirements. To that end, the "way ADE does business" has incorporated the newly formalized processes and organizational units supporting the critical areas of:

- Business Requirements Generation
- Training and User Support Mechanisms
- Data Governance Requirements and Policies Definition
- Systems and Data Quality Assurance Structures
- Event and Data Usage Logging and Auditing
- Security Assurances, both Logical and Physical
- Identity Management Enterprise Class Solutions
- Architectural agility, scalability, high availability, predictability and reliability
- Archival Requirements and Strategies
- Management and Oversight Entities
- Sustainability and Operability Requirements
- Authoritative Source Data Definitions
- Usability for all of Arizona's Educational Stakeholders
- Quality Master Data Management Processes
- Disaster Recovery and Continuity of Operations Processes

In summary, for the last several years Arizona and the Arizona Department of Education have strategically been laying the groundwork, building the framework and preparing for the development of the data system tools, and organization to support statewide data informed educational decision making. The initial phased implementation of these strategies is unquestionably demonstrating that Arizona's successes have uniquely positioned Arizona to successfully deploy the next generation data solution.

- **A significant increase in the number of Arizona teachers who have become Nationally Board Certified since Superintendent Tom Horne took office in 2000:** The number of Arizona teachers honored with certification from the prestigious National Board of Professional Teaching Standards has increased 83% (82.6%) since Superintendent Horne took office in 2003. Arizona ranked 17th nationwide in the number of teachers who achieved board certification in 2009 and ranks 18th in the total number of NBCTs over time (678 teachers). Arizona shows a 22 percent increase in the number of teachers who achieved National Board Certification in 2009 over last year.

- **Increasing the number of certified teachers for Arizona Schools:** The department has employees dedicated to helping schools find qualified teachers. In addition, the State Board created an alternative secondary path to certification (ASPC), designed for adults switching careers. Districts have been very satisfied with ASPC because they show consistent performance in terms of coursework, field experience, and professional development activities. ADE was awarded a second Transition to Teaching grant, which is focused on "growing your own" teachers in rural Arizona communities as well as recruiting recent college graduates and mid-career changers into areas of high need. A newer initiative from Superintendent Horne was the development and implementation of an Adjunct Teacher program to ensure that every student has a qualified math or science teacher. To provide schools and districts with a comprehensive framework based on current research and best practices, the Arizona Department of Education (ADE) in conjunction with businesses, universities, and educators across the state, developed the Adjunct Teacher Framework to guide a pilot project.

- **Through Reading First ARIZONA educators are making impressive student achievement gains with some of the most vulnerable K-3 students in our schools:** Poverty, second language learners, and mobility are common realities for students in Arizona. The department continues to support the schools in implementing,

monitoring, and sustaining these critical programs to provide our students with solid chances for future academic success.

- **Schools are Safe:** No schools in Arizona were identified as "persistently dangerous" under the new "No Child Left Behind" law. *Education Week.* Quality counts 2004: State of the States.

- **Increase in the federal competitive grants Arizona has acquired for Education:** The Federal Relations Unit of the Arizona Department of Education has overseen the department's effort in securing $45,388,500 in federal competitive grants since 2003. The process has been audited by the state Auditor General and was found to be complying with the sound method for applying for these grants.

- **The Arizona Department of Education has developed an administrative process that is assisting in student achievement: Effective leadership is a critical component to school success in raising student achievement.** The Arizona Department of Education based its Turnaround Principal concept on research that highlights the importance of an effective leader in a turnaround model. Effective leaders from across the state are selected to fill positions in schools in which leadership was nonexistent or was ineffectual. Turnaround principals have been used in Schools Failing to Meet Academic Standards since 2004. The first turnaround principals were placed in five schools at the beginning of the 2005-2006 school years. Of these first schools, four schools achieve a Performing or better profile in 2009.

  Every year the leadership at schools that are designated as Failing to Meet Academic Standards is evaluated to make the determination to place a turnaround principal. A total of four turnaround principals were placed at schools that had been designated as failing to meet academic standards in 2007 and 2009. The two schools that had turnaround principals placed in 2007 have been designated as Performing and Performing Plus since 2008. The two schools that had turnaround principals placed in fall 2009 continue to make improvements. Of the 44 schools in the Turnaround Process from 2004 to 2008, 35 or 80% have achieved Performing or better by 2009. Technical assistance and support has always been provided to all superintendents and principals. This support has expanded with increased intensity based on current school data and needs. A Turnaround Personnel cadre was formed in summer of 2009, which included turnaround principals, continuing principals, and Arizona Turnaround Coaches. The turnaround cadre met for intense training and professional development in systems change in the summer of 2009. Monthly meetings continue to provide ongoing support and assistance to the cadre during the year. The focus of these cadre meetings is building the systems, supported by the Standards and Rubrics for School Improvement, Leadership, Instruction &Assessment, Data Based Decision Making, and Culture & Climate.

- **AZ LEARNS:** We have a record number of schools excelling this year, going from 17% in 2008 to 21% excelling in 2009. We also are seeing an increase in the number of schools in the performing plus designation, moving from 21% in 2008 to 32% in 2009. The number of schools in each category for 2009 is: 19 in failing to meet academic standards; 50 in underperforming; 577 in performing; 608 in performing plus; 248 in highly performing; and 394 in excelling.

- **Health and Nutrition:** The department was successful in passing legislation to stop the use of vending machines in schools that push food high in sugar and saturated fat on students for grades K-8. ADE is in the process of pushing for the legislature to pass a similar law for high schools in Arizona. Superintendent Tom Horne has also successfully implemented House Bill 2140 of the Physical Education Pilot Program. Four schools have been chosen and attended training provided by the National School Lunch Program (NSLP) Health Team. Health and Nutrition has issued a report on the results of each pilot school. The report can be found on the ADE web site.

- **Arts Education:** Continues to develop and train the schools in the new Arts Standards. It is completing the assessment and development phase for end of course testing by conducting pilot tests in various state schools.

- **Native American Dropout Prevention Initiative:** A federal grant was awarded to ADE in April 2006 in the amount of 1.8 million dollars for 3 years. The initiative is addressing high dropout rates in the White Mountain and San Carlos Apache tribes. The focus of the project is on school and community collaboration and action to address high school dropout, school attendance and completion issues. Grant funded personnel work closely with youth at San Carlos and Alchesay high schools. Project funding ended June 30, 2009. ADE continues to work with these two tribes through the 4th year on a no cost extension. A report has been completed and filed with the USDOE which includes a DVD of the grant project.

- **Career and Technical Education (CTE):** Career and Technical Education is building a statewide technical skills assessment system. The Assessment System is being developed in partnership with Arizona State University, VTECS, Corporate Education Consulting, Inc and PITSCO/TFI. The system will provide online, industry validated technical skills assessments for concentrators who have completed the required sequence of instruction for each CTE program. Providing industry validated end of program assessments for CTE programs is in compliance with both the federal Carl D. Perkins Career and Technical Education Act of 2006 and A.R.S. 15-391.3(e) defining the requirements for Joint Technical Education Districts (JTEDs). The Arizona Skill Standards Commission represented by industry CEOs, labor union, legislature and education will verify that valid standards exist, ensure consistent documentation across the state, and work with the business community to provide students with a credential evidencing their skill attainment.

- **Adult Education Services (AES):** Ranked above the national average in educational gains and achieving employment goals, Arizona Adult Education has received American Recovery and Reinvestment Act (ARRA) funding to expand its 6 county Integrated Allied Health Career Readiness Initiative statewide. Adult Education students in all parts of the state will now be able to enroll in integrated training programs that take them past earning a GED and post-secondary certificate. This initiative is designed to include the One-stop system as a partner in guiding participants all the way into employment in a locally identified high demand industry.

- **Discipline initiative:** Help is given to schools to implement successful discipline initiatives.

- **Office of English Language Education (OELAS):** Coordinated the Structured English Immersion (SEI) Budget system and distributed $8,791,400 in the program as per A.R.S. § 15-756.01; coordinated/distributed the $10 million Compensatory Instruction program, as per A.R.S. §15-756.11; instituted the Pre-Audit Review monitoring to ensure LEAs are implementing the SEI Models; trained over 8,500 educators in English Language Development since the models were instituted in 2006; and named the fifth annual OELAS Teacher of the Year.

- **Special Education --** PEAs are growing more adept at using data to make decisions focusing on improved student outcomes and increased compliance with state and federal requirements.

- **Gifted Education:** The department has been focusing significant attention on how the gifted students in Arizona are best served. The department is committed to providing interactive all day educational programs for gifted students.

- **Character Education continues to be a critical initiative for ADE:** 1500 schools have now received Character Education training. 2009 celebrates their 10th year training Arizona's schools.

- **International schools:** The Department is working hard on the initiative to establish international schools in Arizona and the program continues to flourish. Students become fluent in world languages at these schools and acquire the international knowledge and skills necessary to compete in the 21st century. Pursuant to A.R.S. §15-245 American Competitive project fund; technical assistance; grants, allows the ADE to collect and administer funds to schools offering academic programs that emphasize each of the following: Foreign language acquisition, International business, World history.

# *SUPPORT NEEDED FOR ADE'S PROJECTS*

| | Funding Issue Title | Description | Total FTE | Total Amount |
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| 1 | Assessment Section – Study Guides for High School students who have not met standards | Students who have not met the standards in reading, writing, and mathematics cannot receive a high school diploma. These students need additional instructional support in order to master the Arizona Academic Content Standards and demonstrate the skills and knowledge identified in those standards. | 0.5 | $7,000,000 |
| 2 | Assessment Section – End of Course Training for High School | Arizona high schools now use the adopted Arizona Academic Standards in the core content areas; however, there is not a statewide standard assessment to evaluate a student's understanding of the skills and knowledge of those standards in non-tested academic areas in social studies and fine arts as well as science and mathematics courses not currently tested. | 10.0 | $10,500,000 |
| 3 | Assessment Section – AIMS Social Studies for students in Grades 3, 6 and 7 | There is concern that classroom instruction will not focus on the Arizona Social Studies Standard if social studies is not a component of the Arizona Assessment Program. There is less emphasis placed on instruction in that content area. | 2.5 | $3,500,000 |
| 4 | Assessment Section – Achievement Testing | State statute 15-741 states that the State Board of Education shall adopt and implement an Arizona Instrument to Measure Standards test to measure pupil achievement of the state board adopted academic standards in reading, writing, and mathematics in at least four grades designated by the Board. AIMS reading, writing and mathematics is administered at three additional grades and three grades are administered AIMS Science to meet NCLB guidelines. The development and administration of the alternate assessment (AIMS A) for student with significant cognitive disabilities is given in the same grades and subject areas as the regular AIMS with the exception of writing. This is done collaboratively with ESS and Assessment. | 0 | $11,000,000 |
| 5 | Administration – SAIS Version 10.0 Rewrite | Since SAIS' 2002 deployment, it has supported the assignment of a unique identifier to Arizona's students benefiting from state or federal tax revenue. SAIS has also increased the accuracy and timeliness of student count information required for state and federal funding and reporting. Additionally, it serves as the authoritative source and primary data collection mechanism for statewide student level information for the Arizona Education Data Warehouse (AEDW). As state and federal educational stakeholders have focused on utilizing highly available information systems, like the AEDW, to support quality data driven educational decision-making, the burden upon SAIS has grown many times over. | 5.0 | $3,200,000 for two years |
| 6 | Standards Based Best Practices - AZ Academic Standards Unit | Arizona high school students will be required to complete additional courses in social studies, science, and mathematics in order to graduate. These increased requirements are mandatory for the students in the graduating classes of 2012 and 2013. With this increased graduation requirement in these subject areas it will be essential to provide more support for implementation, in particular, in the area of mathematics. | 8.0 | $734,000 |

# ***Development from Strategic Issues***

There are key issues the department has identified that merit special high-priority attention. They are critical success factors important to the agency. There are also organizational strengths and opportunities that the agency has to build upon.

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| ***Strategic Issues:*** | ▪ Improved academic performance<br>▪ Need for advocacy and innovation<br>▪ Outreach and increasing business and community participation<br>▪ Increasing public awareness<br>▪ Continued student growth<br>▪ Seek more public involvement on agency matters<br>▪ Getting local school input and buy-in<br>▪ Building relationships/get message out to all parts of the state<br>▪ School finance, administrative costs<br>▪ Lack of Information Technology statewide standards | ▪ Improved school support for increasing performance<br>▪ Technical assistance and training needed for teachers and school personnel<br>▪ Teacher shortages and turnover<br>▪ Dropout prevention and early childhood development<br>▪ Demographic changes<br>▪ Increase certain ADE services outside of Maricopa County<br>▪ School safety<br>▪ Drop outs and graduation rates<br>▪ Research-based innovative and exemplary models<br>▪ Gaps in quality data collected to support interventions and remediation | ▪ Academic standards and testing<br>▪ Focus on student achievement gaps<br>▪ School performance<br>▪ Teacher quality<br>▪ Student Accountability Information System (SAIS)<br>▪ Fiscal accountability<br>▪ Compliance with NCLB<br>▪ English proficiency (Prop. 203), English Language Proficiency standards and assessment<br>▪ Teacher certification<br>▪ Technology improvement | ▪ Improved support services<br>▪ Increased productivity<br>▪ Technology advancements<br>▪ Improved internal and external communication<br>▪ Professional development of staff<br>▪ Budget issues<br>▪ Increase requests for data and information<br>▪ Institutional resistance to change, changing organizational mindset<br>▪ Low morale, lack of internal trust due to political changes<br>▪ Improve customer service<br>▪ Timely responses (internally)<br>▪ Improve School District reporting and compliance (streamlining)<br>▪ Centralized internal data collection |
| ***Department Goals:*** | **LEADERSHIP** | **SCHOOL SUPPORT** | **ACCOUNTABILITY** | **CUSTOMER SERVICE** |
| ***Agency Strengths and Opportunities:*** | ▪ Opportunity for change<br>▪ Federal attention: No Child Left Behind<br>▪ Public's ability to access educational choice<br>▪ Strong collaboration with outside groups<br>▪ Acceptance of the idea of accountability<br>▪ Leadership, experienced management team<br>▪ Willingness to collaborate with agencies outside of education<br>▪ Partnership with statewide IT data providers, researchers, and consumers. | ▪ Increasing credibility with districts and schools<br>▪ Customer's strong response to training and follow up requests<br>▪ Research based professional development<br>▪ Ability to combine funds and target schools with greatest needs<br>▪ External credibility improving (becoming more service-oriented)<br>▪ Strength in quality data management; data provisioning through the AEDW. | ▪ Focus on school accountability<br>▪ Improved quality of teachers in the classroom<br>▪ Improved data collection (SAIS)<br>▪ English language Learner (ELL) assessment data will be input directly into SAIS from the assessment company<br>▪ Incorporation of Colorado Growth Model including Exceptional Web Based User Interface providing clarity and transparency into student, school, district and state growth. | ▪ Agency focus on customer service<br>▪ Strong management support<br>▪ Knowledgeable and dedicated employees<br>▪ Commitment to communication<br>▪ Hard working staff, caring employees, pride in work<br>▪ Coordinated efforts across divisions<br>▪ Improved communication up and down the organization<br>▪ Established general guidelines for everyone<br>▪ Agency encouraged to be creative<br>▪ Information Technology's transformation into a professional service delivery organization. |

# ***Alignment of Key Agency Functions (Objectives) to Goals***

**Goal #1**: Provide ***leadership*** by initiating and advancing improvements to public education.

**Objective 1.1**: Set fair and reasonable ***guidelines and standards*** which foster excellence in public education.

- Adopt and prescribe a minimum course of study in schools and minimum competency for students that are based on ***high standards***.
- Implement an adopted and prescriptive course of English Language Development (ELD) for Structured English Immersion (SEI) classrooms that are based on high English Language Proficiency Standards.
- Review and develop a fair and accurate ***accountability plan*** for public education in Arizona.

**Objective 1.2**: Improve ***communication and involvement*** with the education community and other stakeholders.

- Improve ***communication and outreach*** to the education community to generate input and discussion on education guidelines and initiatives.
- Increase ***participation and collaboration*** with a variety of stakeholders to cultivate involvement and important partnerships.

**Objective 1.3**: ***Advocate and promote*** ideas and initiatives that will advance innovation and enhance resources for public education.

- Develop ***special projects and initiatives*** that support and promote department and goals.
- ***Increase resources for public education*** by promoting administrative efficiency, cultivating partnerships and pursuing increases in federal funding.
- Work with the community to ***improve access*** to early education; career and technical training; family literacy; adult education; workforce development and other issues important not only to public education but to Arizona's quality of life.

**Goal #2**: Offer ***support and assistance to public schools and providers*** for exemplary performance.

**Objective 2.1:** Provide technical assistance and training for schools to improve ***effectiveness and school climate***.

- Undertake original applied research along with the ***identification, evaluation, and sharing of critical information and best practices*** in public education.
- Evaluate underperforming and/or schools that fail to meet academic standards and provide ***proactive counsel*** on how to make improvements.
- Organize and hold ***conferences/workshops*** on various topics to assist schools in ***improving effectiveness*** and implementing best practices.
- Develop the capacity of educational leaders to design results-driven professional development that is based on the learning needs and students and teachers.
- Acknowledge school innovation by ***recognizing schools/districts*** with outstanding programs and practices.
- Provide ***guidance*** and assistance to schools in implementing ***specialized efforts*** critical to school success including; ***broaden curriculum*** and high school renewal enrichment programs; student ***health and safety***; ***character education*** and making focused improvements to ***discipline***; ***reading achievement***; dealing with ***special populations*** and at-risk students.
- Provide character education teacher in-service trainings at no charge to schools throughout Arizona. All requests will be fulfilled.
- Distribute character education materials and curriculum to teachers, parents, and administrators at no charge.
- Organize and implement a statewide "Schools of Character" and "Promising Practices" programs in order to highlight and model effective character education programs in Arizona Schools.
- Provide a sustainable character education network including resources from government, private sector, nonprofit sector, parenting groups, school associations and other stakeholders.

- Incorporate character education into Arizona Academic.
- Administer and provide results of the character education matching grants in schools.

**Objective 2.2:** Provide technical assistance and training for schools on federal and state ***compliance issues***.

- Offer and provide ***one-on-one technical assistance*** and guidance for interpretation and implementation of rules and regulations, along with the resolution of issues.
- Organize and hold ***conferences/workshops*** on various topics to assist schools in meeting Arizona's ***accountability requirements***.
- Develop/make available ***publications and correspondence*** (written & on-line) addressing guideline requirements on various department issues.

**Objective 2.3:** Offer ***professional development*** opportunities to educators and administrators.

- Develop and implement a ***plan for supporting the continuum of teacher/principal growth*** from attraction through certification, mentoring, and professional learning and development.
- Organize and hold ***conferences/workshops*** on various ***personal and professional development*** topics important to educators and administrators including State Board of Ed. rules and regulations, Title XV of Arizona Revised Statutes, and NCLB.
- Develop/make available ***on-line training/materials*** on information to improve instruction & academic skills of school personnel.
- Increase the supply of teachers and administrators by providing ***Information on employment opportunities*** and reducing barriers to entry into the profession by offering ***alternative pathways***.

## **Goal #3**: Ensure maximum ***academic and financial accountability*** in public education.

**Objective 3.1:** Implement assessment of all Arizona ***students*** and report results to the public.

- Develop ***academic content standards*** that are reasonable, fair, appropriate, and prepare all Arizona students for college or career.
- Develop English Language Proficiency Standards that are appropriate for Arizona English Language Learner (ELL) students.
- Develop and administer a ***standards-based assessment*** that matches the academic content standards in order to measure student achievement.
- Develop and administer an English Language Proficiency Standards-based assessment that is aligned with the ELP standards to measure student levels of English language proficiency.

**Objective 3.2:** Review, monitor and report on the performance of Arizona's ***public schools and providers***.

- Review, monitor, and audit the expenditures of school districts and providers for ***financial compliance***.
- Monitor and ensure ***improvements in academic achievement*** for all students.
- Ensure ***compliance with state and federal statutes, regulations*** and other contractual obligations.
- Prepare federal and other required ***plans, certifications and applications*** for compliance and accountability purposes.

**Objective 3.3:** Ensure the quality of Arizona's ***educators*** through evaluation, investigation, and certification.

- Administer and improve the quality of Arizona's ***teacher and administrator assessments***.
- Verify the professional and content knowledge of teachers and administrators and ***issue appropriate certificates***.
- ***Investigate and report on complaints*** of professional educators in a thorough and timely manner to ensure student safety.

**Goal #4:** Deliver high quality ***customer service.***

**Objective 4.1:** Provide timely, reliable ***support services***.

- Enhance services by ***evaluating department efforts*** through a continuous improvement process, surveying customer satisfaction, and offering employee training on customer service.
- ***Streamline paperwork and monitoring expectations*** so that school/district staff are able to operate at maximum efficiency.
- Employ the use of technology to ***increase automation and the amount of web-based applications*** available for department business.

**Objective 4.2:** Provide accurate and helpful ***information*** to the public.

- Increase the ***quality and amount of information and data*** about the agency and Arizona education provided to constituents and the public.
- Increase ***media coverage*** on the services and programs of the department.
- ***Answer questions*** from the general public ***and resolve disputes*** on problems associated with Arizona's public education system.

**Objective 4.3:** Promote a positive and productive ***work environment*** that cultivates teamwork and motivates employees.

- Improve ***employee satisfaction and morale*** by improving communication, promoting teamwork and recognizing individual contributions.
- Offer more ***professional development and training*** opportunities for department staff.
- Increase the ***use of data and information technology*** as a management tool to make better informed decisions.
- Ensure that necessary ***fiscal and managerial systems*** are in place to provide maximum accountability and performance.

# *Agency Performance*

## BENCHMARKS
## KEY AGENCY MEASURES

# *Agency Performance Benchmarks*

The following represents key performance measures that will be used by the department to monitor the outcome of public education efforts in Arizona. These key indicators will serve as benchmarks in time to measure the progress of student achievement based on the standards set by the Arizona State Board of Education. This includes AIMS and *TerraNova* (National norm referenced test used for FY2009), and *Stanford 10* (National norm referenced test used for FY2010) testing for elementary and high school students, plus monitoring the state drop out and graduation rates.

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Percent of Schools with at least 75% of students meeting or exceeding standards in:*** | | | | | | | |
| **--reading** | 41% | 42% | 43% | 44% | 45% | 46% | 47% |
| **--writing** | 62% | 63% | 64% | 65% | 66% | 67% | 68% |
| **--math** | 35% | 36% | 37% | 38% | 39% | 40% | 41% |
| ***Percent of Students tested:*** | | | | | | | |
| Norm-referenced test–Grades 2 & 9 | 94% | 95% | 96% | 96% | 96% | 96% | 96% |
| AIMS | 99% | 99% | 99% | 99% | 99% | 99% | 99% |

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 1: Overall percentage of elementary school students meeting or exceeding AIMS standards*** | | | | | | | |
| Percentage of students in grade 3 meeting or exceeding state academic standards in AIMS reading. | 72% | 73% | 74% | 75% | 76% | 77% | 77% |
| Percentage of students in grade 3 meeting or exceeding state academic standards in AIMS writing. | 79% | 80% | 81% | 82% | 83% | 84% | 85% |
| Percentage of students in grade 3 meeting or exceeding state academic standards in AIMS math. | 73% | 74% | 75% | 76% | 77% | 78% | 79% |
| Percentage of students in grade 5 meeting or exceeding state academic standards in AIMS reading. | 73% | 74% | 75% | 76% | 77% | 78% | 79% |
| Percentage of students in grade 5 meeting or exceeding state academic standards in AIMS writing. | 79% | 80% | 81% | 82% | 83% | 84% | 85% |
| Percentage of students in grade 5 meeting or exceeding state academic standards in math. | 72% | 73% | 74% | 75% | 76% | 77% | 77% |
| Percentage of students in grade 8 meeting or exceeding state academic standards in reading. | 69% | 70% | 71% | 72% | 73% | 74% | 75% |
| Percentage of students in grade 8 meeting or exceeding state academic standards in writing. | 86% | 87% | 88% | 89% | 90% | 91% | 92% |
| Percentage of students in grade 8 meeting or exceeding state academic standards in math. | 63% | 64% | 65% | 66% | 67% | 68% | 69% |

*Note: Standards & Assessment Division has also given AIMS to Grades 4, 6, and 7 since 2005.

| Performance Measures | FY2009 Actual | FY 2010 Estimate | FY2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 2: Overall percentage of high school students meeting or exceeding AIMS standards*** | | | | | | | |
| Percentage of students in grade 10 meeting or exceeding state academic standards in reading. | 75% | 76% | 76% | 77% | 78% | 79% | 79% |
| Percentage of students in grade 10 meeting or exceeding state academic standards in writing. | 72% | 71% | 72% | 73% | 74% | 75% | 76% |
| Percentage of students in grade 10 meeting or exceeding state academic standards in math. | 70% | 70% | 71% | 72% | 73% | 74% | 75% |

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY 2011 Estimate | FY2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 3: Percentage of elementary students meeting or exceeding AIMS standards by subgroups*** | | | | | | | |
| Percentage of students with disabilities with proficient performance in reading in grade 3. | 39% | 36% | 37% | 38% | 39% | 40% | 40% |
| Percentage of students with disabilities with proficient performance in reading in grade 5. | 35% | 32% | 33% | 34% | 35% | 36% | 37% |
| Percentage of students with disabilities with proficient performance in reading in grade 8. | 27% | 26% | 27% | 28% | 29% | 30% | 30% |
| Percentage of Native American students meeting or exceeding Arizona Academic Standards in reading. | 53% | 52% | 53% | 54% | 55% | 56% | 57% |
| Percentage of Native American students meeting or exceeding Arizona Academic Standards in mathematics. | 50% | 52% | 53% | 54% | 55% | 56% | 57% |

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 4: Percentage of high school students meeting or exceeding AIMS standards by subgroups*** | | | | | | | |
| Percentage of students with disabilities with proficient performance in reading in grade 10. | 32% | 34% | 35% | 36% | 37% | 38% | 39% |
| Percentage of students with disabilities with proficient performance in writing in grade 10. | 25% | 25% | 26% | 27% | 28% | 29% | 29% |
| Percentage of students with disabilities with proficient performance in math in grade 10. | 25% | 24% | 25% | 26% | 27% | 28% | 28% |
| Percentage of Career and Technical Education concentrators passing AIMS reading.* | 94.3 | 94.3% | 94.3% | 94.3% | 94.4% | 94.4% | 94.4% |
| Percentage of Career and Technical Education concentrators passing AIMS Math.* | 91.7 | 91.7% | 91.7% | 91.7% | 91.8% | 91.8% | 91.8% |

*Data reflects 2009 CAR submission to OVAE based on NCLB levels.

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 5: Percentage of students tested who perform at or above the national norm on the norm referenced test*** *(Terra Nova for FY2009 and Stanford 10 for 2010)* | | | | | | | |
| Percentage in grade 2 – reading | 49% | 50% | 51% | 52% | 53% | 54% | 55% |
| Percentage in grade 2 – math | 54% | 55% | 56% | 58% | 59% | 60% | 61% |
| Percentage in grade 9 – reading | 55% | 56% | 57% | 58% | 59% | 60% | 61% |
| Percentage in grade 9 – math | 55% | 56% | 57% | 58% | 59% | 60% | 61% |

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | F Y 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 6: Overall student dropout rate*** | | | | | | | |
| Percent of Arizona high school students who enter 9th grade and graduate within 4 years (based on previous year) | 70% | 75% | 76% | 77% | 78% | 78% | 78% |
| Percent of students that drop out of high school (based on previous school year). | 2.9% | 3.5% | 3% | 3% | 3% | 3% | 3% |

| Performance Measures | FY 2009 Actual | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | F Y 2015 Estimate |
|---|---|---|---|---|---|---|---|
| ***Outcome 7: Adult learner education and employment gains*** | | | | | | | |
| Percentage of learners age 16 and older achieving educational gains in Adult Education. | 52% | 41%** | 50% | 51% | 52% | 53% | 54% |
| Percentage of learners age 16 and older achieving employment goals. | 56% | 50%** | 55% | 60% | 65% | 70% | 75% |
| Percent of Career and Technical Education Program concentrators who completed the state-designated sequence of instruction and who took and passed the Arizona CTE Assessment aligned with industry-recognized standards. | 65% | 66% | 67% | 67.5% | 68% | 68.5% | 69% |
| Percent of Career and Technical Education concentrators placed in school, job, or military after graduation. | 67% | 67% | 67% | 67% | 67.1% | 70.8% | 67.1% |
| Percent of parents in family literacy programs achieving education gains. | 83% | 83.5% | 84 % | 84.5% | 85% | 85.5% | 86% |

# *Key Agency Performance Measures*

## Balanced Scorecard Analysis

One way to analyze the agency's strategic direction is through a new approach to strategic management that was developed in the early 1990s by Drs. Robert Kaplan and David Norton. They named this system the 'balanced scorecard.' The balanced scorecard is a management system that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results. The chart below is the department's attempt to show how the agency's goals and strategies line up from a mission, customer, stakeholder, and internal process perspective. The last perspective, learning and growth, emphasizes particular areas that will need greater attention for the future. This includes how the public education system can make systemic changes to improve effectiveness and how technology will impact learning and productivity.

Taken as a whole, this analysis shows how the objectives were formulated to be the critical factors that will lead to overall agency success. It also highlights the key performance measures that will be used by the agency to evaluate its impact for the future.

| MISSION PERSPECTIVE | | |
|---|---|---|
| **CRITICAL SUCCESS FACTOR** | **OBJECTIVES** | **KEY PERFORMANCE MEASURES** |
| Academic excellence for all students.<br><br>English language proficiency for all ELL students to enable them to access al available educational opportunities. | 1.1) Set fair and reasonable guidelines and academic and English language standards, which foster excellence in public education.<br><br>1.3) Advocate and promote ideas and initiatives that will advance innovation and enhance resources for public education. | Agency Benchmarks (Overall and by subgroups):<br>▪ Percentage of elementary students meeting or exceeding AIMS standards.<br>▪ Percentage of high school students meeting or exceeding AIMS standards.<br>▪ Percentage of ELL students reclassified as Fully English Proficient (FEP.)<br>▪ Percentage of students scoring at or above national norm referenced test norms.<br>▪ Student drop-out rate. |
| **CUSTOMER PERSPECTIVE** | | |
| **CRITICAL SUCCESS FACTOR** | **OBJECTIVES** | **KEY PERFORMANCE MEASURES** |
| Communication and involvement. | 1.2) Improve communication and involvement with the education community and other stakeholders. | ▪ Number of special meetings held by the State Board of Education to receive input and engage stakeholders and the public in guidance discussions.<br>▪ Number of different individuals participating on the Superintendent's advisory committees. |
| School improvements. | 2.1) Provide technical assistance and training for schools to improve effectiveness and school climate.<br><br>2.2) Provide technical assistance and training for schools on federal and state compliance issues. | ▪ Percent of all underperforming schools provided solutions team assistance.<br>▪ Percent of attendees reporting readiness to implement Arizona Academic Standards and the English Language Proficiency Standards as a result of resources, support, and training. |
| Professional development assistance to educators. | 2.3) Offer professional development opportunities to educators and administrators.<br><br>2.4) Develop the capacity of educational leaders to design results-driven professional development that is based on the learning needs of students and teachers. | ▪ Number of professional development opportunities provided to teachers, principals, and school administrators.<br>▪ Percent of attendees reporting readiness to implement strategies or techniques as a result of training.<br>▪ Number of professional development plans containing process to evaluate teacher instructional changes and student learning. |

| STAKEHOLDER PERSPECTIVE | | |
|---|---|---|
| **CRITICAL SUCCESS FACTOR** | **OBJECTIVES** | **KEY PERFORMANCE MEASURES** |
| Fair assessment of all students. | 3.1) Implement assessment of all students and report results to the public. | ▪ Number of AIMS tests administered.<br>▪ Number of norm-referenced tests administered.<br>▪ Number of students identified and placed in the ELL program through administration of the Arizona English Language Learner Assessment (AZELLA).<br>▪ Number of ELL students making progress or attaining full English proficiency. |
| Schools are performing. | 3.2) Review, monitor and report on the performance of Arizona's public schools and providers. | ▪ Percentage of Title 1 schools that meet adequate yearly progress.<br>▪ Percentage of Title III districts that meet Annual Measurable Achievement Objectives (AMAOs).<br>▪ Percent of grantees in compliance. |
| Quality education personnel. | 3.3) Ensure the quality of Arizona's educators through evaluation, investigation, and certification. | ▪ Percent of applicants successfully passing professional content and knowledge certification examinations. |
| **INTERNAL PROCESS PERSPECTIVE** | | |
| **CRITICAL SUCCESS FACTOR** | **OBJECTIVES** | **KEY PERFORMANCE MEASURES** |
| Efficient support services. | 4.1) Provide timely, reliable support services. | ▪ Percent of customers satisfied with agency's services. |
| Useful information to decision makers/public. | 4.2) Provide accurate and helpful information to the public. | ▪ Number of press releases generated and made available.<br>▪ Number of individuals on the department's distribution list receiving newsletters and reports. |
| Productive work environment. | 4.3) Provide a positive and productive work environment that cultivates teamwork and motivates employees. | ▪ Percentage of employees satisfied with their job. |
| **LEARNING AND GROWTH PERSPECTIVE** | | |
| **CRITICAL SUCCESS FACTOR** | **OBJECTIVES** | **KEY PERFORMANCE MEASURES** |
| School effectiveness. | 2.1) Provide technical assistance and training for schools to improve effectiveness and school climate. | ▪ Number of school sites recognized as "high quality."<br>▪ Percentage of schools labeled as underperforming. |
| Utilization of technology. | 2.3c) Develop and make available on-line training/materials on information designed to improve the instruction and academic skills of school personnel.<br>4.3c) Increase the use of data and information technology as a management tool to make better-informed decisions. | ▪ Number of Department of Education website "hits."<br>▪ Number of data marts used as management tools by agency units.<br>▪ Percent reduction in average downtime of Internet servers. |

# *Strategic Goals*

## OBJECTIVES
## STRATEGIES

# Strategic Goal 1

***Provide leadership by initiating and advancing improvements to public education.***

Superintendent of Public Instruction Tom Horne began his term with an entirely new top executive team for the Department of Education. These positions have been filled with experienced educators and emphasize one of our principal themes: the Department of Education continues to provide educational leadership, including drawing on talented teachers, principals, and administrators to help all of our schools achieve academic excellence. This type of leadership during Superintendent Horne's final term will continue to raise the bar and improve academic performance in Arizona's public schools.

**Objective 1.1**
Set fair and reasonable guidelines and standards which foster excellence in public education.

**Objective 1.2**
Improve communication and involvement with the education community and other stakeholders.

**Objective 1.3**
Advocate and promote initiatives that will advance innovation and enhance resources for public education.

# Strategic Goal 1

***Provide leadership by initiating and advancing improvements to public education.***

***Objective 1.1***
*Set fair and reasonable guidelines and standards which foster excellence in public education.*

The job of the State Board of Education is to establish policies and the Superintendent of Public Instruction to set and implement the guidelines and standards that regulate the conduct of the public school system. A big part of those duties include prescribing a minimum course of study in schools and minimum competency requirements for the promotion of students in the K-12 system. In its pursuit to improve student achievement, the department and board has recommended improvements built on a foundation of 1) High Standards -- commitment to provide Arizona students with quality curriculum and instruction aligned to the Arizona Academic Standards; and 2) Accountability -- accurate school achievement profiles examining each school's overall performance and a clear definition of the school improvement process.

## Strategies for Objective 1.1

Adopt and prescribe a minimum course of study in schools and minimum competency for students that are based on ***high standards***.

Review and develop a fair and accurate ***accountability plan*** for public education in Arizona by coordinating the requirements of No Child Left Behind with Arizona LEARNS while seeking maximum flexibility.

# Strategic Goal 1

***Provide leadership by initiating and advancing improvements to public education.***

To be a good leader one must be a good listener. The department is anxious to work with all parts of the education community and the public at large to include their ideas as the department and the State Board of Education develops education policy. The department understands the importance of teamwork with teachers, principals, and district administrators throughout Arizona, along with teamwork with business and other groups who care about education. It is important to cultivate and collaborate with department partners to maximize the flow of ideas and information among stakeholders on the needs of learners and business.

***Objective 1.2***
*Improve communication and involvement with the education community and other stakeholders.*

## Strategies for Objective 1.2

Improve ***communication and outreach*** to the education community to generate input and discussion on education guidelines and initiatives.

Increase ***participation and collaboration*** with a variety of stakeholders to cultivate involvement and important partnerships.

# Strategic Goal 1

***Provide leadership by initiating and advancing improvements to public education.***

One of the key roles of the Department of Education, working with the State Board of Education, is to recommend direction to the legislature pertaining to schools. Superintendent Horne's hope is that the department will be a place of intellectual passion and ferment, processing many ideas, and effectively advocating and advancing the implementation of the best of them. The department is committed to only advancing and promoting efforts that will lead to producing results in higher academic achievement for all students.

***Objective 1.3***
*Advocate and promote ideas and initiatives that will advance innovation and enhance resources for public education.*

## Strategies for Objective 1.3

Develop ***special projects and initiatives*** that support and promote department and State Board of Education goals.

***Increase resources for public education*** by promoting administrative efficiency, cultivating partnerships and pursuing increases in federal funding.

Work with the community to ***improve access*** to early education, career and technical training, family literacy, adult education, workforce development and other issues important not only to public education but to Arizona's quality of life.

# Strategic Goal 2

***Provide support and assistance to public schools and providers for exemplary performance.***

Superintendent Tom Horne has committed the Department of Education to be primarily a service organization, helping school districts, charter schools, and contracted educational providers achieve more academic success. To do this, the department has established a broad range of support for schools and educators in their efforts to build strong foundations for our students. The department will continue to provide training, school improvement assistance, evaluation, dissemination of information, and funding that will assist schools with targeted issues. The department also serves as the primary source of current, reliable, and accurate information on the latest innovations in public education. This includes information on scientifically based programs and the design and implementation of prevention and intervention strategies.

**Objective 2.1**
Provide technical assistance and training for schools to improve effectiveness and school climate.

**Objective 2.2**
Provide technical assistance and training for schools on federal and state compliance issues.

**Objective 2.3**
Offer professional development opportunities to educators and administrators.

# Strategic Goal 2

***Provide support and assistance to public schools and providers for exemplary performance.***

The department has placed great emphasis and resources toward helping schools succeed. The department believes it will take systemic change within the environment, administration, and organizational structure of our schools to improve performance.

***Objective 2.1***
*Provide technical assistance and training for schools to improve effectiveness and school climate.*

To assist, the department will provide all Arizona schools critical information and guidance on how to improve. Central to this will be a guide (rubric) that will serve three primary functions: 1) as a blueprint to communicate the State Superintendent's high expectations; 2) as a self-assessment tool to be used by the local educational community; and 3) as an external assessment tool to be used by department School Improvement Teams (for underperforming schools, the department will dispatch teams of experts to help).

This rubric is anchored in the scientifically research-based principles and indicators that consistently distinguish top-performing schools. The indicators are defined within the following four standards: 1) School and District Leadership Capacity -- Focuses on improved student achievement; 2) Curriculum, Instruction, and Professional Development – Provides all students the opportunity to meet or exceed with rigorous curriculum and instruction; 3) Classroom and School Assessments – Uses multiple standards-based assessments, strategies, and data to measure and monitor student performance; 4) School Culture, Climate, and Communication -- Supports a climate conducive to student achievement, and possesses effective communication.

## Strategies for Objective 2.1

Undertake original applied research along with the ***identification, evaluation, and sharing of critical information and best practices*** in public education.

Evaluate underperforming schools and/or schools that fail to meet academic standards and provide ***proactive counsel*** on how to make improvements.

Organize and hold ***conferences/workshops*** on various topics to assist schools in ***improving effectiveness*** and implementing best practices.

Acknowledge school innovation by ***recognizing schools/districts*** with outstanding programs and practices.

Provide ***guidance*** and assistance to schools in implementing ***specialized efforts*** critical to school success, including:

- ***Broaden curriculum*** and high school renewal enrichment programs.
- Student ***health and safety***.
- ***Character education*** and making focused improvements to ***discipline***.
- ***Reading achievement***.
- Dealing with ***special populations*** and at-risk students.

# Strategic Goal 2

***Provide support and assistance to public schools and providers for exemplary performance.***

In addition to providing financial assistance to local educational agencies and educational providers, the department also provides supplemental help in complying with the uses of those resources. This includes assistance in understanding and interpreting state and federal rules and regulations. Additionally, Arizona is experiencing dramatic demographic changes and is seeing a rise in the number of students with unique needs. Because of this, schools need additional support and advice in meeting the needs of these special students. Department staff is also there to resolve disputes and problems as they arise.

***Objective 2.2***
*Provide technical assistance and training for schools on federal and state compliance issues.*

## Strategies for Objective 2.2

Offer and provide ***one- on- one technical assistance*** and guidance for interpretation and implementation of rules and regulations, along with the resolution of issues.

Organize and hold ***conferences/workshops*** on various topics to assist schools in meeting Arizona's ***accountability requirements***.

Develop and make available ***publications and correspondence*** (in written form and on-line) addressing guideline requirements on various department issues.

# Strategic Goal 2

***Provide support and assistance to public schools and providers for exemplary performance.***

**_Objective 2.3_**
*Offer professional development opportunities to educators and administrators.*

In order to deliver access to extraordinary education to every student in the state, 40,000 Arizona teachers, principals, superintendents, other educators and administrators must be trained. To accomplish this, technical assistance will be necessary. Department Regional Training Centers will be responsible for ensuring that school and district staff in the region is appropriately trained. The department will also combine its resources and utilize the expertise from schools, community colleges, universities, and business/industry to be instrumental in delivering a coordinated, effective professional development strategy for all school educators and administrators.

## Strategies for Objective 2.3

Develop and implement a ***plan for supporting the continuum of teacher/principal growth*** from attraction through certification, mentoring and professional learning, and development.

Organize and hold ***conferences/workshops*** on various ***personal and professional development*** topics important to educators and administrators including State Board of Education rules and regulations.

Develop and make available ***on-line training/materials*** on information designed to improve the instruction and academic skills of school personnel.

Increase the supply of teachers and administrators by providing ***information on employment opportunities*** and reducing barriers to entry into the profession by offering ***alternative pathways***.

# Strategic Goal 3

***Ensure maximum academic and financial accountability in public education.***

A system of real school accountability is important to improving our educational system. However, it must be fair with expectations clear and understandable. With the passage of Arizona LEARNS and the federal requirements of No Child Left Behind, the department is taking steps to develop an accountability system that will provide students and their families with the information they need. The department is committed to ensuring: 1) academic accountability -- all students have the skills and knowledge they need to succeed; 2) financial accountability -- getting the most from every dollar spent on public education; and 3) educator accountability – high quality teachers and administrators; along with student safety.

**Objective 3.1**
Implement assessment of all Arizona students and report results to the public.

**Objective 3.2**
Review, monitor, and report on the performance of Arizona's public schools and providers.

**Objective 3.3**
Ensure the quality of Arizona's educators through evaluation, investigation, and certification.

# Strategic Goal 3

***Ensure maximum academic and financial accountability in public education.***

***Objective 3.1***
*Implement assessment of all Arizona students and report results to the public.*

Accountability requires a standard from which to work and a way to measure progress. The purpose of Arizona's academic standards is to define what the citizens of the State expect children to know and be able to do at each grade level and to raise the achievement level of all students in the State's district and charter schools. The Thomas B. Fordham Foundation has rated Arizona's standards as among the best in the nation for being "clear and specific about the content and skills all students are expected to learn."

In addition to establishing standards, the department has developed a state assessment program as a means to measure student progress in meeting the state standards. The department administers Arizona's Instrument to Measure Standards (AIMS) in reading, writing, and mathematics in grades three through eight, and in high school. The State also administers the *TerraNova (Stanford 10 in 2010)* in Reading, Language Arts, and Mathematics in grades two through nine. In addition, the state administers the AIMS A to students with significant cognitive disabilities in reading, mathematics, and science at the same grade levels as AIMS. Schools are required to report assessment results to the public.

## Strategies for Objective 3.1

Develop ***academic content standards*** that are reasonable, fair, appropriate, and prepare all Arizona students for college or career.

Develop and administer a ***standards-based assessment*** that matches the academic content standards in order to measure student achievement.

# Strategic Goal 3

***Ensure maximum academic and financial accountability in public education.***

***Objective 3.2***
*Review, monitor, and report on the performance of Arizona's public schools and providers.*

Every school must respond to the accountability called for at the national, state, and local levels. Arizona's new accountability systems, Arizona LEARNS, focuses on ensuring schools are making progress. By requiring school labeling and performance reports, parents can know whether their school is improving, excelling, maintaining, or underperforming and what steps are being taken to ensure success.
The department is continually updating Arizona's school finance system that drives the need for a Student Accountability Information System (SAIS). SAIS provides necessary information to local school administrators and assists the department in ensuring the efficient use public resources.

In addition, the department reviews and provides oversight on a number of other issues related to ensuring compliance on various federal and state rules and regulations. In doing so, the department resolves disputes and provides recourse for problems and accountability enforcement issues.

## Strategies for Objective 3.2

Review, monitor, and audit the expenditures of school districts and providers for ***financial compliance***.

Monitor and ensure ***improvements in academic achievement*** for all students.

Ensure ***compliance with state and federal statutes, regulations*** and other contractual obligations.

Prepare federal and other required ***plans, certifications and applications*** for compliance and accountability purposes.

# Strategic Goal 3

***Ensure maximum academic and financial accountability in public education.***

Over the past decade, several compelling studies have identified the strong connection between student achievement and teacher preparation and skills. These findings emphasize the importance of all students having highly qualified and skilled teachers.

***Objective 3.3***
*Ensure the quality of Arizona's educators through evaluation, investigation, and certification.*

The state must invest in ways to ensure better teaching quality. While significant work has been done in the development and dissemination of teaching standards, careful alignment of teacher preparation and development efforts remain a challenge.

To address this issue, the department works to: 1) consistently and accurately enforce the rules and regulations governing the certification of professional educators in the state; 2) verify the professional and content knowledge of teachers and administrators who apply for certification through written assessments; 3) issue appropriate certificates and evaluation reports to applicants for certification in a timely manner; and 4) investigate and coordinate certification complaints.

## Strategies for Objective 3.3

Administer and improve the quality of Arizona's ***teacher and administrator assessments***.

Verify the professional and content knowledge of teachers and administrators and ***issue appropriate certificates***.

***Investigate and report on complaints*** of professional educators in a thorough and timely manner to ensure student safety.

Provide web-based applications that allow LEAs to review and verify teacher certification and NCLB highly qualified professional's requirements.

Monitor LEAs for compliance with federal NCLB highly qualified professionals' requirements.

# Strategic Goal 4

***Deliver high quality customer service.***

There has been a shift toward emphasizing the importance of customer service in the Department of Education since Superintendent Tom Horne took office. Along with this service orientation, the department is committed to improving employee morale and productivity, along with creating a spirit of teamwork. Improving service and productivity will require attention, commitment, and innovation with a focus on results. It is the intent of the Department of Education to be a model of good, effective government and be known for its responsiveness and high quality of services.

**Objective 4.1**
Provide timely, reliable support services.

**Objective 4.2**
Provide accurate and helpful information to the public.

**Objective 4.3**
Promote a positive and productive work environment that cultivates teamwork and motivates employees.

*"The only choice for an institution is between management and mismanagement….Whether it is being done right or not will determine largely whether the enterprise will survive and prosper or decline and ultimately fail."*
*-- Peter F. Drucker*

# Strategic Goal 4

## *Deliver high quality customer service.*

***Objective 4.1***
*Provide timely, reliable support services.*

Effective operations management is the process of designing, operating, and controlling a productive work environment capable of transforming physical resources and human talent into needed services the department is required to offer. The department will continue to work on improvements to services that support the agency's ability to accomplish its mission. The department is moving towards the full implementation of having real-time student accounting, funding, grants management, and grant funding in an effort to streamline paperwork and administrative burdens. The advancement of technology will be indispensable as a primary means for simplifying administrative work, evaluating success, improving teaching and learning, and thus enhancing access to extraordinary education.

## Strategies for Objective 4.1

Enhance services by ***evaluating department efforts*** through a continuous improvement process, surveying customer satisfaction, and offering employee training on customer service.

***Streamline paperwork and monitoring expectations*** so that school/district staff are able to operate at maximum efficiency.

Employ the use of technology to ***increase automation and the amount of web-based applications*** available for department business.

# Strategic Goal 4

## *Deliver high quality customer service.*

With increasing attention on education and school accountability, decision makers and the general public are demanding more and more information. In order to understand the state of education in Arizona, the department attempts to serve as the primary source of current and reliable information on the status and needs of Arizona's public school system.

***Objective 4.2***
*Provide accurate and helpful information to the public.*

The department works to provide objective research and provides technical support to schools and districts on data interpretation and use. In addition to the production and dissemination of data and information, the agency also attempts to gain insight into educational concerns through outreach and feedback from the education community and other interested parties.

## Strategies for Objective 4.2

Increase the ***quality and amount of information and data*** about the agency and Arizona education provided to constituents and the public.

Increase ***media coverage*** on the services and programs of the department.

***Answer questions*** from the general public ***and resolve disputes*** on problems associated with Arizona's public education system.

# Strategic Goal 4

***Deliver high quality customer service.***

In our increasingly complex and rapidly changing world, and with an issue as complicated as education, the need for intelligent management is greater than ever before. This strategic plan affords the department the opportunity to effectively manage by objectives. Meeting its goals and objectives will mean attention to the workplace and increasing employee satisfaction and ultimately productivity. The challenge is even more ominous during a time of limited resources. Department management will spend the time to be effective (get the job done). By continuing to focus on improving its information technology capabilities, the department will ultimately increase productivity in the field as well as internally. Effective information technology will increase the efficiency of the department's business operations.

***Objective 4.3***
*Promote a positive and productive work environment that cultivates teamwork and motivates employees.*

## Strategies for Objective 4.3

Improve ***employee satisfaction and morale*** by improving communication, promoting teamwork and recognizing individual contributions.

Offer more ***professional development and training*** opportunities for department staff.

Increase the ***use of data and information technology*** as a management tool to make better informed decisions.

Ensure that necessary ***fiscal and managerial systems*** are in place to provide maximum accountability and performance.

# *Appendix A*

## GOALS & STRATEGIES ANALYSIS

# Appendix A

## *Goals and Strategies Analysis*

The following tables provide more of a detailed analysis of how the goals and strategies were developed based on the issues and the department's statutory authority.

| **GOAL #1: Provide *leadership* by initiating and advancing improvements to public education.** | | | |
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| ***Objective*** | ***Issues Addressed*** | ***Authorization*** | ***Strategies*** |
| 1.1: Set fair and reasonable ***guidelines and standards*** which foster excellence in public education. | Guidelines & Standards<br>▪ Academic standards<br>▪ Alignment of Statutes<br>▪ Link assessment to standards<br>▪ English Language Proficiency Standards<br>▪ Link the Arizona English Language Assessment (AZELLA) to English Proficiency Standards<br>▪ Reading Proficiency<br>▪ Reading Comprehension<br>▪ Vocabulary Development<br>▪ Benchmarking for anticipated guideline changes<br>▪ Legislative rule vagueness<br>▪ "Standards" testing<br>▪ Increase in accountability<br>▪ AIMS implementation<br>▪ AZELLA Implementation<br>▪ External influences on educational guidelines<br>▪ Proposition 301<br>▪ Federal policy uncertainty<br>▪ Quality of standards<br>▪ Changing business requirements<br>▪ Graduation requirements<br>▪ Charter school guidelines<br>▪ Reduced elective course opportunities for students<br>▪ English Language Learner (ELL) Task Force<br>▪ SEI Classroom Guidelines<br>▪ English Language Development (ELD) Guidelines<br><br>Performance<br>▪ Prioritizing resources based on improving performance results<br>▪ Board responding to performance assessments<br>▪ Increase external/internal expectations<br>▪ Uncertainty of federal accountability system<br>▪ Board's expectation to verify curriculum alignment | **ARS 15-231**: The state board of education which shall be the policy determining body of the department.<br><br>**ARS 15-704**: Reading proficiency; definitions<br>**A.** Each school district or charter school that provides instruction in kindergarten programs and grades one through three shall select and administer screening, ongoing diagnostic and classroom based instructional reading assessments.<br>**B**. Each same school district or charter school shall conduct a curriculum evaluation and adopt a scientifically based reading curriculum that includes the essential components of reading instruction.<br><br>**ARS 15-741.01**: **A**. Based on the data reported on the report cards, the state board shall adopt specific state level objectives for each of the following goal areas: 1. Achievement levels of pupils at the end of grade three, grade eight, and grade twelve. 2. Dropout and high school graduation rates. 3. Post-secondary employment and college enrollment rate.<br><br>**ARS 15-203: A**. The state board of education shall: 1. Exercise general supervision over and regulate the conduct of the public school system.<br><br>Prop 203:<br>**ARS §15-756:** Identification of English language learners<br>**B.** The English language proficiency of all pupils with a primary or home language other than English shall be assessed through the administration of English language proficiency assessments in a manner prescribed by the superintendent of public instruction. The test scores adopted by the superintendent as indicating English language proficiency shall be based on the test publishers' designated scores.<br>**C**. If it is determined that a pupil is not English language proficient, the pupil shall be classified as an English language learner and shall be enrolled in an English language education program pursuant to Section 15-752 or 15-753.<br><br>**ARS§15-756.01**. Arizona English language learners task force; research based models of structured English immersion for English language learners; budget requests; definitions<br>**C.** By September 1, 2006, the task force shall develop and adopt research-based models of structured English immersion programs for use by school districts and charter schools. The models shall take into consideration at least the size of the school, the location of the school, the grade levels at the school, the number of English language learners and the percentage of English | ▪ Adopt and prescribe a minimum course of study in schools and minimum competency for students that are based on ***high standards***.<br><br>▪ Review and develop a fair and accurate ***accountability plan*** for public education in Arizona by coordinating the requirements of No Child Left Behind with Arizona LEARNS while seeking maximum flexibility.<br><br>▪ Provide guidance as per the statutorily-prescriptive Structured English Immersion (SEI) Model Classroom, with a specific course of English Language Development (ELD), in length and lesson plan design, based on the Arizona English Language Proficiency Standards and the Discrete Skills Inventory. |

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| | ▪ Using *TerraNova* scores to evaluate school performance<br>▪ Testing backlash<br>▪ Board changing directions - allowing exceptions to test<br>▪ Program evaluation<br>▪ Legislature misuses of the test<br>▪ Clarify performance objectives<br>▪ Focused on procedures and process rather than achievement | language learners. The models shall be limited to programs for English language learners to participate in a structured English immersion program not normally intended to exceed one year. The task force shall identify the minimum amount of English language development per day for all models. The task force shall develop separate models for the first year in which a pupil is classified as an English language learner that includes a minimum of four hours per day of English language development. | |

**GOAL #1: Provide *leadership* by initiating and advancing improvements to public education.**

| *Objective* | *Issues Addressed* | *Authorization* | *Strategies* |
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| 1.2: Improve ***communication and involvement*** with the education community and other stakeholders. | Partnerships/Collaboration<br>▪ Outreach and increasing business and industry participation<br>▪ Partnership with educational platform<br>▪ Working on educational partnerships<br>▪ Work with federal programs<br>▪ Polarized groups on how to best meet needs<br>▪ Working with universities<br>▪ Partnership with the county ESA's<br><br>Public Education<br>▪ Message to customers & stakeholders<br>▪ Increase awareness and buy-in<br>▪ Misperception of AIMS<br>▪ Lack of literature in the home<br>▪ Lack of public awareness on literacy<br>▪ Lack of awareness-schools, internally, etc.<br>▪ Improve global ADE & public awareness on charter schools<br>▪ Increase outreach<br>▪ Perceptions on change of administration | **ARS 15-251**: The superintendent of public instruction shall: 1. Superintend the schools of this state. 5. Execute, under the direction of the state board of education, the guidelines which have been decided upon by the state board.<br><br>**ARS 15-255**: **A**. The superintendent of public instruction shall make a report to the governor and legislature each year.<br><br>**15-756.10. Reporting**<br>The Office of English Language Acquisition Services in the department of education shall: 3. Submit an annual report to the joint legislative budget committee that includes an itemized list of all federal monies received by the department for English language learners, a list of how much of these monies were distributed to school districts on a district by district basis and the purposes for which these federal monies are designated. The department shall submit a copy of this report to the secretary of state and the director of the Arizona state library, archives and public records. 4. Submit an annual report to the governor, the president of the senate, the speaker of the house of representatives and the state board of education that includes a detailed analysis of whether and to what extent pupils are benefiting academically from compensatory instruction as defined in Section 15-756.11 and a comparison of the academic achievement of pupils before and after receiving compensatory instruction as defined in Section 15-756.11. The department shall submit a copy of this report to the secretary of state and the director of the Arizona state library, archives and public records. 5. Present a detailed annual summary of all English language learner programs and funding at a public meeting of the state board of education. 6. Present a summary of information relating to the demonstrated success of schools and school districts at achieving English proficiency for English language learners. | ▪ Improve ***communication and outreach*** to the education community to generate input and discussion on education guidelines and initiatives.<br><br>▪ Increase ***participation and collaboration*** with a variety of stakeholders to cultivate involvement and important partnerships. |

**GOAL #1: Provide *leadership* by initiating and advancing improvements to public education.**

| *Objective* | *Issues Addressed* | *Authorization* | *Strategies* |
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| 1.3: ***Advocate and promote*** ideas and | Advocacy & Innovation<br>▪ Proactive approaches<br>▪ Efforts towards receiving | **ARS 15-206**: **A**. The state board of education may accept on behalf of this state from any federal agency monies which have been | ▪ Develop ***special projects and initiatives*** that support and promote department and State |

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| initiatives that will advance innovation and enhance resources for public education. | allocated state and federal grants<br>▪ National focus on education<br>▪ Political climate<br>▪ Opportunity for change<br>▪ Using data for decision making<br>▪ Growing population & changes in demographics<br>▪ Low levels of funding schools, could be decreased<br>▪ Federal funding limited<br>▪ Access to quality Early Childhood programs<br>▪ Improve preschool services<br>▪ Providing career and technical education resources to promote innovative programs<br>▪ Delivering academic standards in career and technical education programs | appropriated by act of Congress for defense in education, reduction of illiteracy, teaching of immigrants, employment and training, educational support services or other educational purpose.<br><br>**ARS 15-256**: Consistent with the purposes of the education flexibility partnership act, the superintendent of public instruction may issue to schools and school districts waivers of state statutory requirements related to programs described in 20 United States Code Section 5891(b).<br><br>**ARS 15-779.04:** 4. Encourage the development of locally designed, innovative programs for gifted pupils.<br><br>**ARS 15-756.01.** Arizona English language learners task force; research based models of structured English immersion for English language learners; budget requests; definitions<br>**E.** The research based models of structured English immersion shall be limited to a regular school year and school day. Instruction outside the regular school year or school day shall be provided with compensatory instruction and may be eligible for funding from the statewide compensatory instruction fund established by Section 15-756.11.<br><br>**ARS 15-756.04.** Arizona structured English immersion fund<br>**A.** The Arizona structured English immersion fund is established. The department of education shall administer the fund.<br>**B.** The department shall submit an annual request for an appropriation for the purposes of this section.<br>**C.** In addition to the ELL support level weight prescribed in Section 15-943, the department shall distribute monies from the fund to school districts and charter schools in an amount specified in the budget request prescribed in Section 15-756.03, Subsection C. Monies from the fund established by this section and monies for the ELL support level weight prescribed in Section 15-943 shall not be distributed for more than two fiscal years for the same pupil. Nothing in this subsection shall be construed to prohibit a school district or charter school from receiving monies from the statewide compensatory instruction fund established by Section 15-756.11 for more than two fiscal years for the same pupil.<br>**D.** The superintendent of public instruction shall attempt to obtain the maximum amount of federal funding that is available for English language learner programs.<br><br>COMMITTEE ON APPROPRIATIONS<br>HOUSE OF REPRESENTATIVES<br>AMENDMENTS TO S.B. 1096<br><br>(Reference to Senate engrossed bill)<br>"Section 1. Appropriations; English language instruction<br>**A.** The following sums totaling $40,653,833.30 are appropriated from the sources indicated in fiscal year 2008-2009 for deposit in the Arizona structured English immersion fund established by Section 15-756.04, Arizona Revised Statutes, and are appropriated from the fund to the department of education to fund English language learner instruction pursuant to the | Board of Education goals.<br>▪ ***Increase resources for public education*** by promoting administrative efficiency, cultivating partnerships and pursuing increases in state and federal funding.<br>▪ Work with the community to ***improve access*** to early education, career and technical training; family literacy, adult education, workforce development and other issues important not only to public education but to Arizona's quality of life. |

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| | | research based models of structured English immersion programs adopted by the Arizona English language learners task force pursuant to Section 15-756.01, Arizona Revised Statutes, and selected by school districts and charter schools pursuant to Section 15-756.02, Arizona Revised Statutes…"<br><br>ARS15-756.11. Statewide compensatory instruction fund; reporting; definition<br>**A.** The statewide compensatory instruction fund is established. The department of education shall administer the fund.<br><br>**ARS 15-756**. Identification of English language learners<br>**B.** The department shall annually request an appropriation to pay for the purchase of all language proficiency assessments, scoring and ancillary materials as prescribed by the department for school districts and charter schools. | |

**GOAL #2: Offer *support and assistance* to public schools and providers for exemplary performance.**

| *Objective* | *Issue Addressed* | *Authorization* | *Strategies* |
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| 2.1: Provide technical assistance and training for schools to improve ***effectiveness and school climate***. | Technical Assistance & Training<br>▪ Help schools with at-risk students meet standards and align assessment systems<br>▪ Development of assistance package to schools<br>▪ More ongoing technical assistance<br>▪ Improve technical knowledge of system<br>▪ Guideline changes<br>▪ Lack of LEA awareness on how to appropriately service neglected and delinquent students<br>▪ Provide educator training on English Language Development (ELD) in the statutorily-prescriptive Structured English Immersion (SEI) Model classroom.<br>▪ Provide training and proven teaching techniques for effective reading instruction K-3<br>School Support<br>▪ Inform charter schools on certification, website access, and potential operators on preferred characteristics to ensure charter schools success<br>▪ Increasing number of schools<br>▪ Education of new charters<br>▪ Discover comparable options to work in remote areas | **ARS 15-231.02**: **A**. The department of education shall establish a central clearinghouse within the department for information concerning school safety.<br><br>**ARS 15-241: Q**. The superintendent of public instruction, based on need, shall assign a solutions team to the school. The team shall work with staff at the school to assist in curricula alignment and shall instruct teachers on how to increase pupil academic progress.<br><br>**ARS 15-704**: Reading proficiency; definitions<br>**B.** All school districts and charter schools that offer instruction in kindergarten programs and grades one through three shall provide ongoing teacher training based on scientifically based reading research.<br><br>**ARS 15-712**: **B**. At the request of a school district, the department of education shall provide technical assistance to school districts that choose to implement programs to prevent chemical abuse.<br><br>**ARS15-715**: **A**. Each common and unified school district shall develop a plan to supplement the regular education program by providing special academic assistance to pupils in kindergarten programs and grades one through three. **E**. The department of education shall provide technical assistance to school districts in developing and implementing their plan.<br><br>**ARS 15-756.07**: Office of English language acquisition services; duties<br>The Office of English Language Acquisition Services is established in the department of education.<br><br>**ARS 15-809**: **A**. The department of education shall establish an AIMS intervention and dropout | ▪ Undertake original applied research along with the ***identification, evaluation, and sharing of critical information and best practices*** in public education.<br>▪ Evaluate underperforming schools and/or schools that fail to meet academic standards and provide ***proactive counsel*** on how to make improvements.<br>▪ Organize and hold ***conferences /workshops*** on various topics to assist schools in ***improving effectiveness*** and implementing best practices.<br>▪ Acknowledge school innovation by ***recognizing schools/districts*** with outstanding programs and practices.<br>▪ Provide ***guidance*** and assistance to schools in implementing ***specialized efforts*** critical to school success, including:<br>➢ ***Broaden curriculum*** and enrichment programs.<br>➢ Student ***health and safety***.<br>➢ ***Character education*** and making focused improvements to ***discipline***.<br>➢ ***Reading achievement***.<br>➢ Dealing with ***special populations*** and at-risk students.<br>➢ Assistance in implementing the statutorily-prescriptive ***4-hour Structured English Immersion (SEI) classrooms*** for English |

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| | ▪ Schools' resistance to changes<br>▪ Implement character education (CE) program<br>▪ Lack of funding for health issues | prevention program. | Language Learners (ELLs) and providing training in ***English Language Development (ELD).***<br>➢ Provide ***effective framework*** through extensive ***professional development*** and ***technical assistance opportunities.*** |
| **GOAL #2: Offer *support and assistance* to public schools and providers for exemplary performance.** | | | |
| ***Objective*** | ***Issue Addressed*** | ***Authorization*** | ***Strategies*** |
| 2.2: Provide technical assistance and training for schools on federal and state ***compliance issues***. | Technical Assistance & Training<br>▪ More ongoing training<br>▪ Provide professional development on curriculum standards and the measurement of developmental gains; provide professional development on the English Language Proficiency Standards, and English Language Development (ELD)<br>▪ Training customers on intranet services and information<br>▪ Helping schools with targeted students<br>▪ Provide professional development to career and technical education teachers based on the CTE assessment system results<br><br>Compliance<br>▪ Monitoring<br>▪ Grants process<br>▪ Site visits<br>▪ Blending federal & state requirements<br>▪ Increase in mandates<br>▪ Written guidelines & procedures<br>▪ Continued improvement to monitoring | **ARS 15-701**: **A.** The state board of education shall: 1. Prescribe a minimum course of study, as defined in Section 15-101 and incorporating the academic standards adopted by the state board of education, to be taught in the common schools. 3. Distribute guidelines for the school districts to follow in prescribing criteria for the promotion of pupils from grade to grade in the common schools.<br><br>**ARS 15-771**: **A**. Each school district shall make available an educational program for preschool children with disabilities.<br><br>**ARS 15-756**. Identification of English language learners<br>**B.** The department shall annually request an appropriation to pay for the purchase of all language proficiency assessments, scoring and ancillary materials as prescribed by the department for school districts and charter schools.<br><br>**ARS 15-756.08.** Monitoring; corrective action plan<br>**A**. The superintendent of public instruction shall direct the office of English language acquisition services in the department of education to:<br>1. Monitor each year at least twelve school districts or charter schools from the fifty school districts or charter schools in this state with the highest number of English language learners. The department of education shall monitor all fifty school districts or charter schools with the highest number of English language learners in this state at least once every four years. 2. Monitor each year at least ten school districts or charter schools that are not included in the fifty school districts or charter schools described in paragraph 1. 3. Monitor each year at least ten school districts or charter schools that are not required to provide instruction for English language learners for a majority of their grade levels.<br><br>**ARS 15-779.01: A**. Because it is in the public interest to support unique opportunities for high-achieving and underachieving pupils who are identified as gifted, the governing board of each school district shall provide gifted education to gifted pupils identified as provided in this article.<br><br>**ARS 15-779.02: A**. The governing board of each school district shall develop a scope and sequence for the identification process of and curriculum modifications for gifted pupils. **B**. The governing board shall submit the scope and the sequence to the department of education for approval.<br><br>**ARS 15-784**: **A**. The state assents to the provisions and accepts the benefits of the vocational education act of 1917, as amended by the Carl D. Perkins vocational and applied technology act of 1998. **D**. The state board of education may distribute the monies it receives as provided in subsection A to | ▪ Offer and provide ***one- on-one technical assistance*** and guidance for interpretation and implementation of rules and regulations, along with the resolution of issues.<br><br>▪ Organize and hold ***conferences/workshops*** on various topics to assist schools in meeting Arizona's ***accountability requirements***.<br><br>▪ Develop/make available ***publications and correspondence*** (written & on-line) addressing guideline requirements on various department issues. |

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| | | any eligible recipient of the monies under the federal law.<br><br>**ARS 15-205**: **A**. The state board of education may enter into contracts with the department of the interior for the welfare and education of Indians in schools of this state. The board shall administer the expenditure of federal funds provided under such contracts.<br><br>**ARS 15-719**: **C**. At the request of the school district or charter school, the department of education may certify that the school district or charter school has a character development instruction program that meets all of the requirements.<br><br>**ARS 15-1152**: The state board of education may direct the disbursement of federal and state monies, direct the distribution of commodities, prescribe regulations, employ personnel, give technical advice and assistance to governing boards in connection with establishment and operation of school meal programs, assist in training personnel engaged in operation of school meal programs.<br><br>**ARS 15-1251**: **A**. The state block grant for early childhood education program is established in the state board of education. The purpose of the program is to promote improved pupil achievement by providing flexible supplemental funding for early childhood programs, including preschool programs for economically disadvantaged children. | |

**GOAL #2: Offer *support and assistance* to public schools and providers for exemplary performance.**

| *Objective* | *Issue Addressed* | *Authorization* | *Strategies* |
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| 2.3: Offer ***professional development*** opportunities to educators and administrators. | Technical Assistance & Training<br>▪ Strengthen the skills of educators<br>▪ Strengthen the skills of school safety officers<br>▪ Improve technical knowledge of system<br>▪ Lack of training for LEA staff<br>▪ Shortage of qualified staff at LEA level<br>▪ High turnover in field<br>▪ Depth of operational knowledge<br>▪ District staff does not receive professional training<br>▪ District and school leaders lack the understanding of how to support teacher application of professional learning<br>▪ Lack of LEA awareness on how to appropriately service neglected and delinquent students | **ARS 15-533**: **A**. To qualify for either a basic or standard teaching certificate, or equivalent certificate, a person must pass each component of the proficiency examination developed and administered by the state board of education.<br><br>**ARS 15-704**: Reading proficiency; definitions<br>**E.** If more than twenty per cent of students in grade three at either the individual school level or at the school district level do not meet the standards, the governing board of each school district or governing body of each charter school shall conduct a review of its reading program that includes curriculum and professional development in light of current, scientifically based reading research.<br>**F.** Based on the review required in subsection E of this section, the governing board or governing body and the school principal of each school that does not meet the reading standards, in conjunction with school council members, if applicable, shall develop methods of best practices for teaching reading based on essential components of reading instruction and supported by scientifically based reading research. These methods shall be adopted at a public meeting and shall be implemented the following academic year.<br><br>**ARS 15-756.09. Teacher training**<br>**A**. The state board of education shall determine the qualifications necessary for a provisional and full structured English immersion endorsement.<br>**B**. Training may be allowed that is not provided by a college or university to substitute for any of the courses required for a structured English immersion endorsement or a bilingual education endorsement if all of the following conditions apply:<br>1. The state board of education has reviewed the | ▪ Develop and implement a ***plan for supporting the continuum of teacher/principal growth*** from attraction through certification, mentoring and professional learning, and development.<br><br>▪ Organize and hold ***conferences /workshops*** on various ***personal and professional development*** topics important to educators and administrators including State Board of Ed. rules and regulations.<br><br>▪ Develop the capacity of educational leaders to design results-driven professional development that is based on the learning needs of students and teachers.<br><br>▪ Develop/make available ***on-line training/materials*** on information to improve instruction & academic skills of school personnel.<br><br>▪ Increase the supply of teachers and administrators by providing ***information on employment opportunities*** and reducing barriers to |

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| | | curricula, textbooks, grading procedures and attendance policies and determined that the training is comparable in amount, scope, and quality to a course offered by a college or university for a structured English immersion or bilingual education endorsement.<br>2. The training meets the professional teaching standards adopted by the state board of education.<br>3. The state board of education has reviewed the qualifications of the instructor and determined that the instructor has sufficient experience to effectively conduct the training.<br>**C**. The state board of education shall require all approved teacher training programs that provide a degree in education to require courses that are necessary to obtain a full structured English immersion endorsement.<br><br>**ARS 15-779.04:** 2. On request, assist school district governing boards to design, implement, and evaluate programs for gifted pupils. 5. Assist school districts in the development and implementation of staff development programs for administrators, teachers, and counselors related to gifted pupils.<br><br>**ARS 15-808**: A. Arizona online instruction shall be instituted to meet the needs of pupils in the information age. The state board of education shall select traditional public schools and the state board for charter schools shall sponsor charter schools to be online course providers or online schools. The state board of education and the state board for charter schools shall jointly develop standards for the approval of online course providers and online schools based on set criteria.<br><br>**ARS 15-918**: **A**. A school district governing board may apply to the state board of education for approval to budget for a career ladder program. | entry into the profession by offering ***alternative pathways***. |

| **GOAL #3: Ensure maximum *academic and financial accountability* in public education.** | | | |
|---|---|---|---|
| ***Objective*** | ***Issue Addressed*** | ***Authorization*** | ***Strategies*** |
| 3.1: Implement assessment of all Arizona ***students*** and report results to the public. Implement assessment of Arizona ***ELL students*** in the | School Accountability<br>▪ Focus (actions) on student achievement, and on ELL student reclassification<br>▪ Standards, curriculum, and assessment and for ELL students, English Language Proficiency Standards, English Language Development (ELD), and Arizona English Language Assessment (AZELLA)<br>▪ Increase in number of schools<br>▪ Increase accessibility of training on standards & assessment and on English Language Proficiency Standards with English Language Development (ELD) | **ARS 15-741**: **A**. The state board of education shall: 2. Adopt and implement an Arizona instrument to measure standards test to measure pupil achievement of the state board adopted academic standards in reading, writing, and mathematics.<br><br>**ARS 15-743**: **A**. The state board of education shall provide annual reports (test results) for every school and district and the state as a whole.<br><br>**ARS 15-755**: In order to ensure that the educational progress of all Arizona students in academic subjects and in learning English is properly monitored, a standardized, nationally-normed written test of academic subject matter given in English shall be administered at least once each year to all Arizona public schoolchildren in grades two through twelve.<br><br>**ARS 15-756. Identification of English language learners:**<br>**B**. The English language proficiency of all pupils with a primary or home language other than English shall be assessed through the administration of English language proficiency assessments in a manner prescribed by the superintendent of public instruction. The test scores adopted by the superintendent as | ▪ Develop ***academic content standards*** that are reasonable, fair, and appropriate for all Arizona students. Develop English Language Proficiency standards that are reasonable and appropriate for ELL students.<br>▪ Develop and administer a ***standards-based assessment*** that matches the academic content standards in order to measure student achievement. Develop and administer a standards-based English language assessment that is aligned with the English Language Proficiency standards.<br>▪ Administer a norm-referenced assessment in grades 2 and higher |

| | | | |
|---|---|---|---|
| | | indicating English language proficiency shall be based on the test publishers' designated scores. | |

**GOAL #3: Ensure maximum *academic and financial accountability* in public education.**

| *Objective* | *Issue Addressed* | *Authorization* | *Strategies* |
|---|---|---|---|
| 3.3: Ensure the quality of Arizona's ***educators*** through evaluation, investigation, and certification. | Teacher Accountability<br>▪ Required testing/ certification<br>▪ Law enforcement authority<br>▪ Teacher knowledge<br>▪ Teacher shortage<br>▪ Fingerprinting process<br>▪ Certification advisory committee<br>▪ Qualifications of charter school staff and charter operators | **ARS 15-533**: **A**. To qualify for either a basic or standard teaching certificate, or equivalent certificate, a person must pass each component of the proficiency examination developed and administered by the state board of education.<br><br>**ARS 15-534**: **C**. The state board of education may review and determine whether to renew or not issue a certificate to an applicant for certification on a finding that the applicant engaged in conduct that is immoral or unprofessional or engaged in conduct that would warrant disciplinary action. | ▪ Administer and improve the quality of Arizona's ***teacher and administrator assessments***.<br>▪ Verify the professional and content knowledge of teachers and administrators and ***issue appropriate certificates***.<br>▪ ***Investigate and report on complaints*** of professional educators in a thorough and timely manner to ensure student safety. |

**GOAL #4: Deliver high quality *customer service*.**

| *Objective* | *Issue Addressed* | *Authorization* | *Strategies* |
|---|---|---|---|
| 4.1: Provide timely, reliable ***support services***. | Support Services<br>▪ Responsiveness<br>▪ Quality<br>▪ Ways to streamline data reporting requirements<br>▪ Increased workload<br>▪ Continue improving customer service<br>▪ Response time processing purchase orders<br>▪ Continued streamline of processes<br>▪ Outdated delivery service model<br>▪ Cap in administrative funds and growth<br>▪ New projects<br>▪ Electronic submission<br>▪ Web/application changes<br>▪ Technology improvements<br>▪ Registration on-line | **ARS 15-231**: **C**. In addition to any divisions established by law, the superintendent of public instruction may establish such divisions as in the judgment of the superintendent of public instruction are necessary for the proper transaction of the business of the department. | ▪ Enhance services by ***evaluating department efforts*** through a continuous improvement process, surveying customer satisfaction, and offering employee training on customer service.<br>▪ ***Streamline paperwork and monitoring expectations*** so that school/district staff are able to operate at maximum efficiency.<br>▪ Employ the use of technology to ***increase automation and the amount of web-based applications*** available for department business. |

**GOAL #4: Deliver high quality *customer service*.**

| *Objective* | *Issue Addressed* | *Authorization* | *Strategies* |
|---|---|---|---|
| 4.2: Provide accurate and helpful ***information*** to the public. | Public Information<br>▪ Awareness & marketing<br>▪ Inter-agency communication<br>▪ Customer feedback<br>▪ Communication with customers<br>▪ Consistency in relaying information<br>▪ Proactive on information | **ARS 15-231.01**: The department of education shall establish a toll free telephone number for complaints and requests for information relating to public schools and charter schools.<br><br>**ARS 15-237**: **A**. The department of education may make available to the public publications it produces. | ▪ Increase the ***quality and amount of information and data*** about the agency and Arizona education provided to constituents and the public.<br>▪ Increase ***media coverage*** on the services and programs of the department. |

| | | | |
|---|---|---|---|
| | ▪ Timely revision and dissemination of documents<br>▪ Communication methods<br>Data Collection/Analysis<br>▪ Student Accountability Information System (SAIS) timeline<br>▪ Creation of profiles<br>▪ Data accuracy | **ARS 15-252**: **A**. The superintendent of public instruction shall: 1. Print as needed in pamphlet form the laws relating to schools.<br><br>**ARS 15-255**: **A**. The superintendent of public instruction shall make a report to the governor and legislature each year. | ▪ ***Answer questions*** from the general public ***and resolve disputes*** on problems associated with Arizona's public education system. |
| **GOAL #4: Deliver high quality *customer service*.** | | | |
| ***Objective*** | ***Issue Addressed*** | ***Authorization*** | ***Strategies*** |
| 4.3: Promote a positive and productive ***work environment*** that cultivates teamwork and motivates employees. | Work Environment<br>▪ Increase productivity<br>▪ Space planning<br>▪ Transition in administration<br>▪ Limited resources/staff<br>▪ Security<br>▪ High personnel turnover/staff retention<br>▪ Coordination between all programs<br>▪ Staff gradually adapting to change<br>▪ Focused on procedures and process rather than achievement<br>▪ Increased volume and diversity of work and expectations<br>▪ Proper utilization of budget to appropriate expenditures<br>▪ Intra-agency/Inter-divisional communication<br>▪ Communication to and with stakeholders<br><br>Staff Professional Development<br>▪ Re-education of new executive team<br>▪ Cross training<br>▪ Continued need for professional development<br>▪ Lack of funding for professional training<br>▪ New staff learning curve<br>▪ Lack of staff program knowledge<br><br>Technology<br>▪ Build a system that talks to schools, universities, and clients<br>▪ Use of data to make decisions Rapid addition of technologies and reports on revised system | **ARS 15-251**: The superintendent of public instruction shall: 4. Direct the work of all employees of the board who shall be employees of the department of education. 6. Direct the performance of executive, administrative, or ministerial functions by the department of education or divisions or employees thereof. | ▪ Improve ***employee satisfaction and morale*** by improving communication, promoting teamwork and recognizing individual contributions.<br><br>▪ Offer more ***professional development and training*** opportunities for department staff.<br><br>▪ Increase the ***use of data and information technology*** as a management tool to make better informed decisions.<br><br>▪ Ensure that necessary ***fiscal and managerial systems*** are in place to provide maximum accountability and performance. |

# *Appendix* B

# RESOURCE ASSUMPTIONS

# Appendix B

## *Resource Assumptions*

The Arizona Department of Education used the following planning assumptions when preparing its budget request.

| *PLANNING ASSUMPTIONS* | | | |
|---|---|---|---|
| ***Legislative*** | ***Demographic*** | ***Service*** | ***Technology*** |
| ▪ Legislative changes anticipated<br>▪ Competitive food issue continues (filtering down child care centers)<br>▪ High profile<br>▪ Potential for increase in grants<br>▪ Expectation of the public<br>▪ Limited resources<br>▪ Increased accountability<br>▪ Demand for better schools<br>▪ Growth of E-government<br>▪ State is defining low performing schools<br>▪ Fingerprinting rules<br>▪ Requirement to document outcomes "accountability"<br>▪ Lack of appropriate funding<br>▪ Increased demand for funding<br>▪ Public understanding of AIMS & standards still lacking<br>▪ Proposition 301<br>▪ Rule alignment of all schools<br>▪ Testing to be performance based<br>▪ Funding to programs is unknown which may result in unexpected purchases<br>▪ Guidelines will change<br>▪ Increasing in awareness and support<br>▪ Recognition of value for Family Literacy programs<br>▪ Zero increase in money<br>▪ New trend in testing<br>▪ Standards are here to stay<br>▪ Schools' lack of ability to serve at risk students<br>▪ Teacher shortage/turnover (teaching out of content area)<br>▪ National discussions on Early Childhood standards and assessments<br>▪ Federal funding for Early Childhood Programs (ECP)<br>▪ Collaboration/coordination of Proposition 301 performance<br>▪ Focus on high stakes testing<br>▪ Fewer electives for students<br>▪ Turnover of teachers and administrators<br>▪ Educational reform<br>▪ Economic outlook is uncertain<br>▪ Growing concern by Mexican Government about education services to migrant students<br>▪ Loss of funding for Dropout Prevention Programs | ▪ Changing demographics<br>▪ Increase of schools and students<br>▪ Student dropout rate/juvenile crime increasing<br>▪ Increase number of children spending all or part of day in/out of home care<br>▪ Mobility of students<br>▪ Shortage of qualified school personnel<br>▪ Charter school growth<br>▪ Increase in overall & special education population<br>▪ Change in demographics: moving from agricultural to service<br>▪ Teacher shortages<br>▪ Increase in schools in small communities<br>▪ Increasing number of English learners<br>▪ Increase in homeless population<br>▪ Increased Limited English Proficiency (LEP) population<br>▪ Percent of ESOL students increasing<br>▪ Reduction in mobility by migrant students<br>▪ Percent of teenage students (16-19) increasing<br>▪ Increased Section 504 population<br>▪ Continual increase in the need for highly skilled workforce (80% by 2010)<br>▪ Shifts in labor market trends<br>▪ Shortage of certified CTE teachers<br>▪ Inadequate number of qualified teachers<br>▪ Increased need for skilled labor<br>▪ Decrease in supply of appropriately trained skilled labor | ▪ More focus on education and customer service<br>▪ Increased demand of services<br>▪ Increased clarity of data<br>▪ High quality customer service expectation<br>▪ Customer expectations continue to grow/increase<br>▪ Increase in Arizona Department of Education (ADE) staff<br>▪ Increase in population = increase in schools = increase in employees handling grants<br>▪ Supporting and monitoring implementation of school improvement plans<br>▪ Increase in number of contracts and agreements to be negotiated and managed<br>▪ Increase in the need for certified teachers demand will continue to rise due to increase in population<br>▪ Increased reporting/accountability requirements via Federal Government<br>▪ Decreasing ability for customers to attend training<br>▪ Growth of state<br>▪ Teacher testing increasing<br>▪ Ability to recruit adequately trained teaching staff<br>▪ Lack of awareness of schools<br>▪ Impacted due to resource limits (staff, equipment, etc)<br>▪ Resources will not be sufficient to meet the increasing demand for information<br>▪ Increased requirements for accountability (may result in larger role)<br>▪ Talk about achievement<br>▪ Employee growth and turnover<br>▪ Increased services to Charter Schools, JTEDS, and Postsecondary<br>▪ Programs working in status quo (business as usual) | ▪ Increased usage<br>▪ The need for automated reporting<br>▪ More dependent on new technology to deliver and access program<br>▪ Security changes<br>▪ More efficient expectations<br>▪ Moving towards data and technology solutions<br>▪ Student Accountability Information System (SAIS) data<br>▪ Demand high vs. availability low<br>▪ Increased reliance on achievement/ accountability data<br>▪ Increased demand for information/ oversight/ accountability<br>▪ Make things more accessible |

# ***Budget Relationship to Goals***

The following provides a look at how the agency is aligned with its goals. While each sub-program performs functions in each one of the goal areas, the following describes how each sub-program mission aligns with one of the four department goals:

- The Superintendents' Office and State Board of Education fall under "Leadership".
- Sub-programs under Academic Assistance and Student Health and Safety with missions related to technical assistance to schools fall under "School Support."
- Academic Accountability, School Finance, Certification, and Investigation fall under "Accountability."
- Administration and Support Services fall under "Customer Service."

## What are the benefits of student Education & Career Action Plans?

Personalized planning, using ECAPS, will help students reach their academic and career goals and can impact student achievement and school improvement. Implementation of student personalized planning can reap the following benefits:

### Benefits to Students:

- Provides valuable learning experiences in setting and attaining goals.
- Encourages personal involvement in their goal decisions.
- Provides an understanding of how education is relevant to achieving career goals.

### Benefits to Parents:

- Provides families increased opportunities to be involved in their children's education.
- Increases student success.
- Informs decision making for life choices.

### Benefits to Schools:

- Improves course enrollment patterns.
- Increases student achievement.
- Improves relationships between students, parents, schools, and community.
- Increases student attendance, motivation, and engagement in school.
- Increases extracurricular activity participation.
- Increases the number of students meeting postsecondary entrance requirements.

### Benefits to Community:

- Develops a more qualified and motivated workforce.
- Promotes opportunities to be involved with education.
- Provides resources for internships and job shadowing opportunities.

### Helpful Resource Link ~

Current information concerning the Arizona Education and Career Action Plan State Board Rule, including suggested implementation timelines and sample templates can be found on the Arizona Department of Education webpage: www.ade.az.gov/ecap



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**Arizona Department of Education**
**Tom Horne, Superintendent of Public Instruction**

# Arizona Student Education & Career Action Plans (ECAP)

(b)(6)

# Arizona ECAPs...

**On February 25, 2008 the Arizona State Board of Education approved Education and Career Action Plans for all Arizona students grades 9-12 (R7-2-302.05).**

"Effective for the graduation class of 2013, schools shall complete for every student in grades 9-12 an Arizona Education and Career Action Plan."

### Arizona Philosophy ~

*We as educators believe that integrating an Education and Career Action Plan (ECAP) process into all facets of the school experience enables students to be lifelong learners and problem-solvers, developing and applying 21st century skills to their life experiences, as students, as workers, as consumers, and as responsible citizens. With the ability to identify skills and interests and to apply that knowledge to create their own ECAP, our students will have developed needed skills to advance in a more fluid, seamless transition, meeting 21st Century technologies and work place postsecondary requirements.*

*Arizona Department of Education (ADE) – 2008*

### ECAP Definition ~

An ECAP (Education and Career Action Plan) reflects a student's current plan of coursework, career aspirations, and extended learning opportunities in order to develop the student's individual academic and career goals.

Ideally, the initial plan will be developed in middle school and updated on a yearly basis throughout high school and the postsecondary years.

### Why an ECAP?

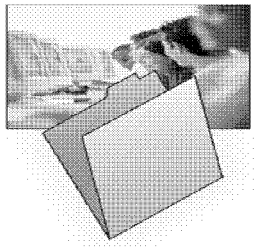
A student's plan helps to personalize education and enables the student to maximize the opportunities available upon high school graduation.

### Who is Involved in the ECAP Process?

Students, parents, and school personnel (i.e. counselors, teachers, administration, or career center staff) can work together to help guide the student in his/her choices for career and educational experiences. When students, parents and the school staff plan together, each student receives needed support to meet his/her Education and Career Action Planning (ECAP) goals.

### Parental Involvement ~

Research indicates that students rely heavily on parents' advice when making postsecondary plans and decisions. Meaningful parental involvement is vital to the effective individualized education planning. The Arizona Education and Career Action Plan provide a way for parents to be involved and informed in planning for their student's education and career choices. Parent signatures are required.



### Arizona Education and Career Action Plan
### (ECAP – State Board Rule # R7-2-302.05)
### Attributes

An Arizona Education and Career Action Plan shall, at minimum, allow students to enter, track and update the following information:

**ACADEMIC**
- Plan coursework
- Meet high school requirements
- Document postsecondary education goals
- Review academic progress to include needed interventions or advisements
- Record academic achievement or awards

**CAREER**
- Identify postsecondary career plans, options, interests or skills
- Explore career opportunities
- Explore needed educational requirements to meet the career option

**POSTSECONDARY**
- Explore admissions requirements
- Complete necessary applications
- Create a financial assistance plan

**EXTRACURRICULAR**

**Documentation for participation in:**
- Clubs, organizations or CTSO
- Athletics
- Recreational activities
- Fine arts opportunities
- Community service or volunteer activities
- Work experiences, internships, job shadow, etc
- Leadership opportunities
- Other activities the student might wish to note

House Engrossed

State of Arizona
House of Representatives
Forty-ninth Legislature
Second Regular Session
2010

# HOUSE BILL 2733

AN ACT

AMENDING TITLE 15, CHAPTER 2, ARTICLE 2, ARIZONA REVISED STATUTES, BY ADDING SECTIONS 15-249 AND 15-249.01; RELATING TO THE DEPARTMENT OF EDUCATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Be it enacted by the Legislature of the State of Arizona:

Section 1. Title 15, chapter 2, article 2, Arizona Revised Statutes, is amended by adding sections 15-249 and 15-249.01, to read:

15-249. Department of education; contracts for evaluation of data collection, compilation and reporting and for updating of student accountability information system; reports; review; reversion

A. THE SUPERINTENDENT OF PUBLIC INSTRUCTION SHALL ENTER INTO CONTRACTS WITH PUBLIC OR PRIVATE ENTITIES TO CARRY OUT THE PURPOSES OF THIS SECTION.

B. ON OR BEFORE AUGUST 1, 2010, THE DEPARTMENT OF EDUCATION SHALL ISSUE A REQUEST FOR PROPOSAL TO EVALUATE THE EXISTING SYSTEM OF DATA COLLECTION, COMPILATION AND REPORTING CONDUCTED BY THE DEPARTMENT. THE DEPARTMENT SHALL AWARD A CONTRACT PURSUANT TO THIS SUBSECTION NO LATER THAN OCTOBER 1, 2010. THE REQUEST FOR PROPOSAL SHALL REQUIRE THE EVALUATION TO INCLUDE:

1. A DETAILED DESCRIPTION OF HARDWARE, SOFTWARE AND NETWORKING INFRASTRUCTURE ASSOCIATED WITH THE STUDENT ACCOUNTABILITY INFORMATION SYSTEM PRESCRIBED IN CHAPTER 9, ARTICLE 8 OF THIS TITLE AND THE DATA WAREHOUSE.

2. A DESCRIPTION OF DATA ELEMENTS INCLUDING THE NUMBER AND FREQUENCY OF DATA INTERFACES BETWEEN EXTERNAL ENTITIES.

3. THE CURRENT SYSTEM'S CAPABILITY TO INCORPORATE THE NEW DATA ELEMENTS REQUIRED BY THE AMERICAN RECOVERY AND REINVESTMENT ACT BY SEPTEMBER 30, 2011.

4. RECOMMENDATIONS FOR A SCOPE OF WORK FOR THE DEVELOPMENT OF A REPLACEMENT OR UPGRADE OF THE CURRENT SYSTEM.

C. ON OR BEFORE MARCH 31, 2011, THE DEPARTMENT OF EDUCATION SHALL ISSUE, IN ADDITION TO THE REQUEST FOR PROPOSAL PRESCRIBED IN SUBSECTION B, A REQUEST FOR PROPOSAL TO REPLACE OR UPDATE THE STUDENT ACCOUNTABILITY INFORMATION SYSTEM PRESCRIBED IN CHAPTER 9, ARTICLE 8 OF THIS TITLE AND TO BRING THAT SYSTEM INTO COMPLIANCE WITH THE AMERICAN RECOVERY AND REINVESTMENT ACT. THE DEPARTMENT SHALL AWARD A CONTRACT PURSUANT TO THIS SUBSECTION NO LATER THAN AUGUST 1, 2011.

D. THE CONTRACT SHALL REQUIRE THE CONTRACTOR TO:

1. SUCCESSFULLY ATTAIN PERFORMANCE GOALS PRESCRIBED BY THE SUPERINTENDENT OF PUBLIC INSTRUCTION RELATING TO IMPROVEMENT OF THE DATA COLLECTION, COMPILATION AND REPORTING DUTIES PRESCRIBED IN THIS TITLE.

2. DEVELOP AND MAINTAIN A SYSTEM THAT IS ACCESSIBLE THROUGH COMMONLY USED INTERNET WEB BROWSERS TO CARRY OUT THE DATA COLLECTION, COMPILATION AND REPORTING DUTIES PRESCRIBED IN THIS TITLE.

3. DEMONSTRATE THAT IT HAS THE QUALIFICATIONS, OPERATIONS AND MANAGEMENT EXPERIENCE AND EXPERIENCED PERSONNEL NECESSARY TO CARRY OUT THE TERMS OF THE CONTRACT AND THE ABILITY TO COMPLY WITH APPLICABLE STANDARDS.

4. PROVIDE A HISTORY OF SUCCESSFULLY OPERATING AND MANAGING DATA COLLECTION, COMPILATION AND REPORTING TASKS.

5. PROVIDE A HISTORY OF SUCCESSFULLY DELIVERING SERVICES RELATED TO DATA COLLECTION, COMPILATION, SERVICE DELIVERY AND REPORTING TASKS.

E. THE CONTRACT SHALL ALLOW THE SUPERINTENDENT OF PUBLIC INSTRUCTION TO RENEW THE CONTRACTS FOR TWO SUBSEQUENT PERIODS OF NOT MORE THAN THREE YEARS EACH AND SHALL PRESCRIBE THE CIRCUMSTANCES UNDER WHICH THE SUPERINTENDENT OF PUBLIC INSTRUCTION MAY TERMINATE THE CONTRACTS. THE CONTRACTS SHALL ALLOW THE STATE TO CANCEL ANY CONTRACT AT ANY TIME AFTER THE FIRST YEAR OF OPERATION, WITHOUT PENALTY TO THIS STATE, ON NINETY DAYS' WRITTEN NOTICE AND SHALL REQUIRE THE CONTRACTOR TO BE IN COMPLIANCE AT ALL TIMES WITH STATE AND FEDERAL LAW.

F. THE CONTRACT MAY PROVIDE FOR ANNUAL CONTRACT PRICE OR COST ADJUSTMENTS, EXCEPT THAT ANY ADJUSTMENTS MAY BE MADE ONLY ONCE EACH YEAR EFFECTIVE ON THE ANNIVERSARY OF THE CONTRACT'S EFFECTIVE DATE. ANY ADJUSTMENT MADE PURSUANT TO THE TERMS OF THE CONTRACT MUST BE APPLIED TO THE TOTAL PAYMENTS MADE TO THE CONTRACTOR FOR THE PREVIOUS CONTRACT YEAR AND SHALL NOT EXCEED THE PERCENTAGE OF CHANGE IN THE AVERAGE CONSUMER PRICE INDEX AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS BETWEEN THAT FIGURE FOR THE LATEST CALENDAR YEAR AND THE NEXT PREVIOUS CALENDAR YEAR. ANY PRICE OR COST ADJUSTMENTS THAT ARE DIFFERENT THAN THOSE AUTHORIZED IN THIS SUBSECTION MAY BE MADE ONLY IF THE LEGISLATURE SPECIFICALLY AUTHORIZES THE ADJUSTMENTS AND APPROPRIATES MONIES FOR THAT PURPOSE, IF REQUIRED.

G. THE SUPERINTENDENT OF PUBLIC INSTRUCTION SHALL NOT AWARD A CONTRACT PURSUANT TO THIS SECTION UNLESS:

1. IT RECEIVES AN ACCEPTABLE PROPOSAL PURSUANT TO ANY REQUEST FOR PROPOSALS. FOR THE PURPOSES OF THIS PARAGRAPH, "ACCEPTABLE PROPOSAL" MEANS A PROPOSAL THAT SUBSTANTIALLY MEETS ALL OF THE REQUIREMENTS OR CONDITIONS PRESCRIBED IN THIS SECTION AND IN THE REQUEST FOR PROPOSALS.

2. THE PROPOSAL OFFERS A LEVEL AND QUALITY OF SERVICES THAT EQUAL OR EXCEED THOSE THAT WOULD BE PROVIDED BY THIS STATE.

3. THE CONTRACTOR PROVIDES AUDITED FINANCIAL STATEMENTS FOR THE PREVIOUS FIVE YEARS, OR FOR EACH YEAR THE CONTRACTOR HAS BEEN IN OPERATION IF FEWER THAN FIVE YEARS, AND PROVIDES OTHER FINANCIAL INFORMATION AS REQUESTED.

H. THE SOVEREIGN IMMUNITY OF THIS STATE DOES NOT APPLY TO THE CONTRACTOR. THE CONTRACTOR OR ANY AGENT OF THE CONTRACTOR MAY NOT PLEAD THE DEFENSE OF SOVEREIGN IMMUNITY IN ANY ACTION ARISING OUT OF THE PERFORMANCE OF THE CONTRACT.

I. THE CONTRACT TERMS ARE SUBJECT TO REVIEW BY THE JOINT LEGISLATIVE BUDGET COMMITTEE BEFORE PLACEMENT OF ANY ADVERTISEMENT THAT SOLICITS A RESPONSE TO A REQUEST FOR PROPOSALS. ANY PROPOSED MODIFICATION OR AMENDMENT TO THE CONTRACT IS SUBJECT TO PRIOR REVIEW BY THE JOINT LEGISLATIVE BUDGET COMMITTEE.

J. DURING ITS FIRST YEAR OF OPERATION UNDER A CONTRACT PURSUANT TO THIS SECTION, THE CONTRACTING ENTITY SHALL SUBMIT MONTHLY REPORTS TO THE DEPARTMENT AS PRESCRIBED BY THE DEPARTMENT. THEREAFTER, THE CONTRACTING

ENTITY SHALL SUBMIT QUARTERLY REPORTS TO THE DEPARTMENT AS PRESCRIBED BY THE DEPARTMENT.

K. AT THE END OF THE SECOND YEAR OF THE CONTRACT, AN INDEPENDENT EVALUATOR SELECTED BY THE SUPERINTENDENT OF PUBLIC INSTRUCTION SHALL CONDUCT AND COMPLETE A PERFORMANCE REVIEW TO DETERMINE IF THE CONTRACTING ENTITY HAS MET THE GOALS SPECIFIED IN THE CONTRACT. THE INDEPENDENT EVALUATOR SHALL SUBMIT A REPORT OF ITS FINDINGS TO THE GOVERNOR, THE PRESIDENT OF THE SENATE, THE SPEAKER OF THE HOUSE OF REPRESENTATIVES ON OR BEFORE MAY 1, AND SHALL PROVIDE A COPY OF ITS REPORT TO THE SECRETARY OF STATE.

L. ALL APPROPRIATED MONIES THAT REMAIN UNEXPENDED AND UNENCUMBERED ON THE EXPIRATION DATE OF ANY CONTRACT ENTERED INTO PURSUANT TO THIS SECTION REVERT TO THE STATE GENERAL FUND.

15-249.01. Data governance commission; membership; terms; duties

A. THE DATA GOVERNANCE COMMISSION IS ESTABLISHED IN THE DEPARTMENT OF EDUCATION CONSISTING OF:

1. THE CHIEF TECHNOLOGY MANAGERS, OR THE MANAGERS' DESIGNEES, OF EACH OF THE UNIVERSITIES UNDER THE JURISDICTION OF THE ARIZONA BOARD OF REGENTS.

2. THE CHIEF TECHNOLOGY MANAGER, OR THE MANAGER'S DESIGNEE, OF A COMMUNITY COLLEGE DISTRICT LOCATED IN A COUNTY WITH A POPULATION OF EIGHT HUNDRED THOUSAND PERSONS OR MORE WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE GOVERNOR.

3. THE CHIEF TECHNOLOGY MANAGER, OR THE MANAGER'S DESIGNEE, OF A COMMUNITY COLLEGE DISTRICT LOCATED IN A COUNTY WITH A POPULATION OF LESS THAN EIGHT HUNDRED THOUSAND PERSONS WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE GOVERNOR.

4. THE CHIEF EXECUTIVE OFFICER OF THE ARIZONA EARLY CHILDHOOD DEVELOPMENT AND HEALTH BOARD OR THE CHIEF EXECUTIVE OFFICER'S DESIGNEE.

5. AN OFFICER OR EMPLOYEE OF A SCHOOL DISTRICT LOCATED IN A COUNTY WITH A POPULATION OF EIGHT HUNDRED THOUSAND PERSONS OR MORE WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE GOVERNOR.

6. AN OFFICER OR EMPLOYEE OF A SCHOOL DISTRICT LOCATED IN A COUNTY WITH A POPULATION OF LESS THAN EIGHT HUNDRED THOUSAND PERSONS WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE GOVERNOR.

7. AN OFFICER OR EMPLOYEE OF A CHARTER SCHOOL LOCATED IN A COUNTY WITH A POPULATION OF EIGHT HUNDRED THOUSAND PERSONS OR MORE WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE PRESIDENT OF THE SENATE.

8. AN OFFICER OR EMPLOYEE OF A CHARTER SCHOOL LOCATED IN A COUNTY WITH A POPULATION OF LESS THAN EIGHT HUNDRED THOUSAND PERSONS WHO HAS EXPERTISE IN TECHNOLOGY AND WHO IS APPOINTED BY THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

9. TWO REPRESENTATIVES OF THE BUSINESS COMMUNITY, ONE OF WHOM IS APPOINTED BY THE PRESIDENT OF THE SENATE AND ONE OF WHOM IS APPOINTED BY THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

10. THE SUPERINTENDENT OF PUBLIC INSTRUCTION OR THE SUPERINTENDENT'S DESIGNEE.

B. THE INITIAL APPOINTED MEMBERS SHALL ASSIGN THEMSELVES BY LOT TO TERMS OF TWO, THREE AND FOUR YEARS IN OFFICE. ALL SUBSEQUENT APPOINTED MEMBERS OF THE COMMISSION SHALL SERVE FOUR YEAR TERMS. THE CHAIRPERSON SHALL NOTIFY THE GOVERNOR, THE SPEAKER OF THE HOUSE OF REPRESENTATIVES AND THE PRESIDENT OF THE SENATE ON APPOINTMENTS OF THESE TERMS. MEMBERS OF THE COMMISSION SHALL ELECT A CHAIRPERSON FROM AMONG THE MEMBERS OF THE COMMISSION. MEMBERS OF THE COMMISSION SHALL NOT RECEIVE COMPENSATION. THE DEPARTMENT OF EDUCATION SHALL PROVIDE ADEQUATE STAFF SUPPORT FOR THE COMMISSION.

C. THE COMMISSION SHALL:

1. ESTABLISH GUIDELINES RELATED TO THE FOLLOWING:

(a) MANAGED DATA ACCESS.

(b) TECHNOLOGY.

(c) PRIVACY AND SECURITY.

(d) ADEQUACY OF TRAINING.

(e) ADEQUACY OF DATA MODEL IMPLEMENTATION.

(f) PRIORITIZATION OF FUNDING OPPORTUNITIES.

(g) RESOLUTION OF DATA CONFLICTS.

2. PROVIDE RECOMMENDATIONS ON TECHNOLOGY SPENDING.

3. PROVIDE ANALYSES AND RECOMMENDATIONS OF THE FOLLOWING:

(a) THE CONTROL OF DATA CONFIDENTIALITY AND DATA SECURITY FOR STORED DATA AND DATA IN TRANSMISSION.

(b) ACCESS PRIVILEGES AND ACCESS MANAGEMENT.

(c) DATA AUDIT MANAGEMENT, INCLUDING DATA QUALITY METRICS, SANCTIONS AND INCENTIVES FOR DATA QUALITY IMPROVEMENT.

(d) DATA STANDARDS FOR STORED DATA AND DATA IN TRANSMISSION, INCLUDING RULES FOR DEFINITION, FORMAT, SOURCE, PROVENANCE, ELEMENT LEVEL AND CONTEXTUAL INTEGRITY.

(e) DOCUMENTATION STANDARDS FOR DATA ELEMENTS AND SYSTEMS COMPONENTS.

(f) DATA ARCHIVAL AND RETRIEVAL MANAGEMENT SYSTEMS, INCLUDING CHANGE CONTROL AND CHANGE TRACKING.

(g) PUBLICATION OF STANDARD AND AD HOC REPORTS FOR STATE AND LOCAL LEVEL USE ON STUDENT ACHIEVEMENT.

(h) PUBLICATION OF IMPLEMENTATION TIMELINES AND PROGRESS.

4. SUBMIT AN ANNUAL REPORT ON OR BEFORE DECEMBER 1 REGARDING THE COMMISSION'S ACTIVITIES TO THE GOVERNOR, THE SPEAKER OF THE HOUSE OF REPRESENTATIVES AND THE PRESIDENT OF THE SENATE. THE DATA GOVERNANCE COMMISSION SHALL PROVIDE COPIES OF THIS REPORT TO THE SECRETARY OF STATE.

Sec. 2. Task force on data privatization; delayed repeal

A. The task force on data privatization is established consisting of the following members, each of whom shall have expertise in educational technology:

1. Two members who are appointed by the state board of education.

2. Two members who are appointed by the Arizona board of regents.

3. One person who is employed by a community college district in this state and who is appointed by the state board of education.

4. One member who is appointed by the president of the senate.

5. One member who is appointed by the speaker of the house of representatives.

B. The state board of education shall select one of the appointed members to serve as the task force chairperson.

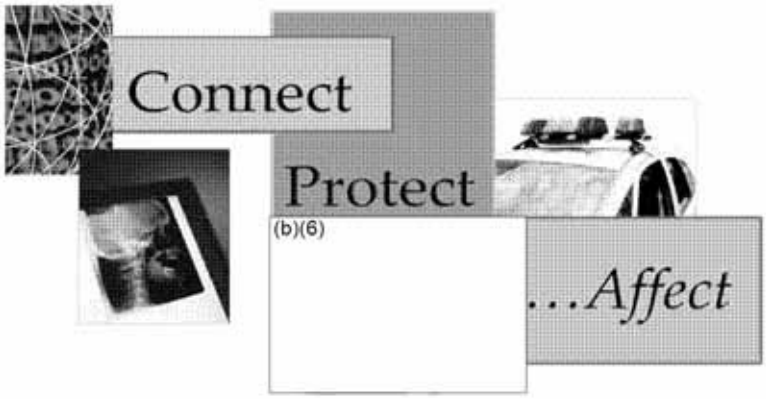
C. The task force shall:

1. Design a request for proposals form to be used by the department of education to solicit proposals from private entities to carry out the purposes of section 15-249, Arizona Revised Statutes, as added by this act.

2. Submit the request for proposals form to the department of education by December 31, 2010.

D. The task force may use the services and expertise of the staff of the legislature and the staff of the department of education.

E. This section is repealed from and after April 30, 2011.




# SACCNet:

State of Arizona
Counties Communication
Network

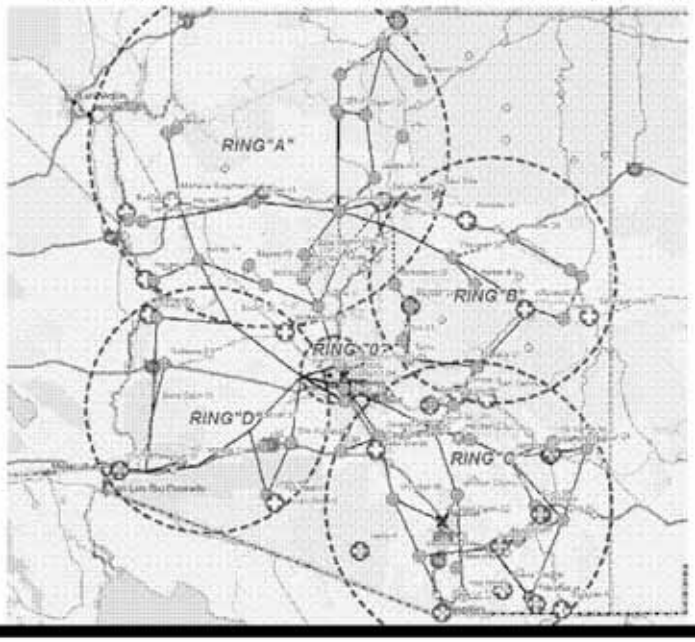
A first time statewide, state-of-the-art Arizona Middle Mile network that will provide the following capabilities:

- Direct delivery of 100-300 Mbps broadband service to **over 280+ rural community anchor institutions** (schools, libraries, hospitals and public safety) in **106 unique rural Arizona markets**
- 300+ interconnection points for last mile service providers to bring high-speed broadband to over 1,000,000 rural citizens in 480,000 households and to 26,000 rural businesses
- Over 30+ direct full-time corporate jobs created; 150+ indirect jobs through construction/fabrication
- No distance-based charges anywhere on the network; flat fee per usage
- A self-healing, SONET/IP Ring architecture with multiple levels of redundancy
- Full network adheres to Federal Security standards

Specific Applications / Opportunities:

- Department of Justice (DOJ) & Department of Homeland Security (DHS) / can have immediate secure access to 200+ local market locations for Emergency Incident Control
- University of Arizona (U of A) / a co-operative partnership to extend the virtual classroom & assist critical research, communication, distance learning and continuing education
- A distinct Education "cloud" to allow all connected Schools & Libraries to share courses/content
- Creation of an statewide Interoperable Emergency Services network securely connecting all 15 Counties and multiple public safety agencies together
- Able to interconnect with individual Tribal communication networks, enhancing each other
- Improved border security and advanced mobile communication among First Responders

***GovNET LLC** offers a Public/Private partnership that demonstrates cross-cooperation of Municipal, County, State & Federal agencies with commercial business for the greater good of the community.*




## SACCNet Stakeholders:

- State of Arizona / Government Information Technology Agency (GITA)
- County Supervisors Association (CSA)
- Arizona State Libraries & Archives
- Arizona County Superintendents of Schools
- Arizona Health-e Connection
- University of Arizona (U of A)
- Northern Arizona University (NAU)

*Contact: Karen McCoy*
*Tel: 602-369-0767*
*karen.m@govnet.net*

GovNET.net

ARIZONA ASSOCIATION OF COUNTY SCHOOL SUPERINTENDENTS

1910 W. JEFFERSON • PHOENIX, ARIZONA • 85009
TELEPHONE: (602) 252-6563 • FACSIMILE: (602) 254-0969



March 17, 2010

Mr. Lawrence E. Strickling
Assistant Secretary for Communications and Information, NTIA
U.S. Department of Commerce (DOC)
1401 Constitution Avenue, N.W.
HCHB, Room 4887
Washington, D.C. 20230

Dear Mr. Strickling,

At a special meeting held May 6, 2009, members of the Arizona Association of County School Superintendents voted unanimously to endorse the establishment of the State of Arizona Counties Communication Network (SACCNet) and to collaborate with partner groups to secure necessary funding and support to bring this effort to fruition.

On March 17,2010, the Arizona Association of County School Superintendents voted their renewed commitment for this valuable networking project. Please accept this letter as evidence of our support. Through SACCNet, Arizona schools will have high quality teaching and learning opportunities in rural areas via distance-learning, enhanced collaboration with other schools and universities where it was not otherwise possible, as well as online continuing education opportunities critical for training teachers and administrators.

The Arizona Association of County School Superintendents is pleased to offer partnership and support in the form anchor tenants and in-kind leases for necessary interconnection points in the respective communities (equating to either ground space for a monopole/equipment shelter or a roof-top antenna/interior space for equipment). Schools in Arizona typically charge a commercial cellular carrier for rooftop or field light attachment a monthly rate of $700 - $1,200 per site; we will provide 10 year leases at a minimum of 82 Schools or District Offices at an average rate of $850/month. Per Grant guidelines, this amounts to an in-kind match contribution of: 82 sites x $850/mo. x 36 months = $2,509,200.

SACCNet is vital to the future of Arizona. Currently, many Arizona Schools have extremely limited access to broadband; where access is available it is often at extremely cost-prohibitive rates for productive utilization. For example: Paloma School District in southwest Maricopa County currently can only access 1.5 Mbps of internet/Broadband service at a rate of $331.00 per Mbps. When the district sought to add bandwidth, the quoted cost for installing a new T1 line for an

additional 1.5 Mbps was $30,000 **PLUS** the monthly rate. The cost was prohibitive, so they continue with their single T1 line. Having access to SACCNet would reduce their cost to approximately $100.00 per Mbps for internet access & provide additional, expandable capacity without further capital cost for greater utilization. Sentinel School District also in southwest Maricopa only has access to services via Satellite. These stories are not unique, and in fact are far too common place in our small and rural school districts throughout Arizona. Prohibitive costs resulting in limited access to broadband services is a severe hardship for these schools, who clearly understand the need to provide meaningful and educational experiences that support career and college ready students.

The SACCNet project will provide a low flat rate charge for all Arizona schools to access broadband and connect to this statewide network. These costs are eligible for funding under USAC/E-Rate, which will support sustainability of the network.

SACCNet brings hope to our schools in a time when budgets and resources for schools are ever-shrinking, as it can offer so many resources at a cost that is at - or less than - current telecommunications spending, thus allowing critical resources to be used where they are most needed, to support student learning.

The Arizona Association of County School Superintendents is very clear about the need for this project in our state and the benefits that will be rendered to our schools and communities when implemented. We appreciate your consideration of this application, and strongly urge you to approve the SACCNet proposal.

Sincerely,

Linda L. O'Dell

Linda L. O'Dell, Ed.D., President
Arizona Association of County School Superintendents

CC: Arizona County School Superintendents

Arizona Department of Education

# Data Warehouse External User Interface Portal

## Accessing Data Warehouse Externally with Microsoft Internet Explorer

ADE PUBLICATION: DW • REVISED 3/19/2010 • DATA WAREHOUSE • OFFICE OF INFORMATION TECHNOLOGY

=Shortcut =Note =Caution

## Request a Data Warehouse Account

1. **An Arizona Department of Education User Account:** This can be requested by e-mailing The Data Management Group at: IT_Data-Management _GROUP@azed.gov (Approved requests will be replied to with an invitation to create an account).
2. **Microsoft Office Excel 2007:** This software needs to be installed on the computer you are using.
3. **SQL Server 2008 Analysis Services 10.0 OLEDB Driver:** This needs to be installed on the computer you are using and is a free download off the internet site. Click the following link to download and install it:
   http://go.microsoft.com/fwlink/?LinkId=123698&clcid=0x409
   (This link can be found under the reference section of the UI)

**Process Summary**

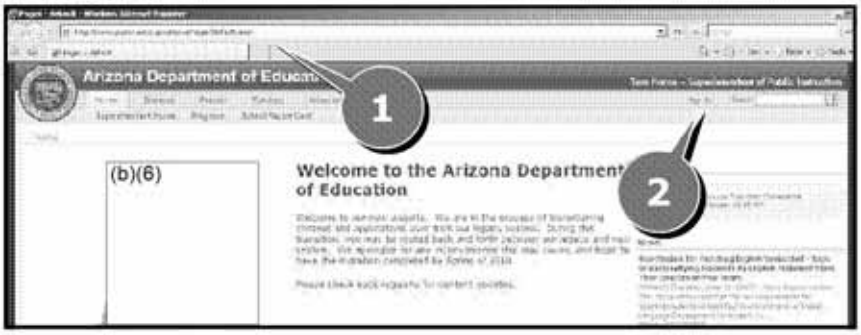
**Data Warehouse**

1. Request User Account
2. Sign In > Data Access
2. Data Warehouse Home
3. Select a Measure / Report
4. Data Dictionary
5. Create New Pivot Table
6. Sign In Using AZED or ADE Net
7. Choose Measure Group

### *Sign In Using Data Access Link*

1. From your Internet Browser type in the following URL: **http://www.azed.gov/home** (Figure 1, 1).
2. Click on the **Sign In** link (Figure 1, 2).
3. You will be prompted for a **User name** and a **Password** (Figure 1).
4. In the **User name**: field, make sure you type **azed** before your **User name** (Figure 2, 1). ). If you are an internal ADE employee you will type in **ade_net** instead of **azed**

***Figure 1***




**Caution**: Make sure you type the backward slash symbol \ before your **User name**.

5. Type in the **Password** (Figure 2, 2), you created when you requested your account, click **OK**.
6. A link called **Data Access** will now be available to you (Figure 3, 1), click on **Data Access** to go to the Data Warehouse Home page. Or hover over **Data Access** and choose **Data Warehouse Home**.

***Figure 2***

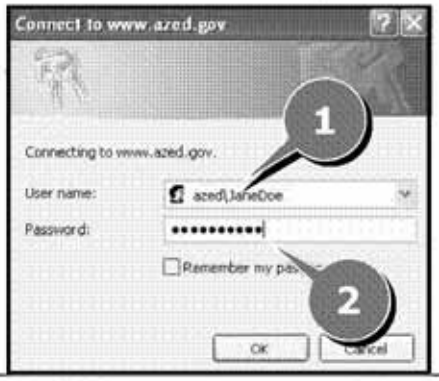
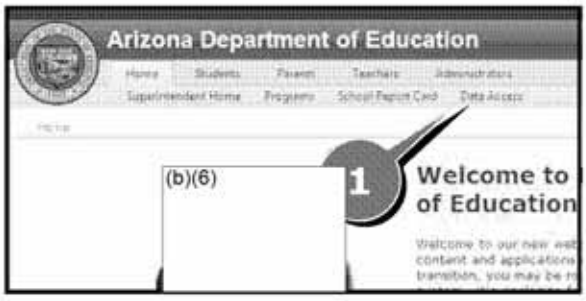



***Figure 3***

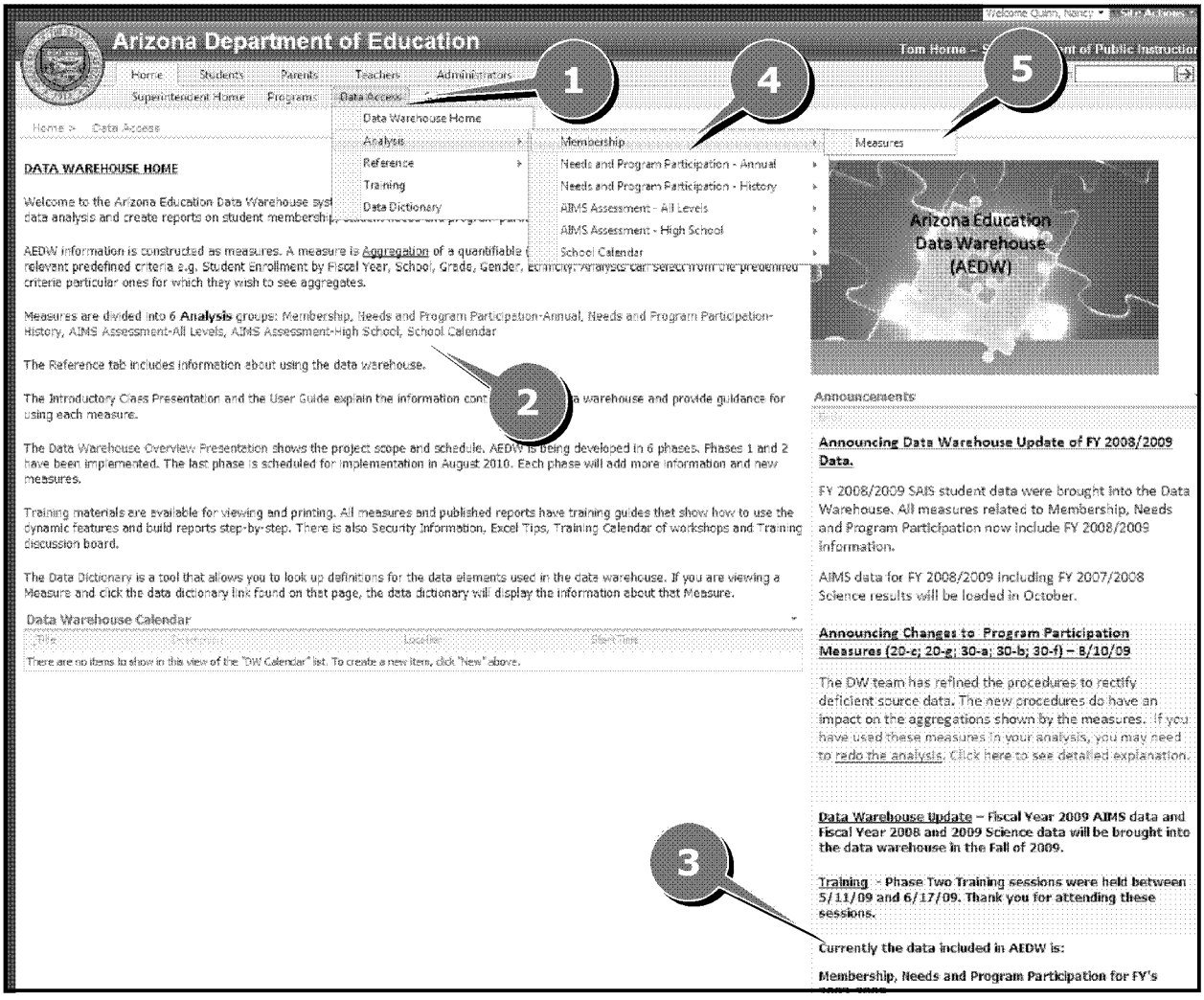


## *Data Ware Home Page Links*

You can navigate to different areas of the Data Warehouse User Interface by hovering your mouse over **Data Access** (Figure 4, 1), or from any of the blue links (Figure 4, 2) found directly on the pages of the site. The Data Warehouse Home page includes the following areas:

- **Analysis**: The Analysis area is grouped into six Measure Groups (Membership, Needs and Program Participation-Annual, Needs and Program Participation-History, AIMS Assessment All Levels, AIMS Assessment-High School and School Calendar). This area is where you will find the Published Reports that you can filter and save.
- **Reference**: The Reference area has the Support Contact e-mail and useful posted documents including the User Reference Guide (which is a detailed manual), and a Data Warehouse Overview Power Point Presentation.
- **Training**: The Training area is an e-Learning site which contains step by step Training Guides and Movie Tutorials on how to use the published Data Warehouse Reports.
- **Data Dictionary**: The Data Dictionary is a tool that allows you to look up definitions for the data elements used in the Measures.
- **Announcements**: The Announcements area (Figure 4, 3) will list what data is currently included in the AEDW.

***Figure 4***

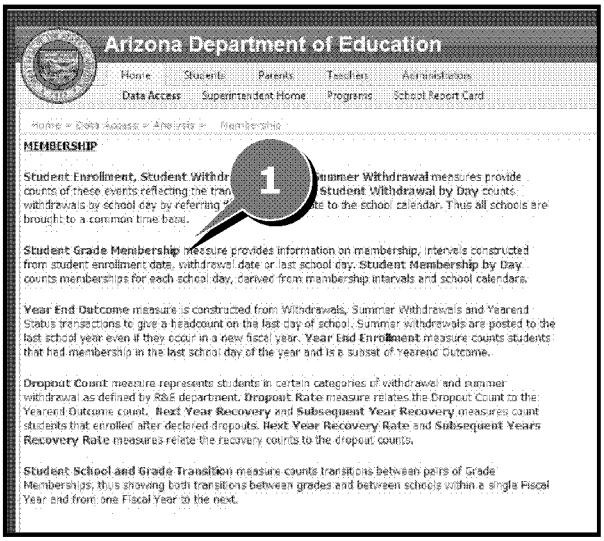


## How Do I Access Information about the Different Measures

1. From the Data Warehouse Home page hover over **Data Access,** choose **Analysis** and then the **Measure Group** you are interested in (Figure 4, 4).
2. The **Measure Group** page has a high level summary view of each of the Measure areas posted for that group (Figure 5).
3. Click on any of the blue links to go to the specific measure (Figure 5, 1).

**Shortcut**: To go directly to the Measure area from the Home page hover over **Data Access** and under **Analysis** choose the **Measure Group** you are interested in, then click on **Measures** (Figure 4, 5).

***Figure 5***




## Select a Measure and then a Report

1. From the Measure page select the drop-down next to **Select a Measure** (Figure 6, 1).
2. To see a description of the measure click on **Expand Description** (Figure 7, 1).
   **Note**: This description will have important information that you need to know about each measure, including source data considerations and a description of Not Reported.
3. To view the Data Dictionary for this measure click on the **Data Dictionary** link (Figure 7, 2). This will show you the description of the measure and detail information on each **Data Element** used in the measure. Use the **Back** arrow in your browser to navigate back to the Measures page.
4. Select the drop down arrow next to **Select a sample pivot report** and choose a report (Figure 7, 3).

***Figure 6***

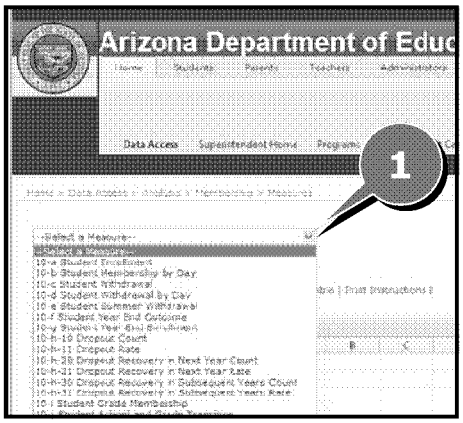
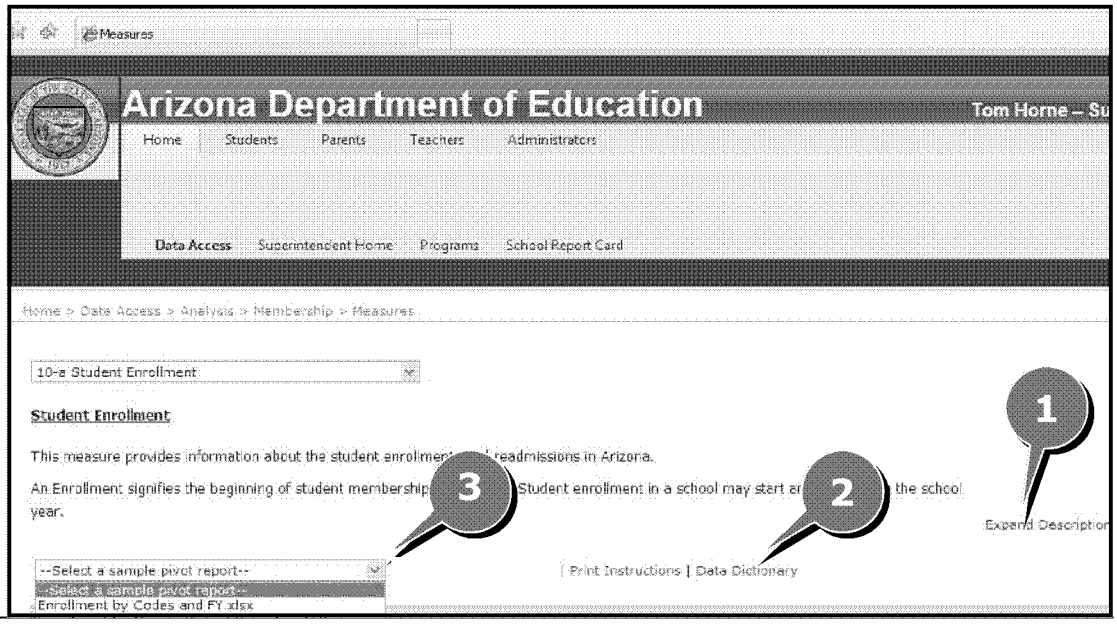


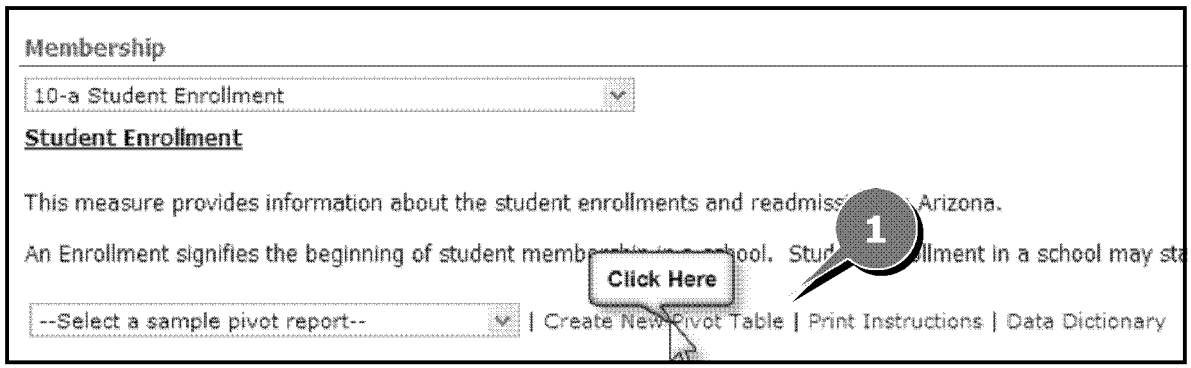

***Figure 7***



## *Connect to the Data Warehouse Cube*

1. Navigate directly to the Measure area from the **Home** page by hovering over **Data Access** and under **Analysis** choose the **Measure Group** you are interested in, then click on **Measures** (Figure 4, 5).
2. If you have the rights to connect directly to the Data Warehouse you will see the **Create New Pivot Table** link, click on it to start your connection to the Data Warehouse cube (Figure 8, 1).

***Figure 8***




3. Click **Open** (Figure 9, 1).
   If you are prompted to enter your username and password again, click **Cancel**.
4. Excel will open, with a **Security Warning** under the top left toolbar (Figure 10).
5. Click on **Options** (Figure 10, 1).
6. Choose the **Enable this content** radio button (Figure 11, 1).
7. Click **OK** (Figure 11, 2).

***Figure 9***

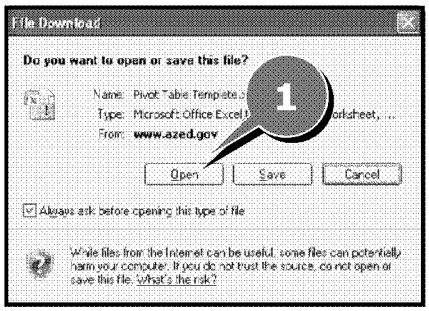



***Figure 10***

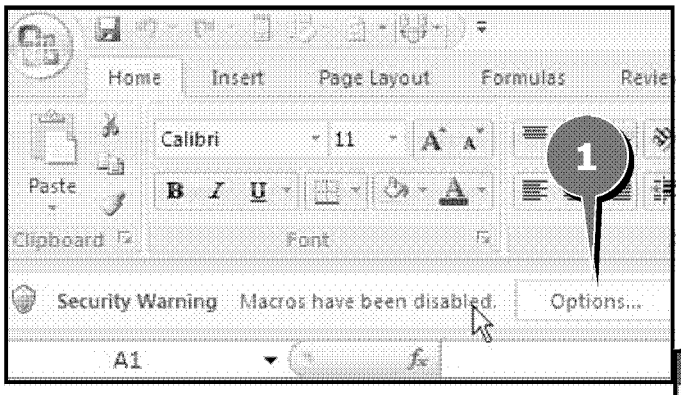
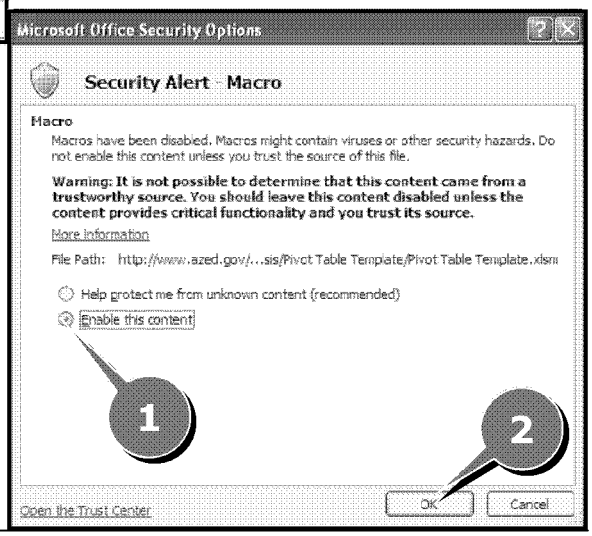
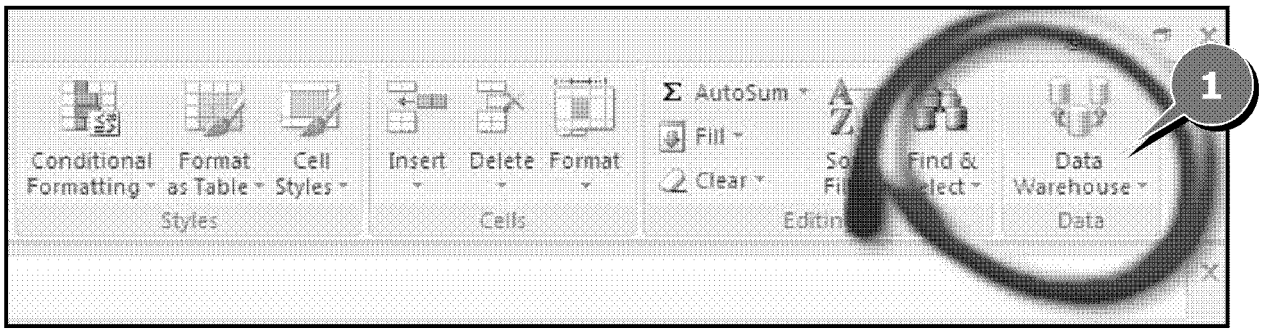



***Figure 11***



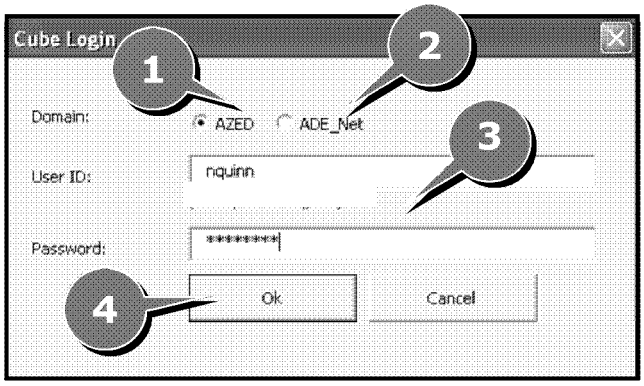
**8.** From the Home tab click on the down arrow by Data Warehouse Data (Figure 12, 1) and select **Connect to Cube.**

***Figure 12***




9. If you are an external user check the AZED Domain (Figure 13, 1).
10. If you are and Internal ADE employee even if accessing the portal externally check the ADE_Net Domain (Figure 13, 2).
11. Type in your **User ID** and **Password** (Figure 13, 3).
12. Click **OK** (Figure 13, 4).

***Figure 13***

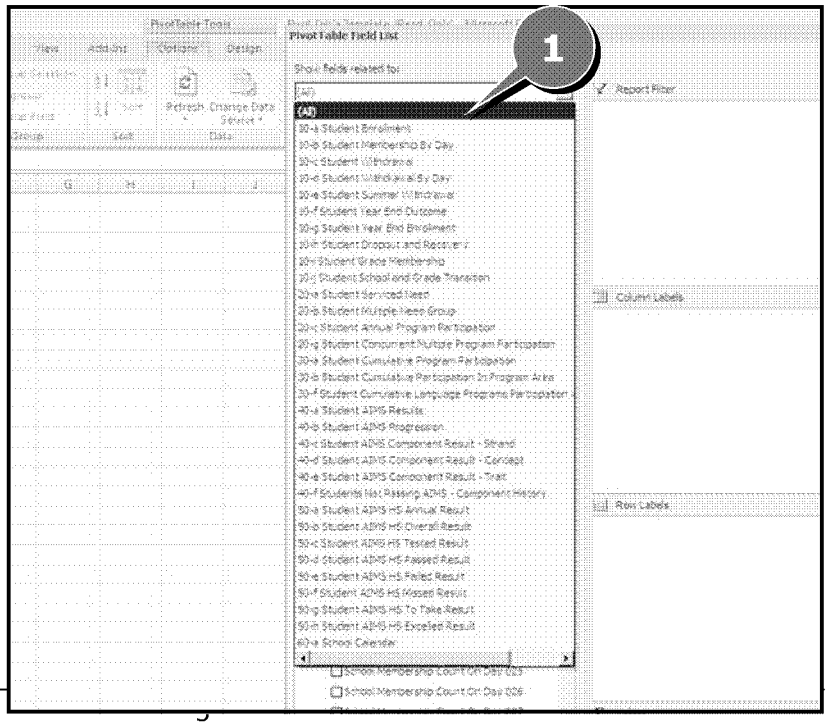



## *Choose a Measure Group*

Excel will open up a Pivot Table and you will be able to start viewing the data using the Pivot Table Field List.

Make sure to click the drop-down arrow from **All** in Pivot Table Field list and select the Measure Group you are interested in working with (Figure 14, 1).

***Figure 14***



# Arizona Education
# Data Warehouse
# AEDW

# User Guide
# for Student Measures

**March 2010**

Last Revision: 03/02/2010

# Arizona Education Data Warehouse

## Table of Contents

# I. Introduction

## A - General Description

Arizona Education Data Warehouse (AEDW) is created to serve two major objectives:

1- Track various aspects of public education longitudinally.

2- Provide data and tools for exploration and analysis of characteristics of Arizona public education.

These objectives are accomplished by:

- Obtaining transactional data from operational systems such as SAIS (Student Accountability Information System) and AIMS (Arizona Instrument to Measure Success) Assessments, aligning and synchronizing the data.
- Restructuring the data in a Fact – Dimension architecture to produce a longitudinal unified view of the data.
- Deriving compound facts from the restructured data, such as students who excelled in AIMS.
- Creating measures from factual data – aggregating factual data by a predefined set of dimensional attributes to provide an organized rich set of information that can be sliced and diced to expose the major characteristics of the education system.

The development of Arizona Education Data Warehouse is divided into 3 Major Phases- Students, Schools, and Teachers. This document is dedicated to data and measures implemented for the Student Phase. You may view a list of future Phases in AEDW Phases or view the Arizona Education Data Warehouse Overview in the Data Warehouse site.

The following measures are available for analysis. You may click on each measure to review more information for that measure.

| ***Measure Id and Name*** | | ***Purpose*** |
|---|---|---|
| ***School Membership Measures:*** | | |
| **10-a** | Student Enrollment Transaction | Counts of Enrollment events |
| **10-b** | Student Withdrawal Transaction | Counts of Withdrawal events |
| **10-c** | Student Summer Withdrawal Transaction | Counts of Summer Withdrawal events |
| **10-d** | Student Year End Outcome | Counts of Students by their final situations of yearend, concluded from In Session Withdrawal, Summer Withdrawal, Year End Status and next year Enrollment events |
| **10-e** | Student Year End Enrollment | Counts of Students enrolled at yearend (subset of 10-d) |
| **10-f** | Student Dropout and Non Dropout | Counts of Students considered dropouts and non dropouts (different view 10-d) |
| **10-g** | Student Dropout and Recovery | Counts of Dropout Students that returned to school in subsequent years |
| **10-h** | Student DOR - DOA and Payer Factors | Counts of Enrollment events by District of Residence (DOR)/ District of Attendance (DOA), Payer Factors, Special Enrollment |
| **10-i** | Student Grade Membership | Counts of Grade Membership Intervals where an interval is defined by membership start and end dates |
| **10-j** | Student School and Grade Transition | Counts of Transition occurrences made by students between grades, schools, within and between fiscal years |
| **10-k** | Student Community College Membership | Counts of Students taking classes in Community Colleges |
| **10-l** | Student Number of Schools Attended | Counts of Students by number of schools and grades attended while in the Arizona public school system |
| **10-m** | Student Membership Interval Membership Session Days | Sums of Membership Session Days by school membership intervals |
| **10-n** | Student Membership Interval Attendance Session Days | Sums of Attendance Session Days by school membership intervals |
| **10-o** | Student Membership Interval Available Session Days | Sums of Available Session Days by school membership intervals where each available day is defined by the membership day weighted by the student FTE (Full Time Equivalency) for the day |
| **10-p** | Student Membership Interval Loss Session Days | Sums of Loss Session Days by school membership intervals where Loss is defined as the difference between a student's available days and the students attendance days |
| **10-q** | Student Membership Interval Resources Count | Counts of School Membership Intervals by session day categories of membership, attendance, available, loss and by efficiency where efficiency is defined as the ratio of a student interval attendance session days to the student interval available days |
| **10-r** | Student Annual Attendance Session Days | Sums of Student Annual Attendance Session Days |
| **10-s** | Student Annual Available Session Days | Sums of Students Annual Available Session Days |
| **10-t** | Student Annual Loss Session Days | Sums of Students Annual Loss Session Days |

| Measure Id and Name | | Purpose |
|---|---|---|
| 10-u | Student Annual Resources Count | Counts of Students by session day categories of membership, attendance, available, loss and by efficiency where efficiency is defined as the ratio of a student annual attendance session days to the student annual available days |
| ***Needs and Program Participation*** | | |
| 20-a | Student Need | Counts of Needs Assignments to students- a student may have multiple assignments in a fiscal year |
| 20-b | Student Multiple Need Group | Counts of Combinations of Need Group Assignments (e.g. SPED-Language-Economic-Disadvantage)- a student may have multiple assignments in a fiscal year |
| 20-c | Student Annual Program Participation: | |
| 20-c-10 | Student Annual Program Participation Count | Counts of Participants in each of the Programs overseen by ADE-a student may be a participant in multiple programs in the same fiscal year, concurrently or sequentially |
| 20-c-20 | Student Annual Program Participation Session Days | Sum of Participation Session Days in each of the Programs overseen by ADE- a student may participate in multiple programs in the same fiscal year, concurrently or sequentially |
| 20-e | Student Annual Needs and Programs: | |
| 20-e-10 | Student Annual Needs and Programs Count | Counts of Needs Assignments Serviced by Programs (a SPED or Support program may serve multiple needs concurrently, a Language program serves only the ELL need) |
| 20-e-20 | Student Annual Needs and Programs Session Days | Sums of Session Days of Needs Assignments Serviced by Programs (a SPED or Support program may serve multiple needs concurrently, a Language program serves only the ELL need) |
| 20-f | Student Annual Concurrent Multiple Program Participation | Counts of Students participating in multiple programs concurrently |
| 20-g | Student Language Assessment Transactions | Counts of Oral, Reading & Writing Assessments taken to determine the English proficiency of students |
| | | |
| ***Needs and Program Participation- History*** | | |
| 30-b | Student Cumulative Participation in Program Area | Counts of Participants in each of the Program Areas while in the Arizona public school system - a student may participate in more than one program area (e.g. SPED and Language), but in the Program Area the count is student count |
| 30-c | Student Cumulative Program Participation: | |
| 30-c-10 | Student Cumulative Program Participation Count | Counts of Participants in each of the Programs while in the Arizona public school system |
| 30-c-20 | Student Cumulative Program Participation Session Days | Sums of Participants Session Days in each of the Programs while in the Arizona public school system |
| 30-f | Student Cumulative Language Programs Participation and Outcome | Counts of Students in Language Programs while in the Arizona public school system by their participation outcome defined as progress from their first assessment result to their last assessment result |

| Measure Id and Name | | Purpose |
|---|---|---|
| 30-g | Student Language Assessment Progress and AIMS | Counts of Language Assessments Progress Steps defined by student results in consecutive pairs of assessment events (e.g. "Basic-Intermediate"; "ELL-RFEP"), accompanied with AIMS results for the later assessment in the pair |
| ***AIMS Assessment – All Levels Measures:*** | | |
| 40-a | Student AIMS Results | Counts of Student AIMS Results in single tests of single subjects (Reading, Writing, Math and Science) |
| 40-b | Student AIMS Progression | Counts of Students by Cumulative Results in AIMS test levels 3-8 |
| 40-c | Student AIMS Component Result-Strands | Counts of Tested Students by Strand Scores for single AIMS Reading, Math, Science tests (scores expressed in %) |
| 40-d | Student AIMS Component Result-Concepts | Counts of Tested Students by Concept Scores for single AIMS Reading, Math, Science tests (scores expressed in %) |
| 40-e | Student AIMS Component Result-Traits | Counts of Tested Students by Trait Scores for single AIMS Writing test (scores expressed in numbers) |
| 40-f | Students Not Passing AIMS Component History | Counts of Students by Concepts Tested across all AIMS Reading, Math and Science tests administered since FY 2005 |
| ***AIMS Assessment – High School Level Measures:*** | | |
| 50-a | Student AIMS HS Annual Result | Counts of High School Students by AIMs Results in single subjects and single fiscal years |
| 50-b | Student AIMS HS Overall Result | Counts of High School Student by Consolidated AIMS Results across the entire High School attendance , in single subjects |
| 50-c | Student AIMS HS Tested Result | Counts of High School Students by Tested Subject Combinations across their entire High School attendance |
| 50-d | Student AIMS HS Passed Result | Counts of High School Students by Passed Subject Combinations across their entire High School attendance |
| 50-e | Student AIMS HS Failed Result | Counts of High School Students by Failed Subject Combinations across their entire High School attendance |
| 50-f | Student AIMS HS Missed Result | Counts of High School Students by Missed Subject Combinations across their entire High School attendance |
| 50-g | Student AIMS HS To Take Result | Counts of High School Students by Subject Combinations To Be taken for graduation |
| 50-h | Student AIMS HS Excelled Result | Counts of High School Students that Excelled in Reading and Writing and Math tests across their entire High School attendance |
| ***School Calendar:*** | | |
| 60-a | School Calendar | Counts of School Calendars by various calendar properties |

# B - Primary Data Warehouse Concepts

## Data Warehouse

A data warehouse is a system designed to store an organization's data longitudinally and to enable business analysis and reporting by business users. The essential components of a data warehousing system include programs to extract, transform, and load data from the operational systems into the data warehouse repository, programs to aggregate the data by various attributes, and tools to view and analyze pre-aggregated data.

The diagram in Appendix B shows the process of data warehouse creation.

Some of the benefits that a data warehouse provides are:

- A unified data structure for all data of interest, regardless of the source systems data structures. This makes it easier to analyze and report information than it would be if multiple data structures had to be used and aligned to retrieve information.
- Prior to loading data into a data warehouse, inconsistencies across operational source systems are identified and resolved. This provides coherent data across time and subject matters.
- Once data is brought in a data warehouse it is maintained independently and unaffected by the source systems longevity.
- Because it is separate from operational systems, a data warehouse provides retrieval of data without slowing down operational systems.
- A data warehouses facilitates decision support processes such as trend identification and monitoring (e.g., improvements in AIMS results of minority students), exception reports, and reports that show actual performance versus goals.
- There are two types of data in a data warehouse:
    - Granular data – extracted from operational systems, transformed and aligned.
    - Aggregated data – Aggregations of granular data by predefined criteria.

## *Granular Data*

Granular data is organized into facts and dimensions:

## Fact

A fact represents a countable situation or a quantifiable property e.g. attendance on a given date is a countable situation; attendance amount on that date is a quantifiable property. Enrollment in a school, membership in a school on a particular school day, grade membership, score on an AIMS test are all countable situations or properties. Facts are stored in fact tables.

### Compound Fact

A fact constructed from other fact/s – e.g. number of times a student Passed/Failed HS AIMS Reading over entire student test history; student transition between schools.

## Dimension, Attribute and Value

A dimension is a set of interrelated properties by which facts can be aggregated. Each fact has associated logical dimensions determined by its essence.

Student and Time are dimensions associated with all student related facts. Test Subject is a dimension associated with the AIMS result fact.

Dimensions are stored in dimension tables. The properties of a dimension are called attributes. Each dimension attribute occupies a column (field) in the table.

An attribute represents a property of the dimension and may have multiple values. For example, a Student is a dimension. A Student Birth Date is an attribute holding the date the student was born. Student Gender is an attribute having 2 Values, Male and Female. Student Ethnicity has 5 values.

There are 3 types of dimensions:

Entity Dimension – School, Student. All student measures have school and student as dimensions

Descriptive Dimension – A collection of codes describing an entity or feature of an entity (code lookup tables in SAIS)

Constructed Dimension – Created for the Data Warehouse compound measures, e.g. FY Range, Grade Range, AIMS Pass/Fail, AIMS Progression category, Language Assessment category

Each measure is associated with a predefined set of dimensions that will be displayed when the measure is selected. Each measure group section in this document has a chart that show which particular dimensions are used in each of the measure.

When a measure relates to multiple events or intervals in one fiscal year or in a range of fiscal years, the latest FY, School, Grade, Test Level of the student are used.

***Aggregated data***

**Measure**

A measure is a quantitative concept, implemented as aggregation of a fact by predefined logical attributes. For example, Students Achievement on AIMS is a measure. It can be aggregated by: test subject, test level, level of achievement, student grade, student gender, student ethnicity, fiscal year, school.

**Cell**

A cell is an aggregate for a combination of Dimensional Attributes that were predefined for a measure - e.g. "count of Hispanic female 11$^{th}$ grade students that excelled in AIMS Reading, Writing & Math by end of FY 2007, in xyz school".

**Hierarchy**

Some dimensions are constructed as a logical hierarchy, expressible in a series of parent-child relationships, where a parent member represents the consolidation of other members which are its children. State - County - District - School is such a hierarchy. Fiscal Year – Month – Day is another hierarchy. The use of hierarchical dimensions in the aggregation allows a top–down view of the aggregated data, starting with the highest level of the hierarchy and drilling down to lower levels. Conversely, an initial detailed view can be consolidated upward across the hierarchy levels.

## Cube

A cube is a collection of measures with their predefined cells. For most measures the cube physically stores the calculated data of the measure by the combinations of its attribute values.

For measures that involve very large number of cells, the cube may store the procedure to process the aggregation when the measure and (all or some of) its attributes are selected by the analyst.

In the cube, dimensions and their attributes values provide labels to the aggregated data display and also play a role as filters, e.g. when an analyst is focusing on a particular fiscal year, he/she can select to display only that year's aggregations.

## Pivot

Pivot means switching among various views of the aggregated data the cube stores for a measure:

- reselecting dimensions and attributes
- Rearranging the selected dimensions/attribute in the spreadsheet

Excel 2007 is the tool of choice for accessing and viewing the cube data by analysts. When accessing the cube via Excel, the analyst has a choice how to organize the retrieved data on the spreadsheet. An analyst might want one dimension (e.g. fiscal year) in columns and another dimension (e.g. districts) in rows. Having seen the data in this particular format, the analyst might wish to switch columns and rows.

The pivot tool in Excel enables the analyst to view a measure in various ways – switch between columns and rows, change the role of a dimension to a filter, and select to include only particular attribute values.

## *AEDW Measures - Dimensions Relationship*

Each AEDW measure uses a set of dimensions and their attributes to aggregate the data. The aggregation of data in the Data Warehouse cube is based on these predefined relationships of measures and dimensions. Any attempt to use a dimension or attribute that was not predefined for the measure will yield illogical results. Therefore whenever a specific measure is selected, only the relevant dimensions and attributes will be displayed and available for use in your analysis.

In each measure group section below, you will find a chart that shows what dimensions are predefined for each measure with description of the dimensions.

The appropriate analysis procedures are presented in the training documents.

The training documents provide step by step instructions to view and conduct analysis for each measure. These documents are accessible under the Training tab of the AEDW User Interface.

# C - Data Scope

Currently the Arizona Education Data Warehouse (AEDW) holds student data related to Membership Resources Available, Resources Utilized by students, Resources Loss, Needs and Program Participation, Language Assessments for LEP Need and AIMS Assessments.

Here are features to take into account while working with the data:

1- Student and School data cover information for fiscal year 2003 onward.

2- AIMS assessment data start with tests taken in FY 2005 and include AIMS tests for grades 3-8 and AIMS 10$^{th}$ grade, which is the highest assessment test in Arizona. Passing AIMS 10$^{th}$ grade (except Science) is required by State law for high school graduation. AIMS data include student test level results (Falls Far Below, Approaches, Meets, Exceeds), as well as % scores for Strands and Concepts, and raw scores for Writing test Traits. The Data Warehouse uses the same AIMS data as used by ADE R&E.

3- AIMS-A will be analyzed for inclusion later in the project.

4- Some schools with the same School ID have various names in different fiscal years, caused mostly by spelling variations and occasionally by actual name change. In these cases the school name in its most recent fiscal year is displayed to the users.

5- When no data exists in the source system for a specified attribute or value (e.g. "Ungraded Secondary" Grade value for 2007 on), aggregation by such value will display as blank " ".

6- Standard Language Proficiency Assessment was implemented in FY 2006. Hence Language Proficiency Assessment is available from FY 2006 onward. Language Proficiency Assessment for students that participated in language programs prior to FY 2006 will be shown as "Not Reported".

7- For SPED students, if Primary Need was not available or multiple different needs were reported as Primary Need for the same program participation, Primary Need will be shown as "Not Reported".

8- Cohort data for years prior to 2006 is not consistently populated in the source systems. Starting with fiscal year 2006, the Cohort year is automatically updated and is accurate.

9- There are three annual events that prompt the schools to submit substantial volume of data - 40$^{th}$ day, 100$^{th}$ day and yearend. During a fiscal year the schools may change prior submitted data. In addition, the schools may change and correct their membership data up to 3 years after the end of the school year, provided they received approval from School Finance division. Though, this has become rare, affecting a very small number of students. When there are additions or changes to the information on the source operational systems, the modification date is stored on each record.

The student membership information in the data warehouse will be updated three times a year, following these events. The Data Warehouse load process extracts any new information since the last load from the source systems based on the above mentioned modification date, and updates the Fact tables. The cube is recreated to reflect the new situation. As a result, the information in any reports created prior to the incremental updates could be different from the updated information in the Data Warehouse. Analysts who need to continue their analysis on the previous version of the cube should contact Data Management group and ask for access to the previous version of the cube.

# II. AEDW Measures

## A - Membership Measures

Measures in this group should be reviewed as belonging to 4 subgroups, since the construction of the measures in each subgroup follows common rules. In particular, all measures in subgroup 2 were constructed from the same set of compound fact data. Hence it is recommended that you review the descriptions of these measures together.

1- Student Enrollment (including Readmissions), Student Withdrawal, Student Summer Withdrawal - Measures in this subgroup count occurrences.

2- Student Year End Outcome, Student Year End Enrollment, Dropout Count, Dropout and Recovery Count - Measures in this subgroup count students (heads).

3- Student Grade Membership, Student School and Grade Transition - Measures in this group count membership intervals and occurrences of transitions between membership intervals.

4- Student Membership Intervals Resources - Sums of Membership Session Days, Attendance Session Days, Available Session Days, Loss Session Days and Counts of Intervals by these Resources.

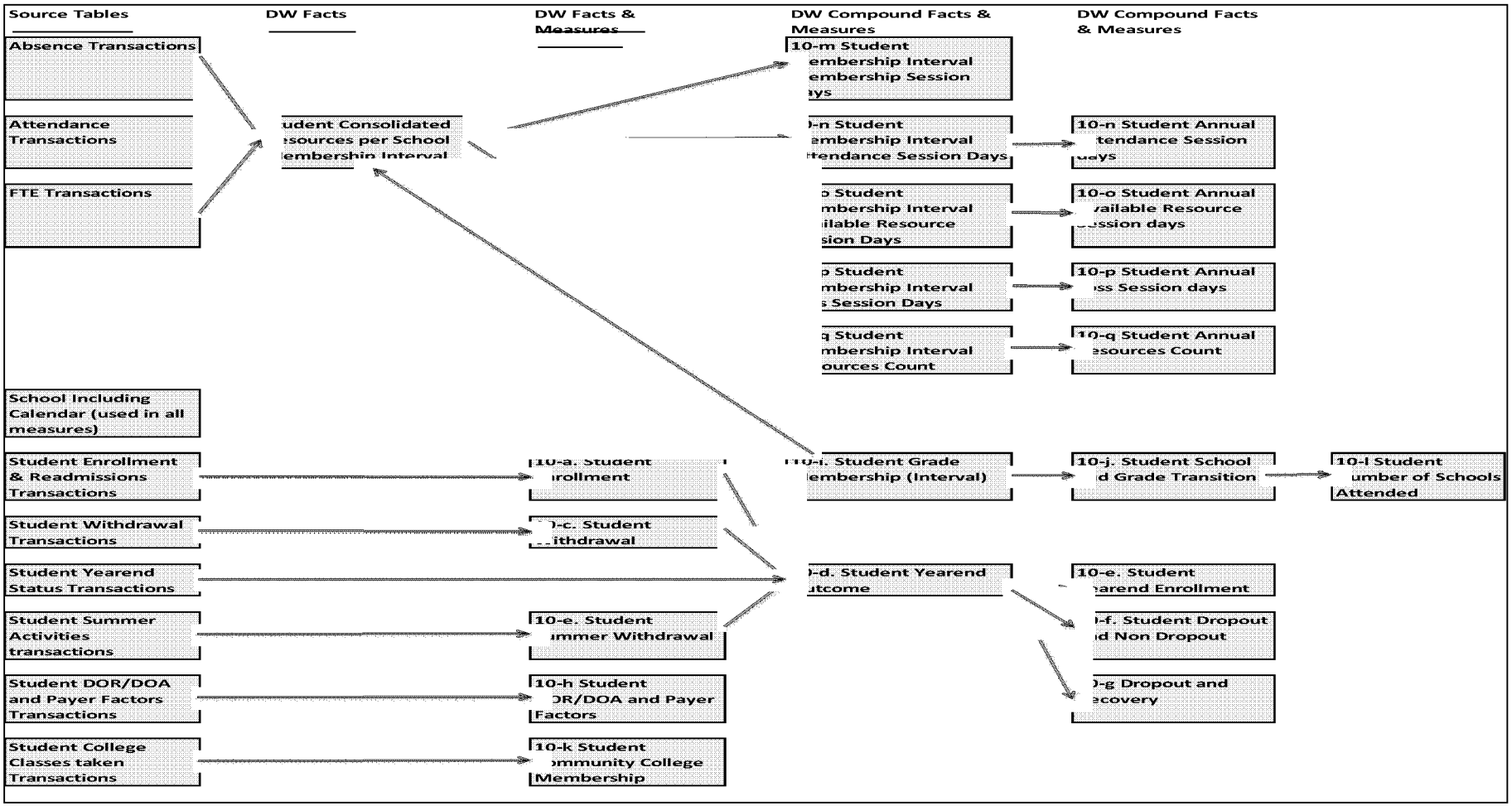
5- Student Annual Membership - Sums of Attendance Session Days, Available Session Days, Loss Session Days and Counts of students by these Resources.

6- Student DOR - DOA and Payer Factors - This measure provides head counts for three different areas: District of Residence vs. District of Attendance, Tuition Payers, and Enrollment Type.

7- Community College - this measure counts students taking classes in a community college.

Chart A shows the process of constructing all membership measures and will assist you in understanding the relationships among the measures. Chart B shows with which dimensions each measure is associated. Appendix ZZ shows the description of each dimension presented in alphabetical order.

## Chart A – Student Membership Measures Map



## Chart B - Dimensions of Membership Measures

| Related Dimension | 10-a Student Enrollment Transaction | 10-b Student Withdrawal Transaction | 10-c Student Summer Withdrawal Transaction | 10-d Student Year End Outcome | 10-e Student Year End Enrollment | 10-f Student Dropout and Non Dropout | 10-g Student Dropout and Recovery | 10-h Student DOR-DOA and Payer Factors | 10-i Student Grade Membership | 10-j Student School and Grade Transition | 10-k Student Community College Membership | 10-l Student Number of Schools Attended | 10-m Student Membership Interval Membership Session Days | 10-n Student Membership Interval Attendance Session Days | 10-o Student Membership Interval Available Session Days | 10-p Student Membership Interval Loss Session Days | 10-q Student Membership Interval Resources Count | 10-r Student Annual Attendance Session Days | 10-s Student Annual Available Session Days | 10-t Student Annual Loss Session Days | 10-u Student Annual Resources Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Affected Fiscal Year | | | x | | | | | | | | | | | | | | | | | | |
| Annual Attendance Session Days Hierarchy | | | | | | | | | | | | | | | | | | x | | | x |
| Annual Available Session Days Hierarchy | | | | | | | | | | | | | | | | | | | x | | x |
| Annual Resource Efficiency Hierarchy | | | | | | | | | | | | | | | | | | x | | | x |
| Annual Loss Session Days Hierarchy | | | | | | | | | | | | | | | | | | | | x | x |
| Average Years Per Grade | | | | | | | | | | | | x | | | | | | | | | |
| Average Years Per School | | | | | | | | | | | | x | | | | | | | | | |
| Community College | | | | | | | | | | | x | | | | | | | | | | |
| District Of Attendance | | | | | | | | x | | | x | | | | | | | | | | |
| District Of Residence | | | | | | | | x | | | | | | | | | | | | | |
| Dropout Code | | | | | | x | x | | | | | | | | | | | | | | |
| Dropout Fiscal Year | | | | | | x | x | | | | | | | | | | | | | | |
| Dropout Grade | | | | | | x | x | | | | | | | | | | | | | | |
| Dropout Recovery Indicator | | | | | | | x | | | | | | | | | | | | | | |
| Dropout School | | | | | | x | x | | | | | | | | | | | | | | |

| Related Dimension | 10-a Student Enrollment Related Dimension Transaction | 10-b Student Withdrawal Transaction | 10-c Student Summer Withdrawal Transaction | 10-d Student Year End Outcome | 10-e Student Year End Enrollment | 10-f Student Dropout and Non Dropout | 10-g Student Dropout and Recovery | 10-h Student DOR-DOA and Payer Factors | 10-i Student Grade Membership | 10-j Student School and Grade Transition | 10-k Student Community College Membership | 10-l Student Number of Schools Attended | 10-m Student Membership Interval Membership Session Days | 10-n Student Membership Interval Attendance Session Days | 10-o Student Membership Interval Available Session Days | 10-p Student Membership Interval Loss Session Days | 10-q Student Membership Interval Resources Count | 10-r Student Annual Attendance Session Days | 10-s Student Annual Available Session Days | 10-t Student Annual Loss Session Days | 10-u Student Annual Resources Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fiscal Year | | | | x | x | | | x | | | x | | x | x | x | x | x | x | x | x | x |
| Fiscal Year Range | | | | | | | | | | x | | x | | | | | | | | | |
| From School | | | | | | | | | | x | | | | | | | | | | | |
| Grade | x | x | x | x | x | | | x | x | | | | x | x | x | x | x | x | x | x | x |
| Grade Range | | | | | | | | | | | | x | | | | | | | | | |
| Grade Start Date Hierarchy | | | | | | | | | x | | | | | | | | | | | | |
| Grade End Date Hierarchy | | | | | | | | | x | | | | | | | | | | | | |
| Grade Transition Hierarchy | | | | | | | | | | x | | | | | | | | | | | |
| Interval Attendance Session Days | | | | | | | | | | | | | | x | | | x | | | | |
| Interval Available Session Days Hierarchy | | | | | | | | | | | | | | | x | | x | | | | |
| Interval Membership Session Days Hierarchy | | | | | | | | | | | | | x | | | | x | | | | |
| Interval Resource Efficiency Hierarchy | | | | | | | | | | | | | | x | | | x | | | | |
| Interval Loss Session Days Hierarchy | | | | | | | | | | | | | | | | x | x | | | | |
| Membership End Date Hierarchy | | | | | | | | | | | | | x | x | x | x | x | | | | |
| Membership Start Date Hierarchy | | | | | | | | | | | | | x | x | x | x | x | | | | |
| Number Of Classes | | | | | | | | | | | x | | | | | | | | | | |

| Related Dimension | 10-a Student Enrollment Transaction | 10-b Student Withdrawal Transaction | 10-c Student Summer Withdrawal Transaction | 10-d Student Year End Outcome | 10-e Student Year End Enrollment | 10-f Student Dropout and Non Dropout | 10-g Student Dropout and Recovery | 10-h Student DOR-DOA and Payer Factors | 10-i Student Grade Membership | 10-j Student School and Grade Transition | 10-k Student Community College Membership | 10-l Student Number of Schools Attended | 10-m Student Membership Interval Membership Session Days | 10-n Student Membership Interval Attendance Session Days | 10-o Student Membership Interval Available Session Days | 10-p Student Membership Interval Loss Session Days | 10-q Student Membership Interval Resources Count | 10-r Student Annual Attendance Session Days | 10-s Student Annual Available Session Days | 10-t Student Annual Loss Session Days | 10-u Student Annual Resources Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Grades Attended | | | | | | | | | | | | x | | | | | | | | | |
| Number of Schools Attended | | | | | | | | | | | | x | | | | | | | | | |
| Number Of Years Attended | | | | | | | | | | | | x | | | | | | | | | |
| Over Under Age Category | x | x | | x | x | x | x | | x | | | | | | | | | | | | |
| Recovery Fiscal Year | | | | | | | x | | | | | | | | | | | | | | |
| Recovery Grade | | | | | | | x | | | | | | | | | | | | | | |
| Recovery School | | | | | | | x | | | | | | | | | | | | | | |
| School District | x | x | x | x | x | | | | x | | | x | x | x | x | x | x | x | x | x | x |
| School Year Outcome Code | | | | x | | | | | | | | | | | | | | | | | |
| Special Enrollment | | | | | | | | x | | | | | | | | | | | | | |
| Student ADM Integrity | x | x | | | | | | | x | | | | | | | | | | | | |
| Student October 1st Integrity | x | x | | | | | | | x | | | | | | | | | | | | |
| Students | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| Summer Withdrawal Date Hierarchy | | | x | | | | | | | | | | | | | | | | | | |
| To School | | | | | | | | | | x | | | | | | | | | | | |
| Transition Indicator | | | | | | | | | | x | | | | | | | | | | | |
| Tuition Payer | | | | | | | | x | | | | | | | | | | | | | |
| Withdrawal Code | | x | x | | | | | | | | | | | | | | | | | | |
| Withdrawal Date Hierarchy | | x | | | | | | | | | | | | | | | | | | | |
| Year End Enrollment Code | | | | | X | | | | | | | | | | | | | | | | |

See Appendix ZZ for dimension descriptions.

## Membership Measures Data Considerations

The following considerations should be taken into account for membership measures:

- If a school in the source system does not have a calendar, the school parent entity (district or charter holder) calendar is assigned to it. If the parent does not have a calendar, the enrolled students cannot be linked to a calendar.
- In the SAIS system, 58 schools, of which 53 are charter schools, are missing calendars in various years, totaling 131 school/year occurrences. These schools and their parents do not have any active or inactive calendars; hence, the data warehouse is missing calendars for these schools as well. The following table shows counts of students for which there are no calendars by school year:

| Fiscal Year | # of Schools Without Calendars | # of Memberships Without Calendars |
|---|---|---|
| 2003 | 45 | 7384 |
| 2004 | 37 | 5699 |
| 2005 | 29 | 4021 |
| 2006 | 18 | 2194 |
| 2007 | 1 | 1 |
| 2008 | 1 | 1 |
| 2009 | 0 | 0 |
| **Total** | **131** | **19300** |

- Across all fiscal years, a number of students (171 as of 2009) carry district IDs instead of school IDs. These students will show the school name and the district name as "Not Reported".
- Students attending non-public schools are included only when they have SAIS ID assigned to the student in SAIS system. This is usually the case when the student is receiving specific services from non-public schools/facilities under state supervision/contracts. Such students are assigned a "Needs Dummy Membership (NDM)" enrollment code in the SAIS system. Across FYs 2003-2009 there were 63,160 enrollments with Dummy Membership.
- The "Dummy Membership" enrollment in non-public schools by no means reflects the overall enrollment in non-public schools.
- Only one set of personal information is maintained for each student in the Student Dimension although multiple enrollments or withdrawals could exist for the student.
- **Integrity Dimension:** SAIS System executes an ongoing validation process on data that affects average daily membership (ADM). Erroneous data transactions are reported back to schools for corrections. This process is known as "ADM Integrity". The integrity results for the 40$^{th}$ day and 100$^{th}$ day are stored in SAIS and brought to the Data

Warehouse for the following measures:

10-a Student Enrollment Transaction
10-b Student Withdrawal Transaction
10-i Student Grade membership

ADM Integrity Dimension has 3 attributes each with values "Pass, "Fail":

1. Student ADM 40th Day Integrity
2. Student ADM 100th Day Integrity
3. Student ADM Integrity: This is the consolidation of the previous 2. Here only transactions that failed both 40th day and 100th day are defined as "Fail".
4. Student October 1st Integrity: This is a validation for October 1 enrollment used for Federal Reporting (EDFACT).

For Student Enrollment 99.65% of all transactions from FY 2003- FY 2009 passed integrity.

For Student Withdrawal 99.55% of all transactions in FY 2003-FY 2009 passed integrity.

For Student Grade Membership 99.8% of all memberships in FY 2003- FY 2009 passed integrity.

For Student Enrollment 99.80% of all transactions from FY 2003- FY 2009 passed October 1st integrity.

***Note: The use of this dimension is discretionary. It should be used as a filter to filter out failed transactions.**

When integrity check results were not available in the source system, the integrity status was set to "Not Reported".

## *10-a Student Enrollment Transaction*

a- Description

This measure provides information about the student enrollments and readmissions events or occurrences in Arizona.

An Enrollment or Readmission signifies the beginning of student membership in a school. Student enrollment in a school may start any date during the school year.

A student may be entering public education for the first time, coming to the school from out of state, from another school or district, or from dropout status or detention. Students have to be enrolled in school every fiscal year anew, regardless of whether they were enrolled in the same school in the previous year.

Student enrollments and readmissions are aggregated by Gregorian calendar date for each school. It should be noted that this information shows only the additions to school membership, through enrollment and readmission. Reductions to the membership by withdrawals are not included in this measure.

See Appendix E for student progression through the school system and enrollment and withdrawal codes.

b- Measure Usage

The counts in this measure refer to the enrollment event. A student may have more than one enrollment per fiscal year, e.g. a student that switches schools in mid-year has 2 enrollments for that fiscal year. A student may be enrolled concurrently in 2 schools, in which case the student has 2 enrollments for that fiscal year. Enrollment should be viewed by fiscal years. Within the fiscal year other dimensions/attributes may be selected.

*c-* Dimensions

*Enrollment Date Hierarchy*; *Enrollment-Readmission Code and Description; Grade; Over-Under Age Category; School /District; Student ADM Integrity, Student October 1st Integrity*, *Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

## *10-b Student Withdrawal Transaction*

a- Description

This measure counts student withdrawal events during the period school is in session, by calendar date. Every withdrawal occurrence is counted.

If one student has two withdrawals within one fiscal year, from the same or different schools, this is tracked as two withdrawals. Summer withdrawals are not included in this measure. See Student Summer Withdrawals measure for analysis of summer withdrawals.

Student withdrawals can be analyzed by various criteria: county, district, school, student demographics, fiscal year, withdrawal date, and withdrawal code and description.

b- Measure Usage

The counts in this measure refer to the withdrawal activity, not the student; a student, who has withdrawn from the same or various schools multiple times in the same fiscal year, will have multiple withdrawal occurrences.

Withdrawals should be viewed by fiscal years. Within the fiscal year other dimensions/attributes may be selected.

c- Dimensions / Attributes

*Grade; Over-Under Age Category; School/ District; Student ADM Integrity, Student October 1st Integrity, Students; Withdrawal Code and Description; Withdrawal Date Hierarchy*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

## *10-c Student Summer Withdrawal Transaction*

a- Description

Student Summer Withdrawal measure counts summer withdrawal occurrences by the withdrawal date as well as by the fiscal year to which it should be attributed – the last school year the student attended.

School Summer breaks for most schools span two fiscal years, starting in May and ending in early August. Provision of summer school and attendance in summer school are not captured in SAIS. Due to this situation, Summer Withdrawal is not well defined, nor well reported by schools. The Student Summer activity relates to students who graduated/completed High School during the summer and to students who were enrolled through the scheduled last day of school but do not return to school as expected. Two groups of students are expected to start membership in a new school year: returning students who are in membership at the end of the previous school year, and new students from feeder schools. If a student who is expected to start membership in a school in the new school year fails to do so, this is considered Student Summer Withdrawal.

The summer withdrawal in the operational systems is attributed to the school year immediately following the summer break in which Summer Withdrawal Date occurred. Summer withdrawals, regardless of the withdrawal date, are submitted in the new school year.

Logically summer withdrawal is an outcome that relates to the school year ended before summer break and to the school attended before summer break. The Data Warehouse calculates an Affected Fiscal Year for the summer activities, to show the fiscal year to which the withdrawal relates. The fiscal year of any summer withdrawal dated between 7/1 and 12/31 is changed to the previous fiscal year. For example:

| Reported Summer Withdrawal Date | Fiscal Year | Affected Fiscal Year |
|---|---|---|
| 1/1/2005 - 6/30/2005 | 2005 | 2005 |
| 7/1/2005 - 12/31/2005 | 2006 | 2005 |

Affected fiscal year, as calculated in the Data Warehouse, is used in the process of deriving the school year end outcome for the student.

This measure identifies the operational fiscal year as well as the affected fiscal year for the student summer withdrawals.

b- Measure Usage

Pivoting this measure by Date will show the number of Summer Withdrawal with dates falling in the summer break, from mid May to mid August, and the numbers falling from mid August to mid May, which are questionable. The questionable transactions could not be corrected and were addressed by the calculation of Affected Fiscal Year. These issues will be addressed in SAIS redesign.

c- Dimensions / Attributes

*Affected Fiscal Year; Grade; School/District*; *Students; Summer Withdrawal Date Hierarchy; Withdrawal Code and Description.*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

See more explanations in Year End Outcome measure.

## *10-d Student Year End Outcome*

a- Description

This measure counts students (Heads) by their final situation at the end of the school year. Yearend outcome integrates all possible membership outcomes for the school year – withdrawal prior to year end, summer withdrawal and student status at year end. To provide a coherent conclusion, it considers enrollment of the next year, to determine the conclusive stance of a student for the school year.

In constructing this measure, the program identifies and captures withdrawals during the school year (in session) first. It then examines the students that were present in the last school day, and identifies and captures students with summer withdrawals. For the remaining students it captures the year end status. In case of a concurrent enrollment, the latest membership yearend status is captured. Every student is captured only once per fiscal year, thus this measure provides a head count as of yearend.

Summer withdrawals information is subjected to rectification steps. Summer withdrawals are attributed to the ending year, as explained in the Summer Withdrawal measure regarding Affected Fiscal Year. Additionally the following rules are applied. When the student is enrolled in the same district for the next school year, yearend outcome will be "Transferred Within Same District - During Summer". When the student is enrolled in a different district for the next school year, yearend outcome will be "Transferred to Another District - During Summer". When the student has more than one summer withdrawal transactions with the same code, the latest date is used. If the student has more than one summer withdrawal transaction with different codes, the transaction selected follows priority ranking where 1 is the highest priority:

| Activity | Rank |
|---|---|
| Summer - Graduated | 1 |
| Summer - Completed | 2 |
| Summer - GED | 3 |
| Summer - Vocational School | 4 |
| Summer - Home Taught | 5 |
| Summer - Age | 6 |
| Summer - Dropout | 7 |
| Summer - Illness | 8 |
| Summer - Deceased | 9 |
| Summer - Expelled | 10 |
| Summer - Detention | 11 |
| Summer - State Unknown | 12 |
| Summer - Transfer, Same District | 13 |
| Summer - Transfer to Different District | 14 |

***Note**: Year End status is subjected to the following rectification: If Year End status is missing and the student is enrolled in next year, the Grade in the next year is compared to the Grade of the Year End and promotion or retention is established. If the student is not enrolled in next

year he/she is defined as "Year End Status-Undeterminable Outcome".

Students with the following grade assignments either in the ending year or the following year or both were defined as having a "Not Reported" outcome: Preschool Disabled, Ungraded Elementary, Ungraded Secondary, and Individual Education Program. For such students a status of Promotion or Retention cannot be assigned.

Year End Outcome Counts can be analyzed by various criteria: county, district, school, student demographics, fiscal year, grade, age-range, and yearend outcome code and description.

b- Measure Usage

Yearend Outcome provides student headcount as of yearend and therefore a good measure to analyze longitudinal growth. By using EXCEL to obtain percentages, it can show proportions of various outcomes within a fiscal year and comparatively across years.

c- Dimensions / Attributes

*Fiscal Year*; *Grade; Over-Under Age Category; School/District*; *School Year Outcome Code and Description; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Year End Outcome is not determined for students with "Needs Dummy Membership" enrollment code. Students without a valid SAIS ID or valid membership are excluded from this measure. Since the Year End Outcome measure includes the summer withdrawals the information for the latest fiscal year will not be complete until the 100th day incremental update.

## *10-e Student Year End Enrollment*

a- Description

This measure counts the number of students who were enrolled at the last day of school based on their respective school calendar. This measure is a subset of Year End Outcome, and excludes students who ended their membership prior to the last day of school.

Student transitions between schools do not affect this count, only the last school attended in the fiscal year is considered for this purpose. Students who withdrew during the summer were present in the last day of school and are accounted for in this measure. In case of a concurrent enrollment, only the latest membership is counted. Year End Enrollment Counts can be analyzed by various criteria: county, district, school, student demographics, fiscal year, grade, age-range, and year end outcome code description.

b- Measure Usage

Use this measure similar to Year End Outcome but focusing on Year End Enrollment.

c- Dimensions / Attributes

*Fiscal Year; Grade; Over-Under Age Category; School/District; Student; Year End Enrollment Code and Description*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Year End Enrollment does not include "Needs Dummy Membership" enrollment code. Students without a valid SAIS ID or without a valid membership are excluded from this measure. Since the yearend enrollment measure includes the summer withdrawals the information for the latest fiscal year will not be complete until the 100th day incremental update.

## *10-f Student Dropout and Non Dropout*

a- Description

This measure counts students considered dropouts from public schools as of the end of the school year, using the ADE R&E definition of dropout; it also presents counts of students who did not dropout. This measure is a variation on the Student Year End Outcome measure providing and easier base for dropout analysis. This measure can be used to convert the information into rates through Excel features.

Students multiple dropouts in one school year are counted only once. The last school attended in the dropout fiscal year is the one used in this calculation.

The following codes are defined by R&E as signifying Dropouts.

| | |
|---|---|
| W3 | Expelled - During Session |
| W4 | Withdrawn Due to Absence - During Session |
| W5 | Declared Dropout - During Session |
| W11 | Withdrawn for GED - During Session |
| W12 | Withdrawn for Vocational School - During Session |
| S3 | Expelled - During Summer |
| S4 | Status unknown - During Summer |
| S5 | Declared Dropout - During Summer |
| S11 | Withdrawn for GED - During Summer |
| S12 | Withdrawn for Vocational School - During Summer |

In addition to the above codes the measure includes students defined as Undeterminable Outcome (See year End Outcome measure) and students that did not Dropout (Non Dropout).

Dropout information can be analyzed by county, district, school, student demographics, fiscal year, grade, age-range, and yearend outcome code description.

b- Measure Usage

This measure provides longitudinal perspective on dropouts across fiscal years and comparative perspective on the magnitudes of the dropout categories.

c- Dimension / Attributes

*Dropout Code and Description; Dropout Fiscal Year; Dropout School; Dropout Grade; Over-Under Age Category; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students without a valid SAIS ID or valid membership are excluded from this measure. Since the Year End Outcome measure includes the summer withdrawals the information for the last fiscal year will not be complete until the 100th day incremental update.

## *10-g Student Dropout and Recovery*

a- Description

This measure counts dropout students (as captured in measure 10-f above) that returned to the public school system in subsequent years. Only the students who are defined as dropouts in the 10-f measure are included in this measure.

When a student who has dropped out enrolls in the next year or any year following the next year, he/she is considered a recovered dropout.

If a student has dropped out and returned in the same fiscal year, he/she will not be counted as a dropout or as recovered in that year. Summer dropouts are included in the prior school year's information.

Dropout information can be explored in various combinations of attributes such as dropout fiscal year, grade and school, recovery fiscal year, grade and school, student demographics, dropout code and description.

b- Measure Usage

This measure provides longitudinal perspective on dropouts and recoveries across fiscal years and comparative perspective on the magnitudes of the dropout categories.

Student dropout activity and student recovery activity occur in different fiscal years. The underlying fact table keeps the recovery event associated with the dropout event. Thus, the recovery counts are a breakdown of a dropout count.

c- Dimension / Attributes

*Dropout Code and Description; Dropout Fiscal Year; Dropout School; Dropout Grade; Dropout Recovery Indicator, Over-Under Age Category; Recovery Fiscal Year; Recovery Grade; Recovery School; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students without a valid SAIS ID or valid membership are excluded from this measure. Since the Year End Outcome measure includes the summer withdrawals the information for the last fiscal year will not be complete until the 100th day incremental update.

Since the recovery enrollment may occur any time in subsequent years, the recovery information will keep changing until the year end processing of the recovery year. In particular for dropout of FY 2009 recovery in FY 2010 data will be complete at year end update of FY 2010.

## *10-h Student DOR - DOA and Payer Factors*

a- Description

This measure provides information regarding the district of residence vs. district of attendance, as well as the payer factor information, tuition payer code, and special enrollment code. When there are multiple rows for a student membership in a fiscal year, the latest one is accounted for.

Every enrollment has a tuition payer factor record. The payer factor code identifies how the tuition is paid:

Privately paid tuition OR no tuition charged
Foreign Exchange Student
Non-special education (NSE) in residential treatment centers
JTED Main non-Resident Charter (concurrent)
All Others

Special enrollment codes are used for the students who attend a school in a district other than their district of residence. They distinguish 3 unique enrollment types, all other enrollment variations are coded as "regular enrollment".

Certificates of Educational Convenience (CEC) are granted by county superintendents to two groups of students:

- CEC-A - for students precluded from attending the school in their own district of residence by distance, lack of transportation, or similar reasons.
- CEC-B - for students residing in corrective institutions, or foster homes

Two other types of special enrollment are:

- Open Enrollment - identifies the students who enrolled in a district that accepts students from other districts of residence.
- Regular Enrollment - All other students, not included in the above three categories.

b- Measure Usage

To display correct relationships, avoid selecting payer factor code/description and special enrollment code/description in the same analysis.

District of Residence has no special meaning when selected along with tuition payer factor.

Please note that for most students' schools of attendance do not capture the real district of residence of students. Typically most charter schools capture and report the charter holder as both district of residence and district of attendance. Therefore the usefulness of this measure in analysis of student choices outside their district of residence is doubtful.

c- Dimensions / Attributes

*District of Residence; Fiscal Year, Grade; School District; Special Enrollment; Students; Tuition Payer Factor*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

The data in this measure includes two distinct and unrelated sets of information: tuition payer information and special enrollment information.

## *10-i Student Grade Membership*

a- Description

This measure counts grade membership intervals where an interval is defined by grade membership start date and end date.

Grade Membership Start Date represents an enrollment or readmission event, a midyear promotion event and\or a midyear demotion event. Grade Membership End Date represents a withdrawal event, a midyear promotion event, a midyear demotion event, and\or the end of the school year.

The measure provides patterns of grade memberships by grade, over-under age categories, fiscal year and dates, school/district/county, and student demographics.

A student may have more than one grade membership in one fiscal year due to grade midyear transfers (promotions or demotions), midyear school transfers, midyear withdrawal and readmission to the same school, concurrent enrollment in multiple schools. The majority of students have one membership during one fiscal year.

The official required age range for each grade was derived from ARS § 15-821 and ARS §15-771 as shown in Chart-C below. The difference in months between student age and the official grade age was assigned categories such as "Under Age", "Within Statutory Range", "1-12 months over age".

## Chart C

### Statutory Age By Grade

| Grade | Age In Months as of Sept 1 | | Formula for Age in Months as of Sept 1 | | Birth Date | | FY 2008 Example (Sept 1, 2007) | |
|---|---|---|---|---|---|---|---|---|
| | Low Bound | High Bound | Low Bound | High Bound | From (High Bound) | To (Low bound) | From (High Bound) | To (Low Bound) |
| **Defined by Statute 15-771 (Preschool) & 15-821 (Kindergarten)** | | | | | | | | |
| Preschool | **33** | **59** | 2 * 12 + 9 | 4 * 12 + 11 | Aug 1, FY - 4 | Dec 1, FY - 2 | Aug 1, 03 | Dec 1, 05 |
| Kindergarten | **56** | **60** | 4 * 12 + 8 | 5 * 12 | Sep 1, FY - 5 | Jan 1, FY - 4 | Sep 1, 02 | Jan 1, 03 |
| **Derived from Kindergarten definition** | | | | | | | | |
| First Grade | **68** | **72** | 5 * 12 + 8 | 6 * 12 | Sep 1, FY - 6 | Jan 1, FY - 5 | Sep 1, 01 | Jan 1, 02 |
| Second Grade | **80** | **84** | 6 * 12 + 8 | 7 * 12 | Sep 1, FY - 7 | Jan 1, FY - 6 | Sep 1, 00 | Jan 1, 01 |
| Third Grade | **92** | **96** | 7 * 12 + 8 | 8 * 12 | Sep 1, FY - 8 | Jan 1, FY - 7 | Sep 1, 99 | Jan 1, 00 |
| Fourth Grade | **104** | **108** | 8 * 12 + 8 | 9 * 12 | Sep 1, FY - 9 | Jan 1, FY - 8 | Sep 1, 98 | Jan 1, 99 |
| Fifth Grade | **116** | **120** | 9 * 12 + 8 | 10 * 12 | Sep 1, FY - 10 | Jan 1, FY - 9 | Sep 1, 97 | Jan 1, 98 |
| Sixth Grade | **128** | **132** | 10 * 12 + 8 | 11 * 12 | Sep 1, FY - 11 | Jan 1, FY - 10 | Sep 1, 96 | Jan 1, 97 |
| Seventh Grade | **140** | **144** | 11 * 12 + 8 | 12 * 12 | Sep 1, FY - 12 | Jan 1, FY - 11 | Sep 1, 95 | Jan 1, 96 |
| Eighth Grade | **152** | **156** | 12 * 12 + 8 | 13 * 12 | Sep 1, FY - 13 | Jan 1, FY - 12 | Sep 1, 94 | Jan 1, 95 |
| Ninth Grade | **164** | **168** | 13 * 12 + 8 | 14 * 12 | Sep 1, FY - 14 | Jan 1, FY - 13 | Sep 1, 93 | Jan 1, 94 |
| Tenth Grade | **176** | **180** | 14 * 12 + 8 | 15 * 12 | Sep 1, FY - 15 | Jan 1, FY - 14 | Sep 1, 92 | Jan 1, 93 |
| Eleventh Grade | **188** | **192** | 15 * 12 + 8 | 16 * 12 | Sep 1, FY - 16 | Jan 1, FY - 15 | Sep 1, 91 | Jan 1, 92 |
| Twelfth Grade | **200** | **204** | 16 * 12 + 8 | 17 * 12 | Sep 1, FY - 17 | Jan 1, FY - 16 | Sep 1, 90 | Jan 1, 91 |

The age of the student is calculated as of September 1st of the current school year. The age is then compared to the grade's predefined age range as shown in Chart C. If the student's age falls within the range for preschool and kindergarten, the category "Within Statutory Range" is assigned. If the student's age falls within the range for all grades other than preschool and kindergarten, the student is included in Within 12 Months category.

If the age is less than the lower value, the "Under-Age" category is assigned. If the student's age is greater than the upper limit, the upper limit is subtracted from the age and the category is assigned according to the difference as follows:

Within 12 Months of Statutory Range

Within 13-23 Months of Statutory Range

24 Months and above Statutory Range

b- Measure Usage

Districts and schools can focus on analysis of patterns of membership intervals that do not span the entire school year. For this purpose the Membership Start Date should be placed in the rows and the Membership End Date in the columns. It is also important to look at memberships by Over-Under Age Categories to identify potential age issues.

c- Dimensions / Attributes

*Grade; Grade End Date Hierarchy*; *Grade Start Date Hierarchy*; *Over-Under Age Category*; *Student ADM Integrity, Student October 1st Integrity, School; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

The following grades do not have specific age designations to calculate the difference between the required age and the student's age. They are labeled and displayed as "Ungraded":

Preschool Disabled, Ungraded Elementary, Ungraded Secondary, Individual Education Program (IEP). 12,463 membership records do not have membership end date, almost all in FYs 2003-2006. When using membership end date, these 12,463 memberships will show under "Not Reported".

A few students have invalid birth dates, causing high ages to be calculated for the student. When calculating student age, if it is more than 26 years, it will be reported as "Not Reported".

## *10-j Student School and Grade Transition*

a- Description

This measure counts transition occurrences made by students between grades, between schools and within and between fiscal years. The measure is designed to explore and analyze student mobility in the Arizona public education system. The measure covers entry to and exit from the system.

The underlying derived Student Grade Transition Fact table tracks the student transition between grade memberships within a school and between schools, within a given fiscal year and from one fiscal year to the next.

Three attributes were defined for this measure (see Appendix H):

- Grade Transition Type – describing the origin (from) and destination (to) grades, e.g. "grade 4 to Grade 5", "Grade 3 to Grade 2". The attribute values include "New to the system" "New to grade 1", and "Exit from the system" when there is no subsequent membership, e.g. "grade 10 to exit".

  *Note: The criteria for identifying a student as new to Arizona public schools is as follows: The student is counted as new in the first fiscal year that we have grade membership information for the student. This is independent of the enrollment codes used by the schools. The codes that identify a student as new to Arizona (E6 & EII) are not used consistently or correctly by the schools. Since information is loaded to the data warehouse starting with 2003 data, every student who has membership in 2003 is counted as being New to Arizona public schools systems as of 2003.

  Exits from memberships in a fiscal year cannot be computed until all of data is brought into the data warehouse for the next year.

- Grade Transition Category – grouping of Transition Types to school levels e.g. "Preschool to Primary Level", "Primary Level to Middle Level", "Exit System from Middle Level".
- Grade Transition Indicator – Partial Transition and Full Transition: Partial transition relates to students that add to their main school membership an additional concurrent membership in another school. Concurrent memberships occur mainly at High School level where students attend concurrently a regular High School and a Technological school. Full Transition means that a student completely leaves one school to attend another school.

This information can be examined by origin and destination schools/districts (from-school/district to-school/district), within fiscal year, origin and destination fiscal years (from fiscal year to fiscal year), transition category, grade transition type, transition indicator, and student demographics. The information can be drilled down to the student level. See illustration in Chart D below.

b- Measure Usage

This measure is the main source for analysis of student mobility through the education system over time. The following topics are just a few examples:

- At what grade levels does the system acquire most of its new students?
- At what grade levels other than 12$^{th}$ grade, is there a significant loss (exit) of students?
- At what grade level and schools is there a significant transition to other schools within a fiscal year?
- Feeding patterns between school levels.
- Grade Demotions, Retentions.
- Concurrent membership.

When conducting analysis, bear in mind that partial transition relates to concurrent memberships and should be excluded from any transition analysis that concerns leaving one school to join another school. For such analysis exercises, full transition should be selected, leaving out partial transition. When analyzing concurrent membership, partial transition should be selected, leaving out full transition.

It is recommended to arrange the "From" information as rows and "To" information as columns.

c- Dimensions/ Attributes

*Fiscal Year Range; From-School-District; To-School-Districts; Grade Transition; Grade Transition Category; Grade Transition Type; Grade Transition Description Hierarchy; From Fiscal Year; To Fiscal Year; Transition Indicator; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

The student transition information for the latest fiscal year included in the data warehouse is not complete since the latest fiscal year does not include transition to future years.

## Chart D

**Student Transition Sample**

**Membership Information Track - 2006 - 2008**

E1,2,3= init; E4,5 subs; N=1st Enrollment in AZ Public Schools

| Enrollment | | | | | | | Withdrawal | | | Grade Membership by Date | | | | | Grade Transition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAIS ID | School ID | School Name | E-Cd | Enrollment Start Date ID | Enrollment End Date ID | Fiscal Year | Withdrawal DateID | W/D Cd | Fiscal Year | School ID | Fiscal Year | Grd | Grade Start Date ID | Grade End Date ID | Grd Tran Typ | From School ID | To School ID | Part | Transition Description |
| **Case 1** | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | N-2 | -1 | 5325 | | New to AZ grade 2 |
| 2564289 | 5325 | Madison Can | N | 20060328 | 20060522 | 2006 | 20060522 | W1 | 2006 | 5325 | 2006 | 2 | 20060328 | 20060522 | | | | | |
| | | | | | | | | | | | | | | | 2-2 | 5325 | 4943 | | Same FY, changed school, same grade |
| 2564289 | 4943 | Pomeroy Eler | E4 | 20060523 | 20060525 | 2006 | | | | 4943 | 2006 | 2 | 20060523 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 2-4 | 4943 | 4943 | | Next FY, same school, skip grade |
| 2564289 | 4943 | Pomeroy Eler | E1 | 20060814 | 20070524 | 2007 | | | | 4943 | 2007 | 4 | 20060814 | 20070524 | | | | | |
| | | | | | | | | | | | | | | | 4-5 | 4943 | 5324 | | Next FY, changed school, promoted |
| 2564289 | 5324 | Madison #1 E | E3 | 20070820 | 20080530 | 2008 | | | | 5324 | 2008 | 5 | 20070820 | 20080530 | | | | | |
| **Case 2** | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | N-5 | -1 | 4943 | | New to AZ, grade 5 |
| 2441600 | 4943 | Pomeroy Eler | N | 20050815 | 20060525 | 2006 | | | | 4943 | 2006 | 5 | 20050815 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 5-6 | 4943 | 4943 | | Next FY, same school, promoted |
| 2441600 | 4943 | Pomeroy Eler | E1 | 20060814 | 20070524 | 2007 | | | | 4943 | 2007 | 6 | 20060814 | 20070524 | | | | | |
| | | | | | | | | | | | | | | | 6-7 | 4943 | 4976 | | Nxt yr, new schl, nxt grade |
| 2441600 | 4976 | Hendrix Junic | E2 | 20070813 | 20080522 | 2008 | | | | 4976 | 2008 | 7 | 20070813 | 20080522 | | | | | |
| **Case 3** | | | | | | | | | | | | | | | | | | | |
| 80250 | 5945 | Toltec Middl | E3 | 20050808 | 20060524 | 2006 | | | | 5945 | 2006 | 6 | 20050809 | 20060524 | | | | | |
| | | | | | | | | | | | | | | | 6-7 | 5945 | 5945 | | Next FY, same school, promoted |
| 80250 | 5945 | Toltec Middl | E1 | 20060809 | 20070524 | 2007 | | | | 5945 | 2007 | 7 | 20060809 | 20070524 | | | | | |
| | | | | | | | | | | | | | | | 7-8 | 5945 | 5945 | | Next FY, same school, promoted |
| 80250 | 5945 | Toltec Middl | E1 | 20070807 | 20070924 | 2008 | 20070924 | W3 | 2008 | 5945 | 2008 | 8 | 20070807 | 20070924 | | | | | Expelled |
| | | | | | | | | | | | | | | | 8-8 | 5945 | 5945 | | Returned same school, same grade |
| 80250 | 5945 | Toltec Middl | R3 | 20071029 | 20080522 | 2008 | | | | 5945 | 2008 | 8 | 20071029 | 20080522 | | | | | |
| | | | | | | | | | | | | | | | 8-9 | 5945 | 81180 | | Next FY, changed school |
| 80250 | 81180 | Pinnacle Virt | E3 | 20080605 | 20080630 | 2008 | | | | 81180 | 2008 | 9 | 20080605 | 20080630 | | | | | |

# Chart D – Cont.

**Student Transition Sample**
**Membership Information Track - 2006 - 2008**

10/21/2008

E1,2,3= init; E4,5 subs; N=1st Enrollment in AZ Public Schools

| Enrollment | | | | | | | Withdrawal | | | Grade Membership by Date | | | | | Grade Transition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAIS ID | School ID | School Name | E-Cd | Enrollment Start Date ID | Enrollment End Date ID | Fiscal Year | Withdrawal DateID | W/D Cd | Fiscal Year | School ID | Fiscal Year | Grd | Grade Start Date ID | Grade End Date ID | Grd Tran Typ | From School ID | To School ID | Part | Transition Description |
| **Case 4** | | | | | | | | | | | | | | | | | | | |
| 111314 | 4955 | Hermosa Vista | N | 20051107 | 20060525 | 2006 | | | | 4955 | 2006 | 5 | 20051107 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 5-6 | 4955 | 4955 | | Next FY, same school, promoted |
| 111314 | 4955 | Hermosa Vista | E1 | 20060814 | 20061026 | 2007 | 20061026 | W1 | 2007 | 4955 | 2007 | 6 | 20060814 | 20061026 | | | | | Left public system |
| | | | | | | | | | | | | | | | 6-7 | 4955 | 5168 | | Returned to public system, changed school |
| 111314 | 5168 | Higley Element | N | 20080429 | 20080522 | 2008 | | | | 5168 | 2008 | 7 | 20080429 | 20080522 | | | | | |
| **Case 5** | | | | | | | | | | | | | | | | | | | |
| 326174 | 5023 | Gilbert Element | E1 | 20050810 | 20050923 | 2006 | 20050923 | W1 | 2006 | 5023 | 2006 | 4 | 20050810 | 20050923 | | | | | |
| | | | | | | | | | | | | | | | 4-4 | 5023 | 4947 | | Changed school mid year |
| 326174 | 4947 | Sirrine Element | E4 | 20050926 | 20060525 | 2006 | | | | 4947 | 2006 | 4 | 20050926 | 20051123 | | | | | |
| | | | | | | | | | | | | | | | 4-3 | 4947 | 4947 | | Demoted same school, mid year |
| | | | | | | | | | | 4947 | 2006 | 3 | 20051128 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 3-4 | 4947 | 4947 | | Next FY, same school, promoted |
| 326174 | 4947 | Sirrine Element | E1 | 20060814 | 20070524 | 2007 | | | | 4947 | 2007 | 4 | 20060814 | 20070524 | | | | | |
| | | | | | | | | | | | | | | | 4-5 | 4947 | 4947 | | Next FY, same school, promoted |
| 326174 | 4947 | Sirrine Element | E1 | 20070813 | 20080522 | 2008 | | | | 4947 | 2008 | 5 | 20070813 | 20080522 | | | | | |
| **Case 6** | | | | | | | | | | | | | | | | | | | |
| 776805 | 4932 | Eisenhower Ele | E1 | 20050817 | 20051004 | 2006 | 20051004 | W1 | 2006 | 4932 | 2006 | 4 | 20050817 | 20051004 | | | | | |
| | | | | | | | | | | | | | | | 4-3 | 4932 | 79225 | | Changed school mid year, demoted |
| 776805 | 79225 | Guerrero Eleme | E2 | 20051114 | 20060309 | 2006 | 20060309 | W1 | 2006 | 79225 | 2006 | 3 | 20051114 | 20060309 | | | | | |
| | | | | | | | | | | | | | | | 3-3 | 79225 | 4923 | | Changed school mid year, same grade |
| 776805 | 4923 | Lincoln Elemen | E5 | 20060320 | 20060525 | 2006 | | | | 4923 | 2006 | 3 | 20060320 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 3-5 | 4923 | 87883 | | Next FY, Changed school, skip grade |
| 776805 | 87883 | Bernard Black E | E3 | 20060731 | 20070607 | 2007 | | | | 87883 | 2007 | 5 | 20060731 | 20070607 | | | | | |
| | | | | | | | | | | | | | | | 5-6 | 87883 | 5231 | | Next FY, Changed school, promoted |
| 776805 | 5231 | Connolly Middl | E4 | 20070910 | 20071127 | 2008 | 20071127 | W1 | 2008 | 5231 | 2008 | 6 | 20070910 | 20071127 | | | | | |
| | | | | | | | | | | | | | | | 6-6 | 5231 | 4928 | | Changed school mid year, same grade |
| 776805 | 4928 | Whittier Eleme | E3 | 20071130 | 20071205 | 2008 | 20071205 | W1 | 2008 | 4928 | 2008 | 6 | 20071130 | 20071205 | | | | | |
| | | | | | | | | | | | | | | | 6-6 | 4928 | 4923 | | Changed school mid year, same grade |
| 776805 | 4923 | Lincoln Elemen | E5 | 20071206 | 20080116 | 2008 | 20080116 | W1 | 2008 | 4923 | 2008 | 6 | 20071206 | 20080116 | | | | | |
| | | | | | | | | | | | | | | | 6-6 | 4923 | 4935 | | Changed school mid year, same grade |
| 776805 | 4935 | Redbird Elemer | E5 | 20080207 | 20080522 | 2008 | | | | 4935 | 2008 | 6 | 20080207 | 20080522 | | | | | |

# Chart D – Cont.

**Student Transition Sample**
**Membership Information Track - 2006 - 2008**

10/21/2008

E1,2,3= init; E4,5 subs; N=1st Enrollment in AZ Public Schools

| Enrollment | | | | | | | Withdrawal | | | Grade Membership by Date | | | | | Grade Transition | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAIS ID | School ID | School Name | E-Cd | Enrollment Start Date ID | Enrollment End Date ID | Fiscal Year | Withdrawal DateID | W/D Cd | Fiscal Year | School ID | Fiscal Year | Grd | Grade Start Date ID | Grade End Date ID | Grd Tran Typ | From School ID | To School ID | Part | Transition Description |
| **Case 7** | | | | | | | | | | | | | | | | | | | |
| 815984 | 79223 | Country Meadc | E1 | 20050815 | 20060329 | 2006 | 20060329 | W1 | 2006 | 79223 | 2006 | 8 | 20050815 | 20060329 | | | | | |
| | | | | | | | | | | | | | | | 8-8 | 79223 | 5129 | | Changed school mid year, same grade |
| 815984 | 5129 | El Mirage Schoc | E4 | 20060410 | 20060525 | 2006 | | | | 5129 | 2006 | 8 | 20060410 | 20060525 | | | | | |
| | | | | | | | | | | | | | | | 8-6 | 5129 | 5500 | 1 | Concurrent membership in other school, lower grade, |
| 815984 | 5500 | Sequoia Choice | E4 | 20060419 | 20060630 | 2006 | | | | 5500 | 2006 | 6 | 20060419 | 20060630 | | | | | |
| | | | | | | | | | | | | | | | Not R | 5500 | 5133 | | Next FY, Changed school, Skip 3 grades = "not reported" |
| 815984 | 5133 | Dysart High Sch | E4 | 20061016 | 20070215 | 2007 | 20070215 | W5 | 2007 | 5133 | 2007 | 9 | 20061016 | 20070215 | | | | | |
| | | | | | | | | | | | | | | | 9-11 | 5133 | 6823 | | Next FY, to detention center, skip grade |
| 815984 | 6823 | Durango Deten | E3 | 20070815 | 20071019 | 2008 | 20071019 | W1 | 2008 | 6823 | 2008 | 11 | 20070815 | 20071019 | | | | | |
| | | | | | | | | | | | | | | | 11-9 | 6823 | 81175 | | Changed school mid year, demoted |
| 815984 | 81175 | Teacher Prepar | E1 | 20071022 | 20071213 | 2008 | 20071213 | W1 | 2008 | 81175 | 2008 | 9 | 20071022 | 20071213 | | | | | |
| | | | | | | | | | | | | | | | 9-10 | 81175 | 5133 | | Changed school mid year, promoted |
| 815984 | 5133 | Dysart High Sch | E4 | 20080110 | 20080219 | 2008 | 20080125 | W1 | 2008 | 5133 | 2008 | 10 | 20080110 | 20080219 | | | | | |

## *10-k Student Community College Membership*

a- Description

This measure counts students that have taken classes in community colleges. It provides information regarding high school students permitted to attend community college classes that count toward the student's high school graduation requirements. ARS § 15-1042.A.2 requires ADE to collect this information from LEA's/schools.

The information in this measure may be analyzed by the number of classes taken in a fiscal year, the district of attendance and the community college attended.

b- Measure Usage

The major usage of this measure is to show the high schools that use community colleges as an instruction source, the extent and time of such use.

c- Dimensions/ Attributes

*Community Colleges; District of Attendance; Fiscal Year; Number of Classes; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-l Student Number of Schools Attended*

a- Description

This measure counts students by the number of distinct schools attended in Arizona public schools from FY 2003 onward. The measure also provides counts by the number of fiscal years attended, the number of distinct grades attended, the range of the fiscal years from first year of attendance to latest year of attendance, and the range of grades attended from earliest grade to the latest grade.

Average Years Per School and Average Years Per Grade are important dimensions for this measure.

The Average Years Per School is calculated as the number of years attended divided by the number of distinct schools attended. An average of 1 implies changing school every year. An average of less than 1 implies changing schools more frequently than once a year. An average greater than 1 implies steady membership. The higher the average, the steadier the student membership.

*Note: For students who have concurrent attendance in 2 schools, which is the case for many high school students that attended a vocational / technology school concurrently, the 2 schools are counted as 1 school to avoid reduction of the average years per school.

The Average Years Per Grade is calculated as the number of years attended divided by the number of distinct grades attended. An average of 1 implies that the student has been

progressing as expected. An average greater than 1 implies slower progress than expected. An average less than 1 implies faster progress.

*Note: Where the number of grades attended is less that the number of grades in the grade range (e.g. K-6 range includes 7 grades), the student skipped grades somewhere along his/her history. Where the number of grades attended is higher that the number of grades in the grade range the student was demoted somewhere along his/her history.

b- Measure Usage

The average number of years per school is an indicator of stability of student populations. Attention should be paid to populations that show an average less than or equal to 1. For populations with averages greater than 1 discretion should be applied relative to the grade range. Some grade ranges may include grades from elementary level, mid level and high school level and involve a logical transition among 3 different schools.

Average years per grade indicate weak student populations when the average is greater than 1.

c- Dimensions/ Attributes

*Average Years Per Grade; Average Years Per School; Fiscal Year Range; Grade Range; Number of Grades Attended; Number of Schools Attended; Number of Years Attended; School District; Students*

Please refer to Chart B for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## Student Resource Measures- A Comprehensive Overview of Measures (10m – 10u)

Student resource information includes 5 major concepts:

1. Membership session days
2. Available resource session days
3. Utilized resource session days (Attendance)
4. Resource loss session days
5. Resource efficiency

A student's membership interval in a school defines the number of session days available for his/her access to instruction resources. The extent of the membership known as Full Time Equivalency (FTE) defines the portion of instruction resources a student can utilize. Thus the product of membership session days and membership FTE is viewed as student available resource, expressed in session days. Attendance session days, which is the sum of attendance time during the membership interval, is viewed as resource utilized. Resource loss is the difference between available resource and the resource utilized. Resource efficiency is the ratio of utilized resource to available resource.

These concepts were calculated as measures both at a membership interval level and at an annual level.

1. Membership session days

A membership interval is defined as a period of time in a fiscal year that a student has been continuously enrolled in a school. A membership interval carries a start and an end date. The start date is the date of enrollment/reenrollment, and end date is the date of student withdrawal or the last day of school, whichever comes first. Membership session days is a count of school session days in which the student was enrolled in a school.

In a majority of cases, a membership interval is the same number of days that the school was in session in a given year, based on the school calendar where the start and end dates are the first day and the last day of the school (usually about 180 days). If the student transfers between schools in the same school year, there would be more than one membership interval for the student in that year.

If the student has attended more than one grade during the membership interval, in the same school, the latest grade is stored for the student.

Individual school calendars are used to identify the days in which each school is in session; the school calendar indicates the number of the session day and excludes weekends and holidays. If a school does not have its own calendar, its parent's calendar is used. Most schools have less than 200 session days. Schools using online instruction (TAPBI) were permitted to teach 365 (366 for leap year) days up to fiscal year 2009. Starting with 2009 they are required to submit a calendar that excludes weekends and holidays, i.e. 201 session days.

A student's annual membership session days is the aggregation of session days of the student's membership intervals. The student's latest school and grade in the year are stored for the year and used in the measures.

2. Available resource session days

Available resource amount for a membership interval is calculated as the student's membership session days in that interval weighted by the applicable FTE for the student's membership interval. For example, if the student attended a school from 8/04/08 to 9/30/08, his membership session days would be 37 days. Assuming his FTE for this interval was 0.75, available resource amount would be 27.75 days (37 * 0.75).

Annual available resource amount is the aggregation of all the student's intervals amounts for the year. The latest school and grade for the student are stored for the year and used in the measure.

In fiscal year 2002 through 2009, total FTE for a single student attending 2 schools concurrently was allowed to be greater than 1.0. In some cases each school membership has the student FTE =1.0 with a total FTE=2.0 for the student. From fiscal year 2010 on, total FTE for a student cannot exceed 1.0 except for students attending a regular high school and a vocational technology school, who are allowed to have a total of 1.25 FTE.

3. Utilized resource (Attendance)

Prior to 2009 high schools had an option to report either attendance or absence for the students. The reporting option that a high school chose would apply to all students for the entire school year. Pre-schools were required to report attendances and all other grades (KG - 9th) were required to report absences. Attendances were reported in minutes and absences were reported in increments of ¼ day. High school students with minimum attendance of 240 minutes in one day, and preschool students with minimum of 72 minutes in one day, have been considered to have full attendance for that day.

For high schools that chose to report attendances, and for preschools, their reported minutes of attendance, were converted to attendance days for every student membership interval.

Starting with 2009 only absence reporting is accepted from high schools. Preschools are still required to report attendance as they did prior to 2009; all other grades (KG - 9th ) continue to report absences.

When attendance is not reported, it is derived from the reported absences. *Derived attendance* for an interval is calculated by subtracting number of absence days from the sum of Available Resources for the interval.

It should be noted that schools reporting student absence have to report absence weighed by the student FTE. The same adjustment applies to reported attendance. Some special cases should be noted:

- If available resource amount is greater than zero and neither absence nor attendance are reported, or both absence and attendance are reported as zeros, then absence amount is set to zero and perfect attendance is assumed. In such cases resource utilized = resource available and resource efficiency =100%

- Some students have been enrolled with FTE =0. These are students who are not funded. The majority enroll to be able to take the high school AIMS test again. For such students, both absence and attendance are set to zeros, resource loss is set to zero and resource efficiency is set to "Not Reported".

- In cases where reported or derived attendance is higher than available resource, attendance is adjusted down to available resource.

  When calculating attendance amount for an interval, if the student attended multiple grades in the interval, attendance amount is the aggregation of all amounts for the interval, and the latest grade for the student is stored and used in the measures.

  A student's annual utilized resource is the aggregation of the student's interval utilized resources. The latest school and grade are stored for the student and used in the measure.

4. Resource loss session days

   Resource Loss for an interval is the difference between the student available resource amount and the student attendance amount in that interval. (See above for calculation of these amounts.) In normal situations where the student attends one school with FTE = 1.0, resource loss would be equal to the number of absence days.

   When calculating resource loss for an interval, if the student attended multiple grades, resource loss for the interval is the aggregation of all amounts in the interval, and the last grade for the student is stored.

   A student's annual resource loss is the aggregation of the student's interval resource losses. The student's latest school and grade are stored for the student and used in the measure.

5. Resource efficiency

   Resource Efficiency for an interval is the ratio of student's attendance amount to the student's available resource amount in that interval. This ratio shows how efficiently the student used the resources allocated to him/her.

   A student's annual resource efficiency is the ratio of the student's annual attendance amount to the student's annual available resource amount. The latest school and grade are stored for the student and used in the measure.

**Student Resource Measures and Dimensions**

The following chart shows the 9 measures addressing student resources with their dimensions.

5 measures are dedicated to interval resources. 4 of the 5 measures aggregate resources session days (10-m, 10-n, 10-o, 10-p). One measure counts student's membership intervals by the various resources (10-q).

4 measures are dedicated to annual resources (10-r, 10-s, 10-t, 10-u). 3 of the 4 measures aggregate resources session days (10-r, 10-s, 10-t). One measure counts students by the various resources (10-u).

## Chart D-A: Student Resource Measures and Related Dimensions (10-m-10-u)

| | Interval | | | | | Annual | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **10-m** | **10-n** | **10-o** | **10-p** | **10-q** | **10-r** | **10-s** | **10-t** | **10-u** |
| **DIMENSIONS** | Student Membership Interval Membership Session Days | Student Membership Interval Attendance Session Days | Student Membership Interval Available Session Days | Student Membership Interval Loss Session Days | Student Membership Interval Resources Count | Student Annual Attendance Session Days | Student Annual Available Session Days | Student Annual Loss Session Days | Student Annual Resource Count |
| **FY** | v | v | v | v | v | v | v | v | v |
| **Grade** | v | v | v | v | v | v | v | v | v |
| **School** | v | v | v | v | v | v | v | v | v |
| **Student** | v | v | v | v | v | v | v | v | v |
| **Membership Start Date** | v | v | v | v | v | - | - | - | - |
| **Membership End Date** | v | v | v | v | v | - | - | - | - |
| **Membership Session Days** | v | - | - | - | v | - | - | - | - |
| **Attendance Session Days** | - | v | - | - | v | v | - | - | v |
| **Available Session Days** | - | - | v | - | v | - | v | - | v |
| **Loss Session Days** | - | - | - | v | v | - | - | v | v |
| **Resource Efficiency** | - | v | - | - | v | v | - | - | v |

All session day dimensions (membership, attendance, available resource, and resource loss) are constructed as a hierarchy of ranges with 4 categories. The highest category presents ranges in increments of 100 days; the next one has increments of 50 days, the following one has increments of 10 days and the last and most detailed one has increments of 1 day. When such a dimension is selected as a hierarchy the user can drill down to any range of choice.

Please note that particular student interval resources may fall in different session days categories. For example a student with a membership interval of 100 session days and 0.5 FTE will have 50 days of available resource. Supposing that the student has 40 days of attendance in the membership interval, then the student's interval:

- Membership Session Days fall in the >90-100 category
- Available Resource Session Days fall in the >40-50 category
- Attendance Session Days fall in the >30-40 category

*Note: It is recommended to first explore the measures that count students intervals and students by the various resources (10-q and 10-u).

## *10-m Student Membership Interval Membership Session Days*

a- Description

This measure provides aggregations of membership interval session days by session days range categories: The highest category defines ranges in increments of 100 days, the next category in increments of 50 days, the next in increments of 10 days and the lowest in increments of 1 day. Thus the measure shows for selected fiscal years, schools, grades and student attributes how many membership session days were included in the membership intervals that contained, for example, 0-100 days, or 0-50 days or 0-10 days or exactly 5 days. The measure also includes the dimensions of membership start date and membership end date, so it can show how many session days were contained in particular membership intervals, e.g. an interval that started on 8/11/08 and ended on 5/21/09 covers the entire school year.

b- Measure Usage

c- Dimensions/ Attributes

*Interval Membership Session Days Hierarchy; Membership End Date Hierarchy; Membership Start Date Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-n Student Membership Interval Attendance Session Days*

a- Description

This measure provides aggregations of membership interval attendance session days by attendance session days range categories. The highest category defines ranges in increments of 100 days, the next in increments of 50 days, the next in increments of 10 days and the lowest in increments of 1 day. Thus the measure shows for selected fiscal years, schools, grades and student attributes how many attendance session days were used in each attendance range category, e.g. 0-100 days of attendance, 0-50 days, 0-10 days or exactly 7 days. The measure also provides aggregates of attendance session days by membership start date and end date and by resource efficiency. (Resource efficiency is the ratio of interval attendance session days to the interval available resource session days).

b- Measure Usage

For selected membership start and end date, the measure can show aggregates of attendance days by level of efficiency. This information can be helpful to schools in identifying periods and student groups with slipping attendance.

c- Dimensions/ Attributes

*Interval Attendance Session Days Hierarchy; Interval Resource Efficiency Hierarchy; Membership End Date Hierarchy; Membership Start Date Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-o Student Membership Interval Available Session Days*

a- Description

Available resource session days for a student is a product of student's membership session days and student's FTE during the membership interval. It should be noted that the base calculation is done at a single membership day, thus in case FTE changed during the membership it is accounted for. The measure provides aggregations of interval available resource session days by categories of session days ranges. Thus the measure shows for selected fiscal years, schools, and student attributes how many available resource session days were generated by FTE weighted membership session days. The measure also provides aggregates by membership start and end dates enabling to examine the aggregates for particular intervals of the school year.

b- Measure Usage

c- Dimensions / Attributes

*Interval Available Session Days Hierarchy; Membership End Date Hierarchy; Membership Start Date Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

## *10-p Student Membership Interval Loss Session Days*

a- Description

Interval loss session days is the difference between interval available resource session days and interval attendance session days.

The measure provides aggregations of interval loss session days by categories of session days ranges. Thus the measure shows for selected fiscal years, schools and student attributes how many session days were lost. The measure also provides aggregates by membership start and end dates enabling the ability of examining the loss for particular intervals of the school year.

b- Measure Usage

c- Dimensions / Attributes

*Interval Loss Session Days Hierarchy; Membership End Date Hierarchy; Membership Start Date Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-q Student Membership Interval Resources Count*

a- Description

The measure counts the school membership intervals of students by session days categories of the various resources, resource efficiency, fiscal year, grade, school and student attributes. The measure answers questions like:
* How many membership intervals fall in attendance category of 0-100 days?
* How many membership intervals have loss of 0-10 session days?
* How many membership intervals have efficiency of 95-100%?

Please note that the resource efficiency dimension has a "Not Reported" attribute. The Not Reported attribute relates to student's membership intervals that have zero available resources due to FTE =0 and zero attendance. Overall there are 15,253 intervals for the "Not Reported" attribute, 978 of which are in FY 2009. Students with membership interval FTE =0 are not funded. They enroll for the capability to retake high school AIMS in order to graduate.

b- Measure Usage

It is recommended to use only one resource session days dimension per pivot table report. Using more then on e dimension e.g. Attendance Session Days and Loss Session Days creates more combinations than the eye can grasp. If there is a need to compare counts by the various resources it is recommended to create multiple reports side by side.

c- Dimensions / Attributes

*Interval Attendance Session Days Hierarchy; Interval Available Session Days Hierarchy; Interval Loss Session Days Hierarchy; Interval Membership Session Days Hierarchy; Interval Resource Efficiency Hierarchy; Membership End Date Hierarchy; Membership Start Date Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## 10-r Student Annual Attendance Session Days

a- Description

This measure provides aggregations of annual attendance session days by attendance session days range categories. The annual attendance for a student is the sum of the student's attendance in the student's membership intervals in a single school year. The highest category defines ranges in increments of 100 days, the next in increments of 50 days, the next in increments of 10 days and the lowest in increments of 1 day. Thus the measure shows for selected fiscal years, schools, grades and student attributes how many attendance session days were used in each attendance range category, e.g. 0-100 days of attendance, 0-50 days, 0-10 days or exactly 7 days. The measure also provides aggregates of attendance session days by resource efficiency. (Resource efficiency is the ratio of annual attendance session days to the annual available resource session days).

b- Measure Usage

For selected membership start and end date, the measure can show aggregates of attendance days by level of efficiency. This information can be helpful to schools in identifying periods and student groups with slipping attendance.

c- Dimensions / Attributes

*Annual Attendance Session Days Hierarchy; Annual Resource Efficiency Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## 10-s Student Annual Available Session Days

a- Description

Annual Available resource session days for student is the sum of the student's available resource session days across the student's membership intervals in a single year. The measure provides aggregations of annual available resource session days by categories of session days ranges. Thus the measure shows for selected fiscal years, schools, and student attributes how many available resource session days were there in the various categories.

b- Measure Usage

c- Dimensions / Attributes

*Annual Available Session Days Hierarchy; Fiscal Year; Grade; School District; Students*
Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-t Student Annual Loss Session Days*

a- Description

Annual Loss session days for a student is the difference between the student's annual available resource session days and the student's annual attendance session days.

The measure provides aggregations of annual loss session days by categories of session days ranges. Thus the measure shows for selected fiscal years, schools, and student attributes how session days were lost during a fiscal year.

b- Measure Usage

c- Dimensions / Attributes

*Annual Loss Session Days Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

## *10-u Student Annual Resources Count*

a- Description

The measure counts students by annual session days categories of the various resources, resource efficiency, fiscal year, grade, school and student attributes. The measure answers questions like:
* How many students fall in attendance category of 0-100 days during a fiscal year?

* How many students have loss of 0-10 session days during a fiscal year?
* How many students have efficiency of 95-100% during a fiscal year?

Please note that the resource efficiency dimension has a "Not Reported" attribute. The "Not Reported" attribute relates to student's that have zero available resources due to FTE =0 and zero attendance during the entire fiscal year. Overall there are 9,095 students in the "Not Reported" attribute, 604 of which are in FY 2009. Students with FTE =0 are not funded. They enroll for the capability to retake high school AIMS in order to graduate.

b- Measure Usage

It is recommended to use only one resource session days dimension per pivot table report. Using more then one dimension e.g. Attendance Session Days and Loss Session Days creates more combinations than the eye can grasp. If there is a need to compare counts by the various resources it is recommended to create multiple reports side by side.

c- Dimensions / Attributes

*Annual Attendance Session Days Hierarchy; Annual Available Session Days Hierarchy; Annual Loss Session Days Hierarchy; Annual Resource Efficiency Hierarchy; Fiscal Year; Grade; School District; Students*

Please refer to Chart D-A for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

# B - Needs and Program Participation Measures

Student Needs and Program Participation measures are organized in two groups, Measures that provide fiscal year based information called Annual measures and cumulative measures that provide longitudinal information across fiscal years called History. The cumulative measures were derived from the annual ones.

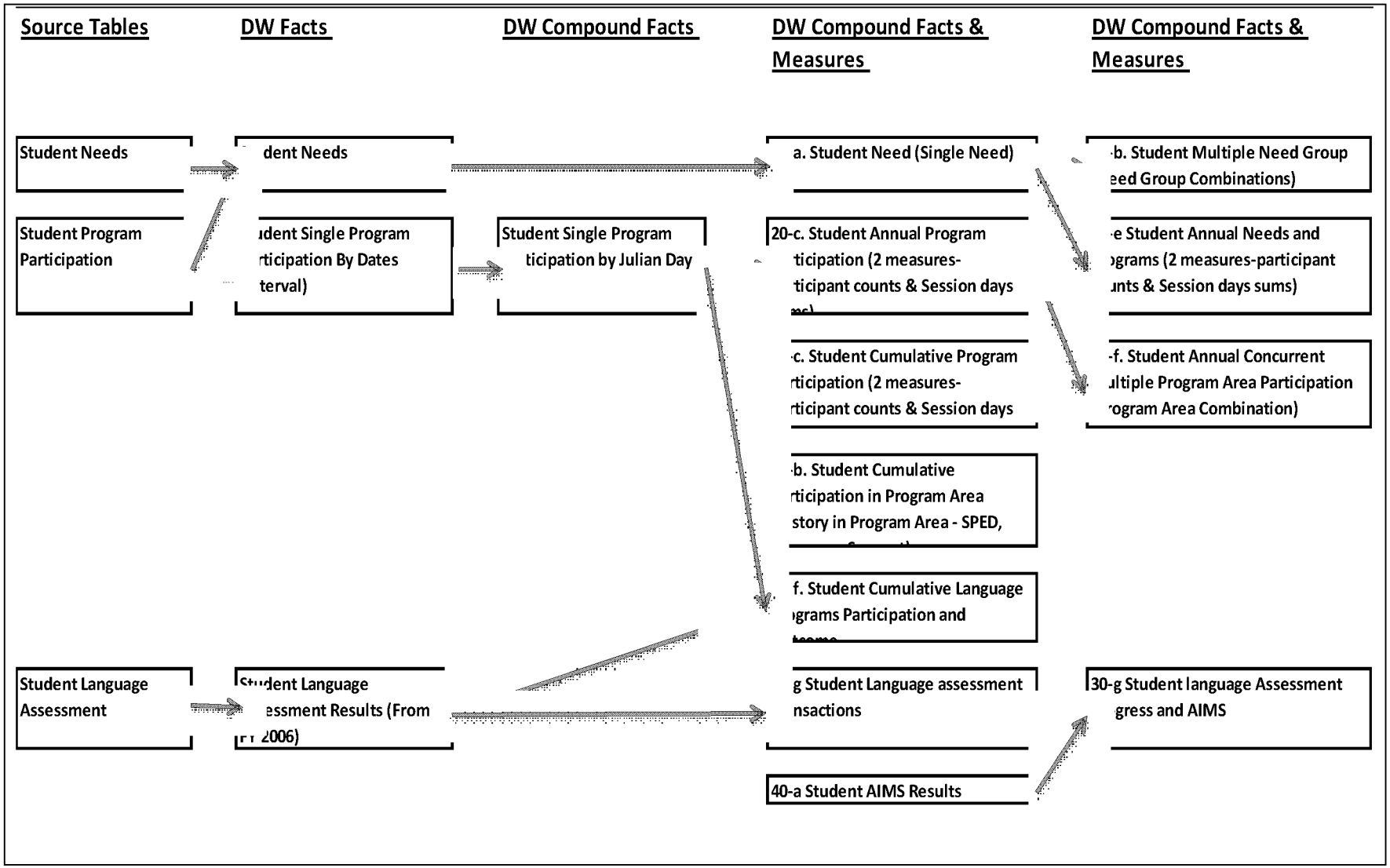
The annual measures provide the following information: counts of individual need assignments to students and by combination of need category (group) assignments, counts of program participations in individual programs and aggregates of participation session days in individual programs, counts of needs assignments serviced by programs and aggregates of session days of needs assignment serviced by programs, counts of students participating in multiple programs concurrently, counts of Oral, Reading, and Writing language assessments taken by students.

The history measures provide the following information: counts of participants in each of the program areas over time, counts of participants in each program over time, aggregation of participants session days in each of the programs over time, counts of students in language program by the number of years in language program and proficiency outcome, counts of language assessment progress steps and related AIMS results.

Chart E shows the process of constructing all Needs and Program Participation measures and will assist you in understanding the relationships among the measures. Chart F shows with which dimensions each measure is associated and provide a description for every dimension.

Chart F-a and Chart F-b track a few students' activities and show the transformation and aggregation of data for various annual program participation measures. Chart F-c tracks a few students' ELL assessments and participation in language programs.

## Chart E – Needs and Program Participation Measures



## Chart F - Dimensions of Needs and Program Participation Measures

| Related Dimension | 20-a Student Needs | 20-b Student Multiple Need Group | 20-c Student Annual Program Participation | 20-e Student Annual Needs and Programs | 20-f Student Annual Concurrent Multiple program Participation | 20-g Student Language Assessment Transaction | 30-b Student Cumulative Participation In Program Area | 30-c Student Cumulative Program Participation | 30-f Student Cumulative Language Programs Participation And Outcome | 30-g Student Language Assessment Progress and AIMS |
|---|---|---|---|---|---|---|---|---|---|---|
| Assessment Date | | | | | | x | | | | |
| AIMS Results - Mathematics | | | | | | | | | | x |
| AIMS Results - Reading | | | | | | | | | | x |
| AIMS Results - Science | | | | | | | | | | x |
| AIMS Results - Writing | | | | | | | | | | x |
| ELL Assessment | | | | | | x | | | | |
| ELL Assessment Proficiency Progress - Oral | | | | | | | | | | x |
| ELL Assessment Proficiency Progress - Reading | | | | | | | | | | x |
| ELL Assessment Proficiency Progress - Writing | | | | | | | | | | x |
| ELL Assessment Result | | | | | | x | | | | |
| ELL Assessment Result Fiscal Year Range | | | | | | | | | x | |
| ELL Assessment Result Progression | | | | | | | | | x | x |
| ELL Proficiency Level | | | | | | x | | | | |
| Fiscal Year | x | x | x | x | x | | | | | |
| Fiscal Year Range | | | | | | | x | x | | |
| From ELL Assessment Result | | | | | | | | | | x |
| From School | | | | | | | | | | x |
| Grade | x | x | x | x | x | x | | | | |
| Grade Range | | | | | | | x | x | x | x |
| Language Program Participation Fiscal Year Range | | | | | | | | | x | |
| Need | x | | | x | | | | | | |
| Need Duration Session Days | | | | x | | | | | | |
| Need End Date | x | | | | | | | | | |
| Need Group Hierarchy | x | | | x | | | | | | |
| Need Group Combinations | | x | | | | | | | | |
| Need Start Date | x | | | | | | | | | |
| Needs | x | | | x | | | | | | |

| Related Dimension | 20-a Student Needs | 20-b Student Multiple Need Group | 20-c Student Annual Program Participation | 20-e Student Annual Needs and Programs | 20-f Student Annual Concurrent Multiple program Participation | 20-g Student Language Assessment Transaction | 30-b Student Cumulative Participation In Program Area | 30-c Student Cumulative Program Participation | 30-f Student Cumulative Language Programs Participation And Outcome | 30-g Student Language Assessment Progress and AIMS |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of Distinct Programs | | | | | x | | x | | | |
| Number of Evaluations | | | | | | | | | x | |
| Number of Need Determination Events | | | x | | | | | | | |
| Number of Years In Need | | | | | | | | | | |
| Number of Years In Program | | | | | | | x | x | x | |
| Participation Rate | | | x | | | | | x | | |
| Participation Session Days | | | x | | | | | x | x | |
| Program Area | | | | x | x | | x | x | | |
| Program Hierarchy | | | x | x | | | | x | | |
| Program Name | | | x | x | | | | x | | |
| Program Participation End Date | | | x | | | | | | | |
| Program Participation Start Date | | | x | | | | | | | |
| School District | x | x | x | x | x | x | x | x | x | |
| SPED Grade | | | x | x | x | | | | | |
| SPED Grade Range | | | | | | | x | x | | |
| SPED Primary Need | | | x | x | | | | | | |
| SPED Self Contained Eligibility | | | x | x | | | | | | |
| SPED State Fund Eligibility | | | x | x | | | | | | |
| Student ADM Integrity | x | | | | | | | | | |
| Student Age | | | x | | | x | | | | |
| Student ELL Integrity | x | | | | | | | | | |
| Student FED SPED Integrity | x | | | | | | | | | |
| Student SPED Integrity | x | | | | | | | | | |
| Student Support Program Integrity | x | | | | | | | | | |
| Students | x | x | x | x | x | x | x | x | x | x |
| To ELL Assessment Result | | | | | | | | | | x |
| To School | | | | | | | | | | x |

*See Appendix ZZ for descriptions.*

## *20-a Student Needs*

a- Description

This measure provides information about distinct needs assigned to students, regardless of any services or program participation information submitted by the school.

A student may have a necessity that requires services beyond the regular classroom instruction. Such necessity is termed a need. Needs that are defined and funded by federal titles, State Aid and state block grants are reported by the schools to SAIS system. A presumed student need is confirmed or refuted by an assessment conducted by the student school. Student need information submitted to SAIS is valid for one fiscal year.

This measure provides information for the trend and pattern analysis of distinct needs by fiscal year, need group, student demographics, and school/district criteria.

If a student has membership information and has no reported needs and receives no services, the student is labeled as "Independent", and is included in the Independent Need group. When a student has multiple enrollments a fiscal year only the last enrollment is used to create Independent Need. The start date and end date for the Independent Need were set up to the student school membership start and end dates. Enrollment type NDM (Needs Dummy Membership) is excluded from the "Independent" Needs.

If grade is missing from Needs information, SPED grade is used for SPED Needs; if not available the grade from membership is used. If neither is available then the grade is set to "Not Reported".

Student Needs transactions go through various integrity checks, relevant to the type of Need Group. Integrity dimensions are discretionary. They should be used as filters to exclude failed transactions.

- **ADM Integrity** applies to all Need Groups, for all available fiscal years. Approximately 99.87 % of Student Needs transactions since 2003 passed ADM integrity. Student ADM Integrity is the consolidation of 40$^{th}$ day and 100$^{th}$ day integrity. Only transactions that failed both 40$^{th}$ day and 100$^{th}$ day are defined as "Failed"
- **Student ELL Integrity** - When using this dimension only Language Need Group should be selected.
- **Student FED SPED Integrity** and **Student SPED Integrity** - When using these dimensions only Special Education Need Group and Fiscal Years later than 2005 should be selected. Special Education integrity data is valid starting with fiscal year 2006.
- **Student Support Program Integrity** - This integrity check applies to support programs only. Support Programs offer services to the following Need Groups:

  Gifted, Economic Disadvantage, Social Disadvantage, Behavioral, Health, Academic Disadvantage, and No Need

  When working with this dimension, these Need Groups only, for fiscal years later than 2005 should be selected. Support Program integrity data is valid starting with fiscal year 2006.

  When integrity check results were not available in the source system, the integrity status was set to "Not Reported".

b- Measure Usage

This measure may be used to identify economically disadvantaged students. The following Needs are considered as economically disadvantaged: reduced price lunch, free lunch, homeless, migrant, or unaccompanied homeless youth. Counts of students with such Needs as of October 1 or the closest school day to October 1 are reported to the Federal Department of Education.

c- Dimensions / Attributes

*Fiscal Year; Grade; Need; Need End Date; Need Group Hierarchy; Need Start Date; Needs; School District; Student ADM Integrity; Student ELL Integrity; Student Fed SPED Integrity; Student SPED Integrity; Student Support Program Integrity; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students' needs may be defined in SAIS in need transactions or in program participation transactions. All needs present in SAIS were brought to the Data Warehouse. At times the entire school is eligible for free/reduced lunch (NCLB1, NCLB2). In all cases Economic Disadvantage needs (See Appendix J - Need Groups for details) are submitted by schools for the students, although they don't necessarily have a program participation record.

In cases where need end date was missing from SAIS transactions, the latest membership end date was used. In the absence of membership end date, the date of last session day was used, in the absence of school calendar the last day of fiscal year was used. For fiscal year 2003, 60,891 need transactions carry a start date of 01/01/1900, which is a default for missing date information. These missing start dates are set to Not-Reported.

## *20-b Student Multiple Need Group*

a- Description

This measure provides information about multiple needs assigned to students by associating the students with Combinations of Need Groups.

There are 40 distinct student needs in use, grouped in SAIS in 9 groups. Students may have needs in various areas e.g. Special Education, Economic Disadvantage, English Proficiency. To be able to analyze the distribution of such students, combinations of all needs would be required. With 40 distinct needs the number of combinations is prohibitive, hence need group combinations are used.

"No Need" is used in SAIS for students who participate in programs that are offered as general support to students, not requiring that participating students be identified with any specific need.

An additional group was defined for students who have school membership information, but do not have any need transactions nor any program participation transactions. This group was labeled "Independent", and does not include enrollment type "NDM".

b- Measure Usage

Analysis of trends in needs compositions over time, by school attributes and student attributes.

c- Dimensions / Attributes

*Fiscal Year; Grade; Need Group Combinations; School District; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students' needs may be defined in SAIS in Need transactions or in program participation transactions. All needs present in SAIS were brought to the Data Warehouse.

## *20-c-10 Student Annual Program Participation Count*

a- Description

Student Annual Program Participation Count is an aggregation of student's participation in various programs by fiscal year and school. There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, and Support.

The measure provides participation counts per program by number of participation session days and other criteria.

It should be noted that aggregations in this measure are not based on unique student id, but based on the participation of the student in various programs and schools. Therefore, if the student has participated in multiple programs in one fiscal year, his participation will be counted multiple times. The earliest start date and the latest end date of student participation is used for each program in a school. However, the session days are counted for distinct days of participation in a program, excluding any gaps.

In addition to Session Days dimension, Student Annual Program Participation measure can be viewed by Participation Rate and Number of Need Determination Events.

Participation Rate is calculated as the ratio of program participation session days to school session days. If a student participates in the same program across different school memberships, participation rate is calculated for each school. In this case the participation rate is usually below 100%.

Number of Need Determination Events is derived from the distinct program start dates. High number of determination events indicates difficulties in the need determination process.

For Special Education programs, the measure can be also viewed by SPED Grade and SPED Primary Need, self containment and Federal funding.

b- Measure Usage

To analyze SPED Needs information regarding SPED Self Contained Eligibility and SPED State Fund Eligibility, expand Program Name - More Fields attribute and select the desired information.

c- Dimensions / Attributes

*Fiscal Year; Grade; Number of Need Determination Events; Participation Rate; Participation Session Days; Program Hierarchy; Program Name; Program Participation End Date; Program Participation Start Date; School District; SPED Grade; SPED Primary Need; SPED Self Contained Eligibility; SPED State Fund Eligibility; Student Age; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

When end date of student participation is missing in SAIS, the last day of the student's membership in the school will be used instead.

For a substantial number of Special Education students, Primary Need was either missing from SAIS or had multiple different values. In both cases it will be shown as Not Reported.

## *20-c-20 Student Annual Program Participation Session Days*

a- Description

Student Annual Program Participation Session Days aggregates participation session days in a single program during a fiscal year for a providing school. When multiple needs are serviced by the same program, each participation day is counted only once for the program duration.

There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, Support.

This measure provides sums of session days per program by number of participation session days and other criteria. Participation Session Days are used here also as a Dimension, ranging from 0 to 366. For example, if 10 students participated in a program for 20 days each, 100 students participated in a program for 179 days, and 50 students participated in a program for 180 days, the session days sum will show as:

| Session Days | Sum of Program Participation Days | Calculation |
|---|---|---|
| 20 | 200 | 10 * 20 |
| 179 | 17,900 | 100 * 179 |
| 180 | 9,000 | 50 * 180 |

It should be noted that aggregations in this measure are not based on unique student id, but based on the participation of the student in various programs and schools. Therefore, if the student has participated in multiple programs in one fiscal year, his participation will be counted in each program separately. The earliest start date and the latest end date of student participation is used for each program in a school. However, the session days are counted for distinct days of participation in a single program, excluding any gaps.

In addition to Session Days dimension, this measure can be viewed by Grade, Student Age, Participation Rate and Number of Need Determination Events.

Participation Rate is calculated as the ratio of program participation session days to school session days. Number of Need Determination Events is derived from the distinct program start dates. High number of determination events indicates difficulties in the need determination process.

For Special Education programs, the measure can be also viewed by SPED Grade and SPED Primary Need, self containment and federal funding.

b- Measure Usage

To analyze SPED Needs information regarding SPED Self Contained Eligibility and SPED State Fund Eligibility, expand Program Name - More Fields attribute and select the desired information.

c- Dimensions / Attributes

*Fiscal Year; Grade; Number of Need Determination Events; Participation Rate; Participation Session Days; Program Hierarchy; Program Name; Program Participation End Date; Program Participation Start Date; School District; SPED Grade; SPED Primary Need; SPED Self Contained Eligibility; SPED State Fund Eligibility; Student Age; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

When end date of student participation is missing in SAIS, the last day of the student's membership in the school will be used instead.

For a substantial number of Special Education students, Primary Need was either missing from SAIS or had multiple different values. In both cases it will be shown as Not Reported.

## *20-e-10 Student Annual Needs and Programs Count*

a- Description

Annual Needs and Programs Count is a count of participants in a program to service a particular need by fiscal year and school.

There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, and Support. For the majority of the students, need duration session days are the same as the program participation days. However for students with Special Education needs there are a substantial number of cases where need diagnosis changed while continuing in the same program.

There are over 40 needs defined for the students in the public school system in Arizona, categorized in 9 need groups. Some needs do not have associated program participation information in SAIS. The needs with missing program participation information generally belong to Economic Disadvantage, Social Disadvantage, and Health need groups.

When a Need does not have associated program participation information, the Need is not included in this measure.

This measure counts the unique combinations of Programs and the Needs they served, for the student in a fiscal year in a school. When a student participates in multiple Programs to receive services for the same Need all combinations are counted; similarly, when a student participates in one Program to receive services for multiple Needs, all combinations are counted. For each combination of Need and Program a distinct count of session days is provided. Session days are grouped by intervals of 100 days and may be expanded several layers, as low as one-day intervals.

This measure provides information for the analysis of distinct needs/programs combinations by fiscal year, grade, program area, need group, student demographics, and school/district criteria. For Special Education programs, the measure can be also viewed by SPED Grade and SPED Primary Need.

b- Measure Usage

This measure shows higher counts for needs and need groups than those provided by measure 20-a (Student Needs). This difference is caused by the same need receiving service from multiple programs.

c- Dimensions / Attributes

*Fiscal Year; Grade; Need; Need Duration Session Days; Need Group Hierarchy; Needs; Program Area; Program Hierarchy; Program Name; School District; SPED Grade; SPED Primary Need; SPED Self Contained Eligibility; SPED State Fund Eligibility; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

## *20-e-20 Student Annual Needs and Programs Session Days*

a- Description

Annual Needs and Programs Session Days aggregates the students program participation session days to service a particular need in a school by fiscal year.

There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, and Support.

There are over 40 needs defined for the students in the public school system in Arizona, categorized in 9 need groups. Some needs do not have associated programs participation information in SAIS. The needs with missing program participation information generally belong to Economic Disadvantage, Social Disadvantage, and Health need groups.

When a Need does not have associated program participation information, the Need is not included in this measure.

This measure aggregates the number of program participation session days for the unique combinations of Programs and the Needs they served, for the student in a fiscal year in a school. When a student participates in multiple Programs to receive services for the same Need the participation days are aggregated for each program need combination; similarly, when a student participates in one Program to receive services for multiple Needs, the participation days are aggregated for each combination of need/program. For each combination of Need and Program a distinct count of participation days is provided which excludes any gaps in service. Session days are also used as dimension in this measure; they are grouped by intervals of 100 days and may be expanded several layers, as low as one-day intervals.

This measure provides sums of participation days per program/need combination by number of session days and other criteria. Session Days are used here also as a Dimension, ranging from 0 to 366. For example, if 10 students participated in a program for 20 days each, 100 students participated in a program for 179 days, and 50 students participated in a program for 180 days, the session days sum will show as:

| Session Days | Sum of Program Participation Days | Calculation |
|---|---|---|
| 20 | 200 | 10 * 20 |
| 179 | 17,900 | 100 * 179 |
| 180 | 9,000 | 50 * 180 |

It should be noted that aggregations in this measure are not based on unique student id, but based on the participation of the student in various programs and schools.

In addition to Session Days dimension, this measure provides information for the analysis of distinct needs/programs combinations by fiscal year, grade, program area, need group, student demographics, and school/district criteria. For Special Education programs, the measure can be also viewed by SPED Grade and SPED Primary Need.

b- Measure Usage

c- Dimensions / Attributes

*Fiscal Year; Grade; Need; Need Duration Session Days; Need Group Hierarchy; Needs; Program Area; Program Hierarchy; Program Name; School District; SPED Grade; SPED Primary Need; SPED Self Contained Eligibility; SPED State Fund Eligibility; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

## *20-f Student Annual Concurrent Multiple Program Participation*

a- Description

Student Concurrent Multiple Program Participation measure provides consolidated information on student participation in multiple programs in a single fiscal year, regardless of the school providing the service. As there are over 80 programs, the only practical way to account for combinations of programs was to use combinations of the 3 program areas: Special Education, Language, Support Program/ Services.

The major purpose of this measure is to explore the numbers of students who required more assistance than others in terms of concurrently participating in multiple program areas. Students are counted in program area combinations, number of distinct programs they attended and also by Fiscal Year, District/School, Student Attributes.

This measure is derived from the Student Annual Program Participation measure.

b- Dimensions / Attributes

*Fiscal Year; Grade; Number of Distinct Programs; Program Area; School District; SPED Grade; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

## *20-g Student Language Assessment Transaction*

a- Description

Language Assessments Transaction measure provides language assessment information for every student assessment event. A language assessment event usually involves 3 assessment types - Oral, Reading, Writing. A proficiency level is determined for each assessment type and

an overall assessment result is determined for the student based on the 3 proficiency levels. There may be multiple ELL assessments for a student in one fiscal year.

The overall assessment result, named Assessment Result, specifies whether the students need to attend a language program (ELL, ELLR) or not (IFEP, RFEP, FEPY1, FEPY2).

Every assessed student has one record per assessment type (Oral, Reading, Writing), per assessment event. This record contains both the Proficiency Level of the assessment type and the overall assessment result for all the assessment types conducted together. Thus, the Assessment Result is repeated on each student assessment types belonging to one assessment event.

**Overall ELL Assessment Result**

| Code | Description |
|---|---|
| ELL | English Language Learner (ELL) |
| ELLR | ELL After Re-classification |
| IFEP | Initial Fluent English Proficient |
| RFEP | Reclassified Fluent English Proficient |
| FEPY1 | Continuing FEP Year 1 |
| FEPY2 | Continuing FEP Year 2 |
| Unk | Unknown |
| NR | Not Reported |

**Detail ELL Proficiency Level**

| Code | Description |
|---|---|
| PE | Pre-Emergent |
| E | Emergent |
| B | Basic |
| I | Intermediary |
| P | Proficient |

The count of each subject (Oral, Reading, Writing) in this measure is normally higher than the count of Language needs in measure 20a, which identifies the students who have been determined as having a Language need.

b- Measure Usage

When analyzing the data for overall results, to prevent multiple counting, filter or order by detail ELL Assessment (oral, reading, writing).

c- Dimensions / Attributes

*Assessment Date; ELL Assessment ; ELL Assessment Result; ELL Proficiency Level; Grade; School District; Student Age; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

ELL assessment information was brought over to the Data Warehouse starting with FY 2006.

The SAIS system implemented new rules for overall assessment results codes starting in FY 2009. In order to maintain consistency of codes over all fiscal years starting with FY 2006 assessments, the Data Warehouse applied these rules to all assessment data from 2006 on. See Appendix O for the rules.

Effective 2009 ELL assessment results are received thru a new setup with the vendor, and do not have the exact test date for the assessments of 2009. Therefore, some of the date validations have been eliminated for 2009 in the source systems.

## *30-b Student Cumulative Participation in Program Area*

a- Description

Student Program Participation in Program Area measure provides participation information at highest level of consolidation. The measure consolidates the program participation information into the 3 Program Areas: Special Education, Language, Support Programs. A new dimension, Number of Distinct Programs Attended, is added.

Since the student may participate in multiple programs in each program area in one or more schools during one fiscal year, participation rate is not meaningful in this measure. The range of grades and the range of fiscal years that the student participated in programs, as well as the count of distinct programs that the student participated in are provided in this measure.

b- Measure Usage

An analyst may choose to start with this measure and go to further details using the Cumulative Program Participation next and then annual level measures.

c- Dimensions / Attributes

*Fiscal Year Range*; *Grade Range; Number of Distinct Programs; Number of Years in Program; Program Area; School District; SPED Grade Range; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

## *30-c-10 Student Cumulative Program Participation Count*

a- Description

Student Cumulative Program Participation Count measure consolidates the information of student program participation over the fiscal year range in which a student attended a particular program, regardless of schools. There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, and Support.

Student Cumulative Program Participation Count measure provides student counts per program by cumulative number of session days over the participation fiscal year range and by other dimensions.

It should be noted that aggregations in this measure are not based on unique student id, but based on the participation of the student in various programs. Therefore, if the student has participated in multiple programs in a range of fiscal years, he will be counted in each program.

As this measure relates to multiple fiscal years, the Grade and SPED Grade dimensions depict ranges as well. An important dimension that was added to the Cumulative Program Participation measure is the Number of Years in the Program. The School dimension relates to the last school that provided the program to the participant.

In addition to Session Days dimension, Student Cumulative Program Participation measure can be also viewed by Participation Rate. Participation Rate is calculated as the ratio of program participation session days to school session days (assumed to be 180 in this case, multiplied by number of years). For Special Education programs, the measure can be also viewed by SPED.

b- Measure Usage

c- Dimensions / Attributes

*Fiscal Year Range*; *Grade Range; Number of Years in Program; Participation Rate; Participation Session Days; Program Area; Program Hierarchy; Program Name; School District; SPED Grade Range; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

When end date of student participation is missing in SAIS, the last day of the student's membership in the school will be used instead.

## *30-c-20 Student Cumulative Program Participation Session Days*

a- Description

Student Cumulative Program Participation Session Days measure consolidates the information of student program participation session days over the fiscal year range in which a student attended a particular program, regardless of school. When multiple needs are serviced by the same program, each participation day is counted only once for the program duration.

There are over 80 programs addressing the needs of the students in the public school system in Arizona. These programs are grouped into 3 areas: Special Education, Language, Support.

This measure provides sums of participation session days per program area and program by number of session days and other criteria. Session Days are used here also as a Dimension. For example, if 10 students participated in a program for 20 days each, 100 students participated in a program for 179 days, and 50 students participated in a program for 500 days, the session days sum will show as:

| Session Days | Sum of Program Participation Days | Calculation |
|---|---|---|
| 20 | 200 | 10 * 20 |
| 179 | 17,900 | 100 * 179 |
| 500 | 25,000 | 50 * 500 |

It should be noted that aggregations in this measure are not based on unique student id, but based on the participation of the student in various programs. Therefore, if the student has participated in multiple programs in one fiscal year, his participation will be summed for each program.

As this measure relates to multiple fiscal years, the Grade and SPED Grade dimensions depict ranges as well. An important dimension that was added to the Cumulative Program Participation measure is the Number of Years in the Program. The School dimension relates to the last school that provided the program to the participant.

In addition to Session Days dimension, Student Cumulative Program Participation measure can be also viewed by Participation Rate. Participation Rate is calculated as the ratio of program participation session days to school session days (assumed to be 180 in this case, multiplied by number of years). For Special Education programs, the measure can be also viewed by SPED Grade.

b- Measure Usage

c- Dimensions / Attributes

*Fiscal Year Range*; *Grade Range; Number of Years in Program; Participation Rate; Participation Session Days; Program Area; Program Hierarchy; Program Name; School District; SPED Grade Range; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

When end date of student participation is missing in SAIS, the last day of the student's membership in the school will be used instead.

## *30-f Student Cumulative Language Programs Participation and Outcome*

a- Description

This measure combines the information of cumulative language program participation with the results of student language assessments. Language Assessment results, brought into the Data Warehouse, start at FY 2006 reflecting the commencement of a statewide unified assessment methodology. Program participation data starts at FY 2003. Thus student participation in language programs in the FYs 2003-2005 is not accompanied by assessment results.

The first and last assessment results available for a student were paired to define student overall progression over the program participation time span e.g. ELL-RFEP, RFEP-ELLR. Progression pairs were further classified to progression categories, to give a concise view of achievement. The following categories were defined (See Appendix N for Progression Category and Description details):

Learning Mode
Learning Resumed
Proficiency Attained
Proficiency Verified
Proficiency Confirmed

Not Reported
Unknown

The category "Not Reported" was defined for students who have participated in Language programs but do not have assessment data. Most of these students participated in the programs prior to FY 2006. The Unknown category has a handful of students who carry this value in SAIS.

This measure has two time dimensions. One relates to Fiscal Year Range of program participation that starts in FY 2003. The other relates to the Fiscal Year Range of assessments that starts in FY 2006. These should be used judiciously, depending on what the user is looking for. Using the ELL Assessment Fiscal year Range will bring in data from FY 2006 only. Using the Program Participation Fiscal Year Range will bring in data from FY 2003.

b- Measure Usage

This measure provides a comprehensive perspective on the language programs. The more important dimensions to use are Number of Years In Program and Progression Category.

The following dimensions refer to the span of years of participation in language programs (not the years of evaluations) and they should be used with care when analyzed relative to ELL assessment dimensions:

Grade Range, Number of Years in Program, Participation Session Days

c- Dimensions / Attributes

*ELL Assessment Results Fiscal Year Range*; *ELL Assessment Result Progression; Grade Range; Language Program Participation Fiscal Year Range; Number of Evaluations; Number of Years in Program; Participation Session Days; School District; Students*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

The SAIS system implemented new rules for overall assessment results codes starting in FY 2009. In order to maintain consistency of codes over all fiscal years starting with FY 2006 assessments, the Data Warehouse applied these rules to all assessment data from 2006 on. See Appendix O for the rules.

## *30-g Student Language Assessment Progress and AIMS*

a- Description

The major concerns of LEAs and ADE in regard to students with language need (LEP) are:

- Proficiency progress as measured by language assessments
- The relationship of progress in language proficiency to AIMS achievements.

This measure is constructed to provide information on both topics.

The measure includes all students with at least 2 language assessments from FY 2006 onward.

The student language assessments are sequenced chronologically and the proficiency results for each assessment type (Oral, Reading, Writing) and the overall result, are paired successively to indicate progress. For example a student with first assessment event in FY 2007 and the second in FY 2008, may have made the following progress from FY 2007 (source) to FY 2008(destination):

- From Intermediary to Proficient in Oral assessment
- From Basic to Intermediary in Reading assessment
- From Basic to Intermediary in Writing assessment
- From ELL to ELL in overall result

In addition, the student AIMS results in Reading, Writing, Math and Science in the destination fiscal years were included in this measure to allow comparisons with the progress in language assessments.

It should be noted that AIMS is applicable to grades 3-10 excluding 9. Hence for students in grades below 3 and grade 9 AIMS results are defined as "Not Reported". Also, the 10th grade AIMS tests may be taken again by a student in grades 11 and/or 12. For such students any result relevant to a destination fiscal year is included. If there are two AIMS result for the same fiscal year the best result is included.

If the school reporting the ELL score does not have a valid School Id on the data warehouse, the ELL assessment is not included in this measure.

b- Measure Usage

Since this measure reports the relationship of results between 2 consecutive ELL assessments for the student, the counts provided are equal to the number of ELL assessments, excluding the first assessment available for the student in the data warehouse.

To analyze overall results of ELL assessment, expand ELL Assessment Result Progression dimension and select the desired component, from result, to result, result progression description, and / or progression category.

For more accurate results, when analyzing data regarding the AIMS test, exclude the grades which do not participate in AIMS: Set filter on Last Grade and select grades 3 to 8 and 10 to 12.

c- Dimensions / Attributes

*AIMS Results – Mathematics; AIMS Results – Reading; AIMS Results – Science; AIMS Results – Writing; ELL Assessment Proficiency Progress – Oral; ELL Assessment Proficiency Progress – Reading; ELL Assessment Proficiency Progress – Writing; ELL Assessment Result Progression; From ELL Assessment Result; From School; Grade Range; Students; To ELL Assessment Result; To School*

Please refer to Chart F above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source data Consideration

The SAIS system implemented new rules for overall assessment results codes starting in FY 2009. In order to maintain consistency of codes over all fiscal years starting with FY 2006 assessments, the Data Warehouse applied these rules to all assessment data from 2006 on. See Appendix O for the rules.

Effective 2009 ELL assessment results are received thru a new setup with the vendor, and do not have the exact test date for the assessments of 2009. Therefore, some of the date validations have been eliminated for 2009 in the source systems.

## Chart F-a

### Track Program Participation for Selected Students

**Measures 20c, 20f** .8/3/2009

| Program Participation by Date Fact Table | | | | | | | | | Annual Program Participation-20c | | | | | | | | | | | Concurrent Prog Participation - 20f | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| StudentID | FY | Pgm | Pgm | StartP | EndP | Pgm Area | SchlID | Grd | FY | Pgm | Pgm Start | Pgm End | #Days | PartRte | SchlID | #Determi | IniGr | LstGr | PgmArea | FY | Pgm Area | #Pgm | Last Schl | Lst Grd |
| **Case1- Same prog same year same schools; 3 areas** | | | | | | | | | | | | | | | | | | | | | | | | |
| 79528 | 2003 | 8 | B Outs | 20020814 | 20030522 | SPED | 6127 | 9 | 2003 | 8 | 20020814 | 20030522 | 177 | 1.00 | 6127 | 1 | 9 | 9 | SPED | 2003 | SPED | 1 | 6127 | 9 |
| 79528 | 2004 | 8 | B Outs | 20030813 | 20031002 | SPED | 6127 | 10 | 2004 | 8 | 20030813 | 20040521 | 127 | 0.71 | 6127 | 2 | 10 | 10 | SPED | 2004 | SPED | 1 | 6127 | 10 |
| 79528 | 2004 | 8 | B Outs | 20040105 | 20040521 | SPED | 6127 | 10 | | | | | | | | | | | | | | | | |
| 79528 | 2005 | 7 | A Outs | 20040805 | 20041013 | SPED | 6127 | 11 | 2005 | 7 | 20040805 | 20041013 | 47 | 0.26 | 6127 | 1 | 11 | 11 | SPED | 2005 | SPED | 1 | 6127 | 11 |
| 79528 | 2006 | 8 | B Outs | 20060113 | 20060317 | SPED | 84659 | 12 | 2006 | 8 | 20060113 | 20060317 | 43 | 0.24 | 84659 | 1 | 12 | 12 | SPED | 2006 | SPED & Bilingual & Su | 4 | 84659 | 12 |
| 79528 | 2006 | 17 | S Regu | 20051129 | 20051213 | SPED | 79551 | NR | 2006 | 17 | 20051129 | 20051213 | 11 | 0.04 | 79551 | 1 | NR | NR | SPED | | | | | |
| 79528 | 2006 | 96 | Structe | 20060207 | 20060317 | Bilingua | 84659 | 12 | 2006 | 96 | 20060207 | 20060317 | 27 | 0.15 | 84659 | 1 | 12 | 12 | Bilingual | | | | | |
| 79528 | 2006 | 105 | Home | 20060113 | 20060317 | Support | 84659 | 12 | 2006 | 105 | 20060113 | 20060317 | 43 | 0.24 | 84659 | 1 | 12 | 12 | Support | | | | | |
| **Case2 - 3 programs in 4 years - grade 11 in 2003 is bad data in source systems** | | | | | | | | | | | | | | | | | | | | | | | | |
| 148808 | 2003 | 86 | C PSD- | 20021022 | 20030606 | SPED | 5199 | PS | 2003 | 86 | 20021022 | 20030606 | 125 | 0.70 | 5199 | 1 | PS | PS | SPED | 2003 | SPED & Bilingual | 2 | 5199 | PS |
| 148808 | 2003 | 96 | Structe | 20020815 | 20020909 | Bilingua | 4980 | 11 | 2003 | 96 | 20020815 | 20020909 | 17 | 0.09 | 4980 | 1 | 11 | 11 | Bilingual | | | | | |
| 148808 | 2004 | 84 | A PSD- | 20030818 | 20040611 | SPED | 5200 | PS | 2004 | 84 | 20030818 | 20040611 | 169 | 0.94 | 5200 | 1 | PS | PS | SPED | 2004 | SPED | 1 | 5200 | PS |
| 148808 | 2005 | 8 | B Outs | 20040802 | 20050610 | SPED | 5200 | KG | 2005 | 8 | 20040802 | 20050610 | 180 | 1.00 | 5200 | 1 | KG | KG | SPED | 2005 | SPED & Bilingual | 2 | 5200 | KG |
| 148808 | 2005 | 96 | Structe | 20040802 | 20050610 | Bilingua | 5200 | KG | 2005 | 96 | 20040802 | 20050610 | 180 | 1.00 | 5200 | 1 | KG | KG | Bilingual | | | | | |
| 148808 | 2006 | 8 | B Outs | 20050808 | 20050906 | SPED | 5200 | 1 | 2006 | 8 | 20050808 | 20050906 | 21 | 0.12 | 5200 | 1 | 1 | 1 | SPED | 2006 | SPED & Bilingual | 2 | 5200 | 1 |
| 148808 | 2006 | 96 | Structe | 20050808 | 20060208 | Bilingua | 5200 | 1 | 2006 | 96 | 20050808 | 20060208 | 106 | 0.59 | 5200 | 1 | 1 | 1 | Bilingual | | | | | |
| **Case3 - Overlapping programs in the same area** | | | | | | | | | | | | | | | | | | | | | | | | |
| 161017 | 2003 | 96 | Structe | 20020731 | 20030612 | Bilingua | 5287 | 4 | 2003 | 96 | 20020731 | 20030612 | 177 | 1.00 | 5287 | 1 | 4 | 4 | Bilingual | 2003 | Bilingual | 2 | 5287 | 4 |
| 161017 | 2003 | 97 | Biling | 20020731 | 20030612 | Bilingua | 5287 | 4 | 2003 | 97 | 20020731 | 20030612 | 177 | 1.00 | 5287 | 1 | 4 | 4 | Bilingual | | | | | |
| 161017 | 2004 | 98 | Biling | 20030723 | 20040526 | Bilingua | 5287 | 5 | 2004 | 98 | 20030723 | 20040526 | 178 | 1.00 | 5287 | 1 | 5 | 5 | Bilingual | 2004 | Bilingual | 1 | 5287 | 5 |
| 161017 | 2005 | 111 | Title I | 20040721 | 20050525 | Support | 5289 | 6 | 2005 | 111 | 20040721 | 20050525 | 179 | 1.00 | 5289 | 1 | 6 | 6 | Support | 2005 | Support Program/Ser | 1 | 5289 | 6 |
| 161017 | 2006 | 111 | Title I | 20050720 | 20060525 | Support | 5289 | 7 | 2006 | 111 | 20050720 | 20060525 | 180 | 1.00 | 5289 | 1 | 7 | 7 | Support | 2006 | Support Program/Ser | 2 | 5289 | 7 |
| 161017 | 2006 | 113 | Title I | 20050720 | 20060525 | Support | 5289 | 7 | 2006 | 113 | 20050720 | 20060525 | 180 | 1.00 | 5289 | 1 | 7 | 7 | Support | | | | | |
| **Case4 - No participation in 2006, Duplicate Participation** | | | | | | | | | | | | | | | | | | | | | | | | |
| 161441 | 2005 | 111 | Title I | 20040721 | 20050414 | Support | 5287 | 4 | 2005 | 111 | 20040721 | 20050414 | 150 | 0.84 | 5287 | 1 | 4 | 4 | Support | 2005 | Support Program/Ser | 2 | 5287 | 4 |
| 161441 | 2005 | 113 | Title I | 20040721 | 20050414 | Support | 5287 | 4 | 2005 | 113 | 20040721 | 20050414 | 150 | 0.84 | 5287 | 1 | 4 | 4 | Support | | | | | |
| 161441 | 2007 | 7 | A Outs | 20060807 | 20070411 | SPED | 79792 | 6 | 2007 | 7 | 20060807 | 20070411 | 141 | 0.78 | 79792 | 1 | 6 | 6 | SPED | 2007 | SPED & Support Progr | 3 | 7408 | 6 |
| 161441 | 2007 | 11 | E Priva | 20070417 | 20070601 | SPED | 7408 | 6 | 2007 | 11 | 20070417 | 20070601 | 33 | 0.18 | 7408 | 1 | 6 | 6 | SPED | | | | | |
| 161441 | 2007 | 113 | Title I | 20060807 | 20070411 | Support | 79792 | 6 | 2007 | 113 | 20060807 | 20070411 | 141 | 0.78 | 79792 | 1 | 6 | 6 | Support | | | | | |
| 161441 | 2008 | 127 | D Pub | 20070814 | 20080530 | SPED | 7408 | 7 | 2008 | 127 | 20070814 | 20080530 | 185 | 0.99 | 7408 | 1 | 7 | 7 | SPED | 2008 | SPED | 1 | 7408 | 7 |
| 161441 | 2008 | 127 | D Pub | 20070814 | 20080530 | SPED | 7408 | 7 | | | | | | | | | | | | | | | | |
| 161441 | 2009 | 127 | D Pub | 20080811 | 20090630 | SPED | 7408 | 7 | 2009 | 127 | 20080811 | 20090630 | 186 | 1.00 | 7408 | 1 | 7 | 7 | SPED | 2009 | SPED | 1 | 7408 | 7 |

## Track Program Participation for Selected Students

**Measures 20c, 20f** .8/3/2009

| Program Participation by Date Fact Table | | | | | | | | | Annual Program Participation-20c | | | | | | | | | | | Concurrent Prog Participation - 20f | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| StudentID | FY | Pgm | Pgm | StartP | EndP | Pgm Area | SchlID | Grd | FY | Pgm | Pgm Start | Pgm End | #Days | Part Rte | SchlID | #Determi | IniGr | LstGr | PgmArea | FY | Pgm Area | #Pgm | Last Schl | Lst Grd |
| **Case5 - Consecutive participation in different schools -Annual separate rows, Cumulative aggregated** | | | | | | | | | | | | | | | | | | | | | | | | |
| 181737 | 2003 | 97 | Biling | 20020812 | 20030523 | Bilingua | 5821 | 4 | 2003 | 97 | 20020812 | 20030523 | 179 | 1.00 | 5821 | 1 | 4 | 4 | Bilingual | 2003 | Bilingual | 1 | 5821 | 4 |
| 181737 | 2004 | 96 | Structe | 20030904 | 20040524 | Bilingua | 5813 | 5 | 2004 | 96 | 20030904 | 20040524 | 161 | 0.90 | 5813 | 1 | 5 | 5 | Bilingual | 2004 | Bilingual & Support P | 3 | 5813 | 5 |
| 181737 | 2004 | 98 | Biling | 20030811 | 20030902 | Bilingua | 5821 | 5 | 2004 | 98 | 20030811 | 20030902 | 16 | 0.09 | 5821 | 1 | 5 | 5 | Bilingual | | | | | |
| 181737 | 2004 | 112 | Title I | 20030811 | 20030902 | Support | 5821 | 5 | 2004 | 112 | 20030811 | 20030902 | 16 | 0.09 | 5821 | 1 | 5 | 5 | Support | | | | | |
| 181737 | 2004 | 112 | Title I | 20030904 | 20040525 | Support | 5813 | 5 | 2004 | 112 | 20030904 | 20040525 | 162 | 0.91 | 5813 | 1 | 5 | 5 | Support | | | | | |
| 181737 | 2005 | 112 | Title I | 20040811 | 20050526 | Support | 5824 | 6 | 2005 | 112 | 20040811 | 20050526 | 180 | 1.00 | 5824 | 1 | 6 | 6 | Support | 2005 | Support Program/Ser | 1 | 5824 | 6 |
| 181737 | 2006 | 112 | Title I | 20050810 | 20060526 | Support | 5824 | 7 | 2006 | 112 | 20050810 | 20060526 | 180 | 1.00 | 5824 | 1 | 7 | 7 | Support | 2006 | Support Program/Ser | 1 | 5824 | 7 |
| **Case6- 3 determinations in the same school same year** | | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 111 | Title I | 20061005 | 20061206 | Support | 10823 | 11 | 2007 | 111 | 20061005 | 20070531 | 109 | 0.60 | 10823 | 3 | 11 | 11 | Support | 2007 | Support Program/Ser | 2 | 10823 | 11 |
| 191252 | 2007 | 111 | Title I | 20061207 | 20070305 | Support | 10823 | 11 | 2007 | 113 | 20061005 | 20070531 | 109 | 0.60 | 10823 | 3 | 11 | 11 | Support | | | | | |
| 191252 | 2007 | 111 | Title I | 20070416 | 20070531 | Support | 10823 | 11 | | | | 42+40+27=109 | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title I | 20061005 | 20061206 | Support | 10823 | 11 | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title I | 20061207 | 20070305 | Support | 10823 | 11 | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title I | 20070416 | 20070531 | Support | 10823 | 11 | | | | | | | | | | | | | | | | |
| 191252 | 2008 | 111 | Title I | 20070820 | 20080313 | Support | 10823 | 12 | 2008 | 111 | 20070820 | 20080313 | 108 | 0.60 | 10823 | 1 | 12 | 12 | Support | 2008 | Support Program/Ser | 2 | 10823 | 12 |
| 191252 | 2008 | 113 | Title I | 20070820 | 20080313 | Support | 10823 | 12 | 2008 | 113 | 20070820 | 20080313 | 108 | 0.60 | 10823 | 1 | 12 | 12 | Support | | | | | |
| **Case9- Multiple grades & multiple schools in one year. Aggregated in Annual, Cumulative, and language** | | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2003 | 96 | Structe | 20020812 | 20030605 | Bilingua | 5335 | 3 | 2003 | 96 | 20020812 | 20030605 | 178 | 1.00 | 5335 | 1 | 3 | 3 | Bilingual | 2003 | Bilingual | 1 | 5335 | 3 |
| 764172 | 2004 | 96 | Structe | 20030804 | 20040609 | Bilingua | 5335 | 4 | 2004 | 96 | 20030804 | 20040609 | 178 | 1.00 | 5335 | 1 | 4 | 4 | Bilingual | 2004 | Bilingual | 1 | 5335 | 4 |
| 764172 | 2005 | 96 | Structe | 20040809 | 20041122 | Bilingua | 5335 | 5 | 2005 | 96 | 20040809 | 20041122 | 61 | 0.34 | 5335 | 1 | 5 | 5 | Bilingual | 2005 | Bilingual & Support P | 3 | 79509 | 5 |
| 764172 | 2005 | 96 | Structe | 20050301 | 20050603 | Bilingua | 79509 | 5 | 2005 | 96 | 20050301 | 20050603 | 61 | 0.33 | 79509 | 1 | 5 | 5 | Bilingual | | | | | |
| 764172 | 2005 | 111 | Title I | 20040809 | 20041122 | Support | 5335 | 5 | 2005 | 111 | 20040809 | 20041122 | 61 | 0.34 | 5335 | 1 | 5 | 5 | Support | | | | | |
| 764172 | 2005 | 113 | Title I | 20040809 | 20041122 | Support | 5335 | 5 | 2005 | 113 | 20040809 | 20041122 | 61 | 0.34 | 5335 | 1 | 5 | 5 | Support | | | | | |
| 764172 | 2007 | 96 | Structe | 20070307 | 20070607 | Bilingua | 79989 | 7 | 2007 | 96 | 20070307 | 20070607 | 60 | 0.32 | 79989 | 1 | 7 | 7 | Bilingual | 2007 | Bilingual | 1 | 79989 | 7 |
| 764172 | 2008 | 96 | Structe | 20070809 | 20071207 | Bilingua | 79989 | 8 | 2008 | 96 | 20070809 | 20071220 | 85 | 0.46 | 79989 | 2 | 7 | 8 | Bilingual | 2008 | Bilingual & Support P | 3 | 5332 | 8 |
| 764172 | 2008 | 96 | Structe | 20071210 | 20071220 | Bilingua | 79989 | 7 | 2008 | 96 | 20080130 | 20080403 | 40 | 0.22 | 5332 | 1 | 8 | 8 | Bilingual | | | | | |
| 764172 | 2008 | 96 | Structe | 20080130 | 20080403 | Bilingua | 5332 | 8 | 2008 | 111 | 20080130 | 20080417 | 50 | 0.28 | 5332 | 1 | 8 | 8 | Support | | | | | |
| 764172 | 2008 | 111 | Title I | 20080130 | 20080417 | Support | 5332 | 8 | 2008 | 113 | 20080130 | 20080417 | 50 | 0.28 | 5332 | 1 | 8 | 8 | Support | | | | | |
| 764172 | 2008 | 113 | Title I | 20080130 | 20080417 | Support | 5332 | 8 | | | | | | | | | | | | | | | | |

## Chart F-b

### Track Program Participation for Selected Students

**Measures 30b, 30c, 30f** 8/2/2009

| Program Participation by Date Fact Table | | | | | | | | | | Cumulative Program Participation 30c | | | | | | | | Program Area Participation 30b | | | | | | | Language Participation Outcome 30f | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Student ID | FY | Pgm ID | Pgm | Pgm Start | Pgm End | Pgm Area | Schl ID | Grd | Trk | Transition Fiscal Years | Pgm | Last Schl | # Yrs | Fst | Lst | #Days | Part Rate | Pgm Area | Transition Fiscal Years | Pgm Area | Last Schl | Fst | Lst | Pgm Cnt | Yrs Cnt | Fr FY | To FY | Pgm Yr | Last Schl | Fst | Lst | Part Days | Prgrn |
| **Case1- Same prog same year same schools; 3 areas** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 79528 | 2003 | 8 | B Out | 20020814 | 20030522 | SPED | 6127 | 9 | 1 | 2003 To 2006 | 8 | 84659 | 3 | 9 | 12 | 347 | 0.64 | SPED | 2003 To 2006 | SPED | 84659 | 9 | 12 | 3 | 4 | | | | | | | | |
| 79528 | 2004 | 8 | B Out | 20030813 | 20031002 | SPED | 6127 | 10 | 1 | Within 2005 | 7 | 6127 | 1 | 11 | 11 | 47 | 0.26 | SPED | Within 2006 | Biling | 84659 | 12 | 12 | 1 | 1 | 2006 | 2006 | 1 | 84659 | 12 | 12 | 27 | ELL-ELL |
| 79528 | 2004 | 8 | B Out | 20040105 | 20040521 | SPED | 6127 | 10 | 1 | Within 2006 | 17 | 79551 | 1 | NR | NR | 11 | 0.06 | SPED | Within 2006 | Supp | 84659 | 12 | 12 | 1 | 1 | | | | | | | | |
| 79528 | 2005 | 7 | A Out | 20040805 | 20041013 | SPED | 6127 | 11 | 1 | Within 2006 | 96 | 84659 | 1 | 12 | 12 | 27 | 0.15 | Biling | | | | | | | | | | | | | | | |
| 79528 | 2006 | 8 | B Out | 20060113 | 20060317 | SPED | 84659 | 12 | 1 | Within 2006 | 105 | 84659 | 1 | 12 | 12 | 43 | 0.24 | Suppo | | | | | | | | | | | | | | | |
| 79528 | 2006 | 17 | S Reg | 20051129 | 20051213 | SPED | 79551 | NR | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 79528 | 2006 | 96 | Struc | 20060207 | 20060317 | Biling | 84659 | 12 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 79528 | 2006 | 105 | Hom | 20060113 | 20060317 | Supp | 84659 | 12 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Case2 - 3 programs in 4 years - grade 11 in 2003 is bad data in source systems** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148808 | 2003 | 86 | C PS | 20021022 | 20030606 | SPED | 5199 | PS | 1 | Within 2003 | 86 | 5199 | 1 | PS | PS | 125 | 0.69 | SPED | 2003 To 2006 | SPED | 5200 | PS | 1 | 3 | 4 | | | | | | | | |
| 148808 | 2003 | 96 | Struc | 20020815 | 20020909 | Biling | 4980 | 11 | 1 | 2003 To 2006 | 96 | 5200 | 3 | 11 | 1 | 303 | 0.56 | Biling | 2003 To 2006 | Biling | 5200 | 11 | 1 | 1 | 3 | 2003 | 2006 | 3 | 5200 | 11 | 1 | 303 | NR |
| 148808 | 2004 | 84 | A PS | 20030818 | 20040611 | SPED | 5200 | PS | 1 | Within 2004 | 84 | 5200 | 1 | PS | PS | 169 | 0.94 | SPED | | | | | | | | | | | | | | | |
| 148808 | 2005 | 8 | B Out | 20040802 | 20050610 | SPED | 5200 | KG | 1 | 2005 To 2006 | 8 | 5200 | 2 | KG | 1 | 201 | 0.56 | SPED | | | | | | | | | | | | | | | |
| 148808 | 2005 | 96 | Struc | 20040802 | 20050610 | Biling | 5200 | KG | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148808 | 2006 | 8 | B Out | 20050808 | 20050906 | SPED | 5200 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 148808 | 2006 | 96 | Struc | 20050808 | 20060208 | Biling | 5200 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Case3 - Overlapping programs in the same area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161017 | 2003 | 96 | Struc | 20020731 | 20030612 | Biling | 5287 | 4 | 1 | Within 2003 | 96 | 5287 | 1 | 4 | 4 | 177 | 0.98 | Biling | 2003 To 2004 | Biling | 5287 | 4 | 5 | 3 | 2 | 2003 | 2004 | 2 | 5287 | 4 | 5 | 355 | FEPY1FEPY |
| 161017 | 2003 | 97 | Biling | 20020731 | 20030612 | Biling | 5287 | 4 | 1 | Within 2003 | 97 | 5287 | 1 | 4 | 4 | 177 | 0.98 | Biling | 2005 To 2006 | Supp | 5289 | 6 | 7 | 2 | 2 | | | | | | | | |
| 161017 | 2004 | 98 | Biling | 20030723 | 20040526 | Biling | 5287 | 5 | 1 | Within 2004 | 98 | 5287 | 1 | 5 | 5 | 178 | 0.99 | Biling | | | | | | | | | | | | | | | |
| 161017 | 2005 | 111 | Title | 20040721 | 20050525 | Supp | 5289 | 6 | 1 | 2005 To 2006 | 111 | 5289 | 2 | 6 | 7 | 359 | 1.00 | Suppo | | | | | | | | | | | | | | | |
| 161017 | 2006 | 111 | Title | 20050720 | 20060525 | Supp | 5289 | 7 | 1 | Within 2006 | 113 | 5289 | 1 | 7 | 7 | 180 | 1.00 | Suppo | | | | | | | | | | | | | | | |
| 161017 | 2006 | 113 | Title | 20050720 | 20060525 | Supp | 5289 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Case4 - No participation in 2006, Duplicate Participation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 161441 | 2005 | 111 | Title | 20040721 | 20050414 | Supp | 5287 | 4 | 1 | Within 2005 | 111 | 5287 | 1 | 4 | 4 | 150 | 0.83 | Suppo | 2005 To 2007 | Supp | 79792 | 4 | 6 | 2 | 2 | | | | | | | | |
| 161441 | 2005 | 113 | Title | 20040721 | 20050414 | Supp | 5287 | 4 | 1 | 2005 To 2007 | 113 | 79792 | 2 | 4 | 6 | 291 | 0.81 | Suppo | 2007 To 2009 | SPED | 7408 | 6 | 7 | 3 | 3 | | | | | | | | |
| 161441 | 2007 | 7 | A Out | 20060807 | 20070411 | SPED | 79792 | 6 | 1 | Within 2007 | 7 | 79792 | 1 | 6 | 6 | 141 | 0.78 | SPED | | | | | | | | | | | | | | | |
| 161441 | 2007 | 11 | E Priv | 20070417 | 20070601 | SPED | 7408 | 6 | 1 | Within 2007 | 11 | 7408 | 1 | 6 | 6 | 33 | 0.18 | SPED | | | | | | | | | | | | | | | |
| 161441 | 2007 | 113 | Title | 20060807 | 20070411 | Supp | 79792 | 6 | 1 | 2008 To 2009 | 127 | 7408 | 2 | 7 | 7 | 371 | 1.03 | SPED | | | | | | | | | | | | | | | |
| 161441 | 2008 | 127 | D Pul | 20070814 | 20080530 | SPED | 7408 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 161441 | 2008 | 127 | D Pul | 20070814 | 20080530 | SPED | 7408 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 161441 | 2009 | 127 | D Pul | 20080811 | 20090630 | SPED | 7408 | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Case5- 3 bilingual programs. Concurrent support Prog 2 schools** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 181737 | 2003 | 97 | Biling | 20020812 | 20030523 | Biling | 5821 | 4 | 1 | Within 2003 | 97 | 5821 | 1 | 4 | 4 | 179 | 0.99 | Biling | 2003 To 2004 | Biling | 5813 | 4 | 5 | 3 | 2 | 2003 | 2004 | 2 | 5813 | 4 | 5 | 356 | NR |
| 181737 | 2004 | 96 | Struc | 20030904 | 20040524 | Biling | 5813 | 5 | 1 | Within 2004 | 96 | 5813 | 1 | 5 | 5 | 161 | 0.89 | Biling | 2004 To 2006 | Supp | 5824 | 5 | 7 | 1 | 3 | | | | | | | | |
| 181737 | 2004 | 98 | Biling | 20030811 | 20030902 | Biling | 5821 | 5 | 1 | Within 2004 | 98 | 5821 | 1 | 5 | 5 | 16 | 0.09 | Biling | | | | | | | | | | | | | | | |
| 181737 | 2004 | 112 | Title | 20030811 | 20030902 | Supp | 5821 | 5 | 1 | 2004 To 2006 | 112 | 5824 | 3 | 5 | 7 | 538 | 1.00 | Suppo | | | | | | | | | | | | | | | |
| 181737 | 2004 | 112 | Title | 20030904 | 20040525 | Supp | 5813 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 181737 | 2005 | 112 | Title | 20040811 | 20050526 | Supp | 5824 | 6 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 181737 | 2006 | 112 | Title | 20050810 | 20060526 | Supp | 5824 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |

## Chart F-b (Cont.)

**Track Program Participation for Selected Students**

**Measures 30b, 30c, 30f** 8/2/2009

| Program Participation by Date Fact Table | | | | | | | | | | Cumulative Program Participation 30c | | | | | | | | | Program Area Participation 30b | | | | | | | Language Participation Outcome 30f | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Student ID | FY | Pgm ID | Pgm | Pgm Start | Pgm End | Pgm Area | Schl ID | Grd | Trk | Transition Fiscal Years | Pgm | Last Schl | # Yrs | Fst | Lst | #Days | Part Rate | Pgm Area | Transition Fiscal Years | Pgm Area | Last Schl | Fst | Lst | Pgm Cnt | Yrs Cnt | Fr FY | To FY | Pgm Yr | Last Schl | Fst | Lst | Part Days | Prgrn |
| **Case6- 3 determinations in the same school same year** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 111 | Title | 20061005 | 20061206 | Supp | 10823 | 11 | 1 | 2007 To 2008 | 111 | 10823 | 2 | 11 | 12 | 217 | 0.60 | Suppor | 2007 To 2008 | Supp | 10823 | 11 | 12 | 2 | 2 | | | | | | | |
| 191252 | 2007 | 111 | Title | 20061207 | 20070305 | Supp | 10823 | 11 | 2 | 2007 To 2008 | 113 | 10823 | 2 | 11 | 12 | 217 | 0.60 | Suppor | | | | | | | | | | | | | | |
| 191252 | 2007 | 111 | Title | 20070416 | 20070531 | Supp | 10823 | 11 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title | 20061005 | 20061206 | Supp | 10823 | 11 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title | 20061207 | 20070305 | Supp | 10823 | 11 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2007 | 113 | Title | 20070416 | 20070531 | Supp | 10823 | 11 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2008 | 111 | Title | 20070820 | 20080313 | Supp | 10823 | 12 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 191252 | 2008 | 113 | Title | 20070820 | 20080313 | Supp | 10823 | 12 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| **Case7 - Overlapping participation in pgm 7- distinct days counted. Pgm 8 skips some years.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191424 | 2003 | 8 | B Out | 20020815 | 20021015 | SPED | 5030 | KG | 1 | 2003 To 2007 | 8 | 5255 | 3 | KG | 4 | 319 | 0.59 | SPED | 2003 To 2009 | SPED | 5255 | KG | 6 | 4 | 7 | | | | | | | |
| 191424 | 2004 | 7 | A Out | 20030814 | 20040526 | SPED | 5029 | 1 | 1 | 2004 To 2005 | 7 | 5029 | 2 | 1 | 2 | 357 | 0.99 | SPED | Within 2006 | Supp | 5267 | 3 | 3 | 5 | 1 | | | | | | | |
| 191424 | 2004 | 7 | A Out | 20040114 | 20040526 | SPED | 5029 | 1 | 1 | Within 2006 | 111 | 5267 | 1 | 3 | 3 | 84 | 0.47 | Suppor | | | | | | | | | | | | | | |
| 191424 | 2005 | 7 | A Out | 20040812 | 20050526 | SPED | 5029 | 2 | 1 | Within 2006 | 112 | 5267 | 1 | 3 | 3 | 84 | 0.47 | Suppor | | | | | | | | | | | | | | |
| 191424 | 2005 | 7 | A Out | 20040812 | 20050526 | SPED | 5029 | 2 | 1 | Within 2006 | 113 | 5267 | 1 | 3 | 3 | 84 | 0.47 | Suppor | | | | | | | | | | | | | | |
| 191424 | 2006 | 8 | B Out | 20060103 | 20060525 | SPED | 5255 | 3 | 1 | Within 2006 | 114 | 5267 | 1 | 3 | 3 | 84 | 0.47 | Suppor | | | | | | | | | | | | | | |
| 191424 | 2006 | 111 | Title | 20050808 | 20051215 | Supp | 5267 | 3 | 1 | Within 2006 | 115 | 5267 | 1 | 3 | 3 | 84 | 0.47 | Suppor | | | | | | | | | | | | | | |
| 191424 | 2006 | 112 | Title | 20050808 | 20051215 | Supp | 5267 | 3 | 1 | Within 2008 | 125 | 5255 | 1 | 5 | 5 | 180 | 1.00 | SPED | | | | | | | | | | | | | | |
| 191424 | 2006 | 113 | Title | 20050808 | 20051215 | Supp | 5267 | 3 | 1 | Within 2009 | 124 | 5255 | 1 | 6 | 6 | 180 | 1.00 | SPED | | | | | | | | | | | | | | |
| 191424 | 2006 | 114 | Title | 20050808 | 20051215 | Supp | 5267 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191424 | 2006 | 115 | Title | 20050808 | 20051215 | Supp | 5267 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191424 | 2007 | 8 | B Out | 20060814 | 20070530 | SPED | 5255 | 4 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191424 | 2008 | 125 | B Ins | 20070813 | 20080528 | SPED | 5255 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191424 | 2009 | 124 | A Ins | 20080811 | 20090630 | SPED | 5255 | 6 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| **Case8- Same prog diff schools. Aggregated in Cumulative, not in Annual** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191974 | 2005 | 112 | Title | 20040802 | 20050609 | Supp | 80315 | 3 | 1 | 2005 To 2008 | 112 | 80916 | 4 | 3 | 6 | 513 | 0.71 | Suppor | 2005 To 2009 | Supp | 80916 | 3 | 6 | 1 | 4 | | | | | | | |
| 191974 | 2006 | 112 | Title | 20050801 | 20060608 | Supp | 80315 | 4 | 1 | Within 2007 | 7 | 87521 | 1 | 5 | 5 | 133 | 0.74 | SPED | 2007 To 2009 | SPED | 7408 | 5 | 7 | 3 | 3 | | | | | | | |
| 191974 | 2007 | 7 | A Out | 20061023 | 20061109 | SPED | 80315 | 5 | 1 | Within 2008 | 126 | 80916 | 1 | 6 | 6 | 93 | 0.52 | SPED | | | | | | | | | | | | | | |
| 191974 | 2007 | 7 | A Out | 20061113 | 20070607 | SPED | 87521 | 5 | 1 | 2008 To 2009 | 127 | 7408 | 2 | 6 | 7 | 272 | 0.76 | SPED | | | | | | | | | | | | | | |
| 191974 | 2007 | 112 | Title | 20060801 | 20061109 | Supp | 80315 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191974 | 2008 | 112 | Title | 20070806 | 20080116 | Supp | 80916 | 6 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191974 | 2008 | 126 | C Ins | 20070806 | 20080116 | SPED | 80916 | 6 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191974 | 2008 | 127 | D Put | 20080122 | 20080530 | SPED | 7408 | 6 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 191974 | 2009 | 127 | D Put | 20080811 | 20090630 | SPED | 7408 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| **Case9- Multiple grades & multiple schools in one year. Aggregated in Annual, Cumulative, and language** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2003 | 96 | Stru | 20020812 | 20030605 | Biling | 5335 | 3 | 1 | 2003 To 2008 | 96 | 5332 | 5 | 3 | 8 | 663 | 0.74 | Biling | 2003 To 2008 | Biling | 5332 | 3 | 8 | 1 | 5 | 2003 | 2008 | 5 | 5332 | 3 | 8 | 663 | ELL-ELLR |
| 764172 | 2004 | 96 | Stru | 20030804 | 20040609 | Biling | 5335 | 4 | 1 | 2005 To 2008 | 111 | 5332 | 2 | 5 | 8 | 111 | 0.31 | Suppor | 2005 To 2009 | Supp | 5332 | 5 | 8 | 2 | 2 | | | | | | | |
| 764172 | 2005 | 96 | Stru | 20040809 | 20041122 | Biling | 5335 | 5 | 1 | 2005 To 2008 | 113 | 5332 | 2 | 5 | 8 | 111 | 0.31 | Suppor | | | | | | | | | | | | | | |
| 764172 | 2005 | 96 | Stru | 20050301 | 20050603 | Biling | 79509 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2005 | 111 | Title | 20040809 | 20041122 | Supp | 5335 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2005 | 113 | Title | 20040809 | 20041122 | Supp | 5335 | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2007 | 96 | Stru | 20070307 | 20070607 | Biling | 79989 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2008 | 96 | Stru | 20070809 | 20071207 | Biling | 79989 | 8 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2008 | 96 | Stru | 20071210 | 20071220 | Biling | 79989 | 7 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2008 | 96 | Stru | 20080130 | 20080403 | Biling | 5332 | 8 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2008 | 111 | Title | 20080130 | 20080417 | Supp | 5332 | 8 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 764172 | 2008 | 113 | Title | 20080130 | 20080417 | Supp | 5332 | 8 | 1 | | | | | | | | | | | | | | | | | | | | | | | |

# Chart F-c

**Track ELL Assessment and Program Participation for Selected Students**

Measures: 20g, 30g, 20c, 30f

| 20g - ELL Assessment | | | | | | 30g - ELL Progress And AIMS | | | | | | | | | | | | 20-c - Language Program Participation | | | | | | 30f - Language Program Participation Outcome | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| StudentID | SchlID | AsmtFY | ELL AsmtDt | Asmt Mthd | Ovrall Rslt | FrFY | ToFY | Fst Grd | Lst Grd | OvrAll Prgs | Oral Prgs | Rdg Prgs | Wtg Prgs | AIMS - ToFY Rd | Mth | Wrt | | Pgm ID | FY | Grd | Start Part | End Part | Needs ID | FrFY | ToFY | Pgm Yr | Fst Grd | Lst Grd | ELL FrFY | ELL ToFY | Part Days | ELL Asmt Rslts Progression |
| **1- 4 ELL assessments, 4 Language prog participation, neg progress, outcome OK** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 5243 | 2006 | 20060503 | Oral | RFEP | 2006 | 2007 | 6 | 7 | RFEP - ELL | P-P | I-I | I-P | A | FFB | A | | 96 | 2006 | 6 | 20050808 | 20060203 | 21 | 2006 | 2009 | 4 | 6 | 9 | 2006 | 2009 | 469 | RFEP - ELL |
| 825045 | 5243 | 2006 | 20060503 | Reading | RFEP | 2007 | 2008 | 7 | 8 | ELLR - ELL | P-P | I-I | P-I | FFB | FFB | A | | 96 | 2006 | 6 | 20060208 | 20060503 | 21 | | | | | | | | | |
| 825045 | 5243 | 2006 | 20060503 | Writing | RFEP | 2008 | 2009 | 8 | 9 | ELL - ELL | P-P | I-B | I-I | NR | NR | NR | | 96 | 2007 | 7 | 20070511 | 20070614 | 21 | | | | | | | | | |
| 825045 | 5243 | 2007 | 20070511 | Oral | ELLR | | | | | | | | | | | | | 96 | 2008 | 8 | 20070806 | 20080606 | 21 | | | | | | | | | |
| 825045 | 5243 | 2007 | 20070511 | Reading | ELLR | | | | | | | | | | | | | 96 | 2009 | 9 | 20080804 | 20081208 | 21 | | | | | | | | | |
| 825045 | 5243 | 2007 | 20070511 | Writing | ELLR | | | | | | | | | | | | | 96 | 2009 | 9 | 20090323 | 20090512 | 21 | | | | | | | | | |
| 825045 | 5243 | 2008 | 20080115 | Oral | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 5243 | 2008 | 20080115 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 5243 | 2008 | 20080115 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 6348 | 2009 | 20090414 | Oral | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 6348 | 2009 | 20090414 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 825045 | 6348 | 2009 | 20090414 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2-One asmt, 4 yrs part - no Progress & AIMS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 438631 | 5811 | 2006 | 20060516 | Oral | ELL | | | | | | | | | | | | | 96 | 2003 | 4 | 20020812 | 20030523 | 21 | 2003 | 2009 | 7 | 4 | No | 2006 | 2006 | 227 | ELL - ELL |
| 438631 | 5811 | 2006 | 20060516 | Reading | ELL | | | | | | | | | | | | | 96 | 2004 | 5 | 20030811 | 20030925 | 21 | | | | | | | | | |
| 438631 | 5811 | 2006 | 20060516 | Writing | ELL | | | | | | | | | | | | | 96 | 2004 | 5 | 20030926 | 20040525 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2005 | 6 | 20040812 | 20050526 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2006 | 7 | 20050810 | 20060526 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2007 | 8 | 20060815 | 20070221 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2007 | 8 | 20070313 | 20070503 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2008 | NR | 20070814 | 20080630 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 96 | 2009 | NR | 20080813 | 20090630 | 21 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3-Assessment and Participation in different years - (part aft ELLR ok)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1079292 | 4728 | 2007 | 20061201 | Oral | RFEP | 2007 | 2008 | 9 | 10 | RFEP - ELL | I-P | P-P | P-I | A | A | A | | 96 | 2003 | 6 | 20020812 | 20030523 | 21 | 2003 | 2009 | 4 | 6 | 1 | 2007 | 2008 | 714 | RFEP - EL |
| 1079292 | 4728 | 2007 | 20061201 | Reading | RFEP | | | | | | | | | | | | | 96 | 2004 | 7 | 20030811 | 20040520 | 21 | | | | | | | | | |
| 1079292 | 4728 | 2007 | 20061201 | Writing | RFEP | | | | | | | | | | | | | 96 | 2005 | 8 | 20040809 | 20050526 | 21 | | | | | | | | | |
| 1079292 | 4728 | 2008 | 20080516 | Oral | ELLR | | | | | | | | | | | | | 96 | 2009 | 1 | 20080807 | 20090528 | 21 | | | | | | | | | |
| 1079292 | 4728 | 2008 | 20080516 | Reading | ELLR | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1079292 | 4728 | 2008 | 20080516 | Writing | ELLR | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# Chart F-c (cont.)

**Track ELL Assessment and Program Participation for Selected Students**

Measures: 20g, 30g, 20c, 30f

| 20g - ELL Assessment | | | | | | 30g - ELL Progress And AIMS | | | | | | | | | | 20-c - Language Program Participation | | | | | | 30f - Language Program Participation Outcome | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| StudentID | SchlID | AsmtFY | ELL AsmtDt | AsmtMthd | Ovrall Rslt | FrFY | ToFY | FstGrd | LstGrd | OvrAll Prgs | Oral Prgs | Rdg Prgs | Wtg Prgs | AIMS - ToFY Rd | Mth | Wrt | Pgm ID | FY | Grd | Start Part | End Part | Needs ID | FrFY | ToFY | Pgm Yr | FstGrd | LstGrd | ELL FrFY | ELL ToFY | Part Days | ELL Asmt Rslts Progression |
| **4-Skipped asmt 2 yrs, while participated - 6 yrs no progress** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043307 | 4773 | 2006 | 20060411 | Oral | ELL | 2006 | 2009 | 10 | 12 | ELL - ELL | P-P | B-I | I-I | A | NR | NR | 96 | 2003 | 7 | 20020814 | 20030522 | 21 | 2003 | 2009 | 6 | 7 | 12 | 2006 | 2009 | 843 | ELL - ELL |
| 2043307 | 4773 | 2006 | 20060411 | Reading | ELL | | | | | | | | | | | | 96 | 2004 | 8 | 20030825 | 20040527 | 21 | | | | | | | | | |
| 2043307 | 4773 | 2006 | 20060411 | Writing | ELL | | | | | | | | | | | | 96 | 2005 | 9 | 20040812 | 20050526 | 21 | | | | | | | | | |
| 2043307 | 5877 | 2009 | 20080909 | Oral | ELL | | | | | | | | | | | | 96 | 2006 | 10 | 20050808 | 20060524 | 21 | | | | | | | | | |
| 2043307 | 5877 | 2009 | 20080909 | Reading | ELL | | | | | | | | | | | | 96 | 2007 | 10 | 20060807 | 20070227 | 21 | | | | | | | | | |
| 2043307 | 5877 | 2009 | 20080909 | Writing | ELL | | | | | | | | | | | | 97 | 2009 | 12 | 20080903 | 20080916 | 21 | | | | | | | | | |
| **5-Two asmt in one yr - two progress rows ending in 2009** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 10866 | 2007 | 20061030 | Oral | ELL | 2007 | 2008 | KG | KG | ELL - ELL | P-P | B-P | B-I | NR | NR | NR | 96 | 2007 | KG | 20061030 | 20070530 | 21 | 2007 | 2009 | 3 | KG | 1 | 2007 | 2009 | 406 | ELL - RFEP |
| 2577529 | 10866 | 2007 | 20061030 | Reading | ELL | 2008 | 2009 | KG | 1 | ELL - ELL | P-P | P-I | I-P | NR | NR | NR | 96 | 2008 | KG | 20070723 | 20080528 | 21 | | | | | | | | | |
| 2577529 | 10866 | 2007 | 20061030 | Writing | ELL | 2009 | 2009 | 1 | 1 | ELL - RFEP | P-P | I-P | P-I | NR | NR | NR | 96 | 2009 | 1 | 20080728 | 20080926 | 21 | | | | | | | | | |
| 2577529 | 5113 | 2008 | 20080212 | Oral | ELL | | | | | | | | | | | | 96 | 2009 | 1 | 20081208 | 20090323 | 21 | | | | | | | | | |
| 2577529 | 5113 | 2008 | 20080212 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 5113 | 2008 | 20080212 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20081223 | Oral | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20081223 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20081223 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20090324 | Oral | RFEP | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20090324 | Reading | RFEP | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2577529 | 4768 | 2009 | 20090324 | Writing | RFEP | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **6-ELL 2006-2009, Participation 2004-2009 - 4 ELL Asmt, 6 yrs participation** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043386 | 5215 | 2006 | 20050912 | Oral | ELL | 2006 | 2007 | 4 | 5 | ELL - ELL | I-I | B-B | I-I | A | A | M | 96 | 2004 | 2 | 20030923 | 20040526 | 21 | 2004 | 2009 | 6 | 2 | 7 | 2006 | 2009 | 1028 | ELL - ELL |
| 2043386 | 5215 | 2006 | 20050912 | Reading | ELL | 2007 | 2008 | 5 | 6 | ELL - ELL | I-P | B-B | I-I | A | M | M | 96 | 2005 | 3 | 20040802 | 20040917 | 21 | | | | | | | | | |
| 2043386 | 5215 | 2006 | 20050912 | Writing | ELL | 2008 | 2009 | 6 | 7 | ELL - ELL | P-P | B-I | I-I | A | M | A | 96 | 2005 | 3 | 20041004 | 20050525 | 21 | | | | | | | | | |
| 2043386 | 5215 | 2007 | 20060824 | Oral | ELL | | | | | | | | | | | | 96 | 2006 | 4 | 20050808 | 20060525 | 21 | | | | | | | | | |
| 2043386 | 5215 | 2007 | 20060824 | Reading | ELL | | | | | | | | | | | | 98 | 2007 | 5 | 20060807 | 20070524 | 21 | | | | | | | | | |
| 2043386 | 5215 | 2007 | 20060824 | Writing | ELL | | | | | | | | | | | | 96 | 2008 | 6 | 20070806 | 20080522 | 21 | | | | | | | | | |
| 2043386 | 5230 | 2008 | 20080212 | Oral | ELL | | | | | | | | | | | | 96 | 2009 | 7 | 20080804 | 20090521 | 21 | | | | | | | | | |
| 2043386 | 5230 | 2008 | 20080212 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043386 | 5230 | 2008 | 20080212 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043386 | 5230 | 2009 | 20090202 | Oral | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043386 | 5230 | 2009 | 20090202 | Reading | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2043386 | 5230 | 2009 | 20090202 | Writing | ELL | | | | | | | | | | | | | | | | | | | | | | | | | | |

# C - AIMS Assessment Measures

Assessment measures cover AIMS assessments results starting with FY 2005. These measures use a number of facts and derived facts to present the information in various forms and aggregations to the analysts. The charts below show the logical process of calculating these measures. Chart G below shows the process of constructing all AIMS assessment measures. Chart H shows the process of constructing the High School related measures. Charts I and J illustrate the computation of the derived facts for measures related to High School.

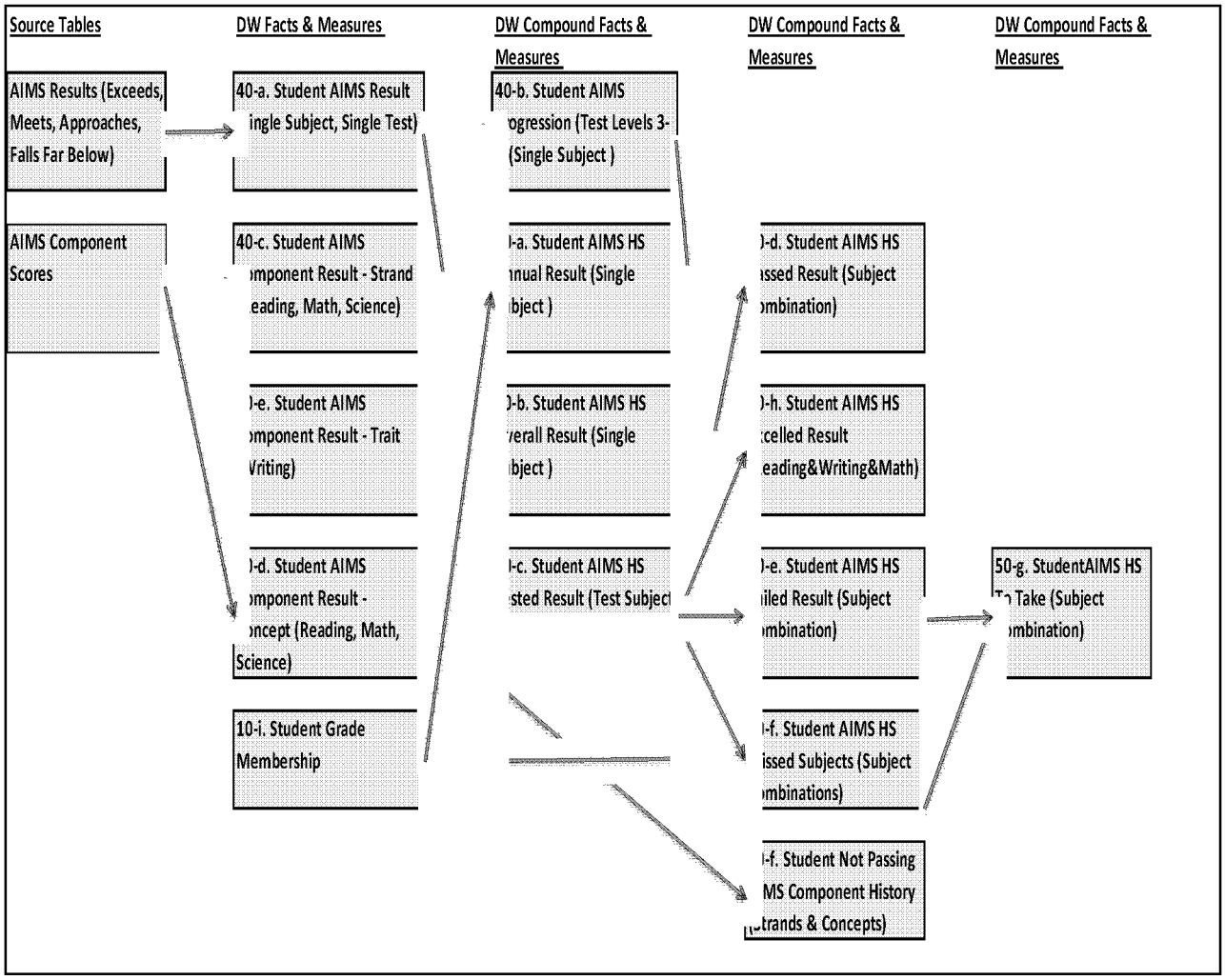
Chart K presents the strand and concept composition of conducted tests by Subject, Strand, Concept, Fiscal Year and Test Levels. Some strands or concepts were not included in some fiscal years. It is important to consult this schedule when doing analysis of Strands and Concepts.

Chart L provides descriptions of the dimensions used in this group of measures indicating in which measure/s they play a role.

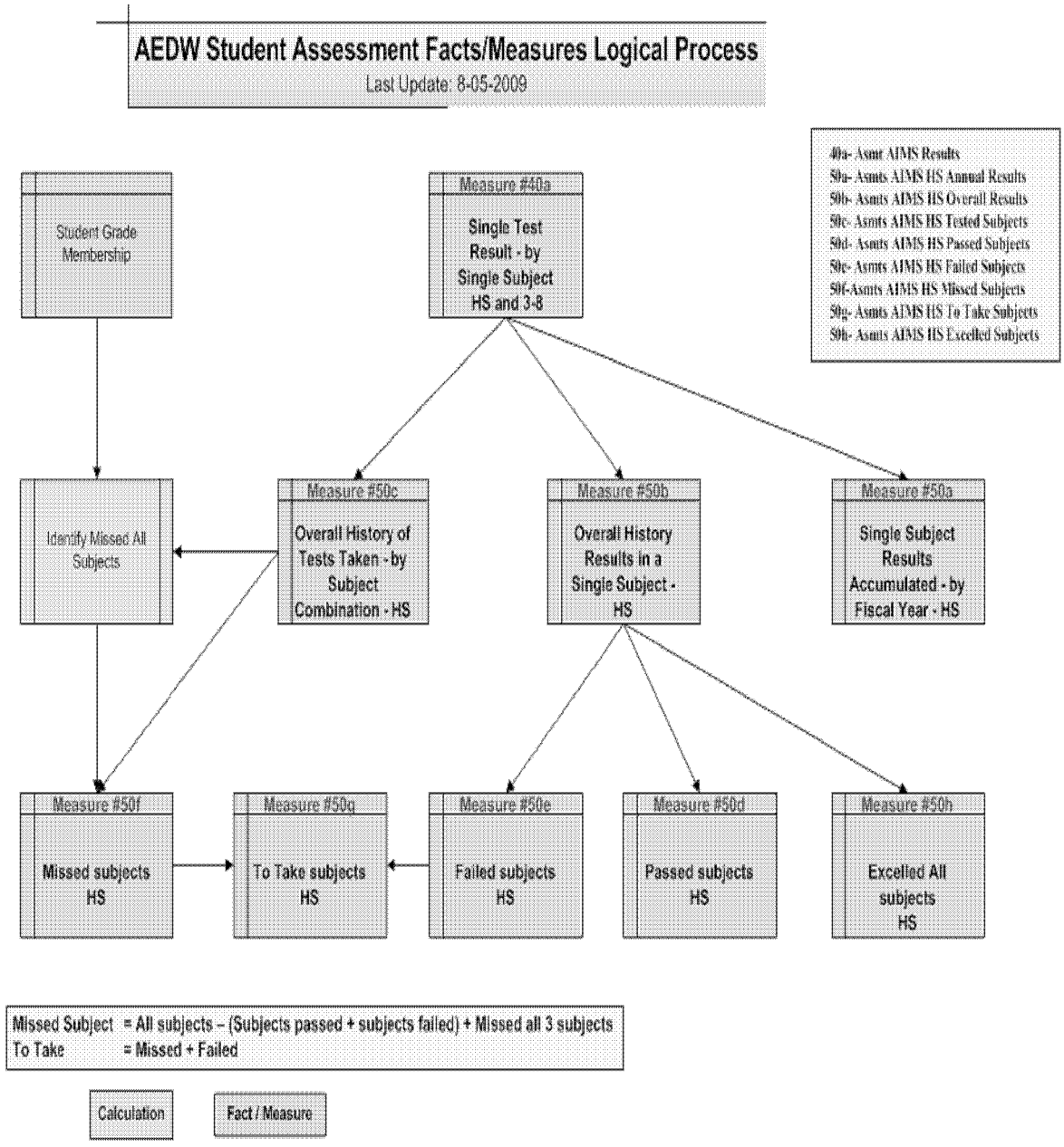
Passing High School AIMS, excluding Science, is required by State law for high school graduation. For AIMS HS Writing, Reading, and Mathematics, the student's first opportunity to test is the spring of their second year of high school (as determined by cohort not grade). The high school Science test is the only AIMS HS test that can be taken during the student's first year of high school. If the student does not take the HS Science test during his/her first year, then the student is expected to take the test during the second year of high school. Normally the first year of high school is the 9$^{th}$ grade; therefore, the number of students taking science test in the 9$^{th}$ grade is considerably higher than those taking the other subjects in the 9$^{th}$ grade.

High school Science test is not required for graduation and is not included in any school accountability formula. Therefore, the measures that are designed for the analysis of student graduation requirements, (such as counts of missed or to-take subjects) do not include Science.

## Chart G


Source Tables
DW Facts & Measures
DW Compound Facts & Measures
DW Compound Facts & Measures
DW Compound Facts & Measures
AIMS Results (Exceeds, Meets, Approaches, Falls Far Below)
40-a. Student AIMS Result ingle Subject, Single Test)
40-b. Student AIMS ogression (Test Levels 3- (Single Subject )
AIMS Component Scores
40-c. Student AIMS mponent Result - Strand eading, Math, Science)
l-a. Student AIMS HS nual Result (Single bject )
)-d. Student AIMS HS ssed Result (Subject mbination)
)-e. Student AIMS mponent Result - Trait Writing)
)-b. Student AIMS HS verall Result (Single bject )
)-h. Student AIMS HS celled Result eading&Writing&Math)
)-d. Student AIMS mponent Result - ncept (Reading, Math, Science)
l-c. Student AIMS HS sted Result (Test Subject
)-e. Student AIMS HS iled Result (Subject mbination)
50-g. StudentAIMS HS Take (Subject mbination)
10-i. Student Grade Membership
l-f. Student AIMS HS ssed Subjects (Subject mbinations)
l-f. Student Not Passing MS Component History trands & Concepts)

## Chart H


AEDW Student Assessment Facts/Measures Logical Process
Last Update: 8-05-2009
40a- Asmt AIMS Results
50a- Asmts AIMS HS Annual Results
50b- Asmts AIMS HS Overall Results
50c- Asmts AIMS HS Tested Subjects
50d- Asmts AIMS HS Passed Subjects
50e- Asmts AIMS HS Failed Subjects
50f-Asmts AIMS HS Missed Subjects
50g- Asmts AIMS HS To Take Subjects
50h- Asmts AIMS HS Excelled Subjects
Student Grade Membership
Measure #40a
Single Test Result - by Single Subject HS and 3-8
Identify Missed All Subjects
Measure #50c
Overall History of Tests Taken - by Subject Combination - HS
Measure #50b
Overall History Results in a Single Subject - HS
Measure #50a
Single Subject Results Accumulated - by Fiscal Year - HS
Measure #50f
Missed subjects HS
Measure #50g
To Take subjects HS
Measure #50e
Failed subjects HS
Measure #50d
Passed subjects HS
Measure #50h
Excelled All subjects HS
Missed Subject = All subjects – (Subjects passed + subjects failed) + Missed all 3 subjects
To Take = Missed + Failed
Calculation
Fact / Measure

## Chart I

**Track Test Results for selected students**

**Single Subject Assessment Results - Measures 40a, 50a, and 50b**

5/8/2009

**Measure 40a - Asmt AIMS Results**

| Student ID | Subject | AIMS Count Pass Fail | Assessment Date ID | Asmt Fiscal Year |
|---|---|---|---|---|
| 64969 | Reading | Pass 0, Fail 1 | 20041025 | 2005 |
| 64969 | Writing | Pass 1, Fail 0 | 20041025 | 2005 |
| 64969 | Mathematics | Pass 0, Fail 1 | 20041025 | 2005 |
| 64969 | Reading | Pass 0, Fail 1 | 20050221 | 2005 |
| 64969 | Mathematics | Pass 0, Fail 1 | 20050411 | 2005 |
| 64969 | Reading | Pass 0, Fail 1 | 20061030 | 2007 |
| 64969 | Mathematics | Pass 0, Fail 1 | 20061101 | 2007 |
| 74038 | Reading | Pass 0, Fail 1 | 20070226 | 2007 |
| 74038 | Writing | Pass 1, Fail 0 | 20070226 | 2007 |
| 74038 | Mathematics | Pass 0, Fail 1 | 20070410 | 2007 |
| 74038 | Mathematics | Pass 0, Fail 1 | 20071100 | 2008 |
| 74038 | Reading | Pass 0, Fail 1 | 20080226 | 2008 |
| 74368 | Reading | Pass 0, Fail 1 | 20060227 | 2006 |
| 74368 | Writing | Pass 0, Fail 1 | 20060227 | 2006 |
| 74368 | Mathematics | Pass 1, Fail 0 | 20060403 | 2006 |
| 74368 | Reading | Pass 1, Fail 0 | 20061030 | 2007 |
| 74368 | Writing | Pass 0, Fail 1 | 20071029 | 2008 |
| 74368 | Writing | Pass 0, Fail 1 | 20080226 | 2008 |
| 74380 | Reading | Pass 0, Fail 1 | 20060227 | 2006 |
| 74380 | Writing | Pass 0, Fail 1 | 20060227 | 2006 |
| 74380 | Mathematics | Pass 1, Fail 0 | 20060403 | 2006 |
| 74380 | Reading | Pass 0, Fail 1 | 20061030 | 2007 |
| 74380 | Writing | Pass 1, Fail 0 | 20061030 | 2007 |
| 74380 | Reading | Pass 0, Fail 1 | 20070226 | 2007 |
| 74380 | Reading | Pass 0, Fail 1 | 20071029 | 2008 |
| 74380 | Reading | Pass 1, Fail 0 | 20080226 | 2008 |

**Measure 50a - Asmt AIMS HS Annual Results**

| Student ID | Subject | AIMS Count Pass Fail | Fiscal Year |
|---|---|---|---|
| 64969 | Reading | Pass 0, Fail 2 | 2005 |
| 64969 | Writing | Pass 1, Fail 0 | 2005 |
| 64969 | Mathematics | Pass 0, Fail 2 | 2005 |
| 64969 | Reading | Pass 0, Fail 1 | 2007 |
| 64969 | Mathematics | Pass 0, Fail 1 | 2007 |
| 74038 | Reading | Pass 0, Fail 1 | 2007 |
| 74038 | Writing | Pass 1, Fail 0 | 2007 |
| 74038 | Mathematics | Pass 0, Fail 1 | 2007 |
| 74038 | Reading | Pass 0, Fail 1 | 2008 |
| 74038 | Mathematics | Pass 0, Fail 1 | 2008 |
| 74368 | Reading | Pass 0, Fail 1 | 2006 |
| 74368 | Writing | Pass 0, Fail 1 | 2006 |
| 74368 | Mathematics | Pass 1, Fail 0 | 2006 |
| 74368 | Reading | Pass 1, Fail 0 | 2007 |
| 74368 | Writing | Pass 0, Fail 2 | 2008 |
| 74380 | Reading | Pass 0, Fail 1 | 2006 |
| 74380 | Writing | Pass 0, Fail 1 | 2006 |
| 74380 | Mathematics | Pass 1, Fail 0 | 2006 |
| 74380 | Reading | Pass 0, Fail 2 | 2007 |
| 74380 | Writing | Pass 1, Fail 0 | 2007 |
| 74380 | Reading | Pass 1, Fail 1 | 2008 |

**Measure 50b - Asmt AIMS HS Overall Results**

| Student ID | Subject | AIMS Count Pass Fail | Last Fiscal Year Tested |
|---|---|---|---|
| 64969 | Mathematics | Pass 0, Fail 3 | 2007 |
| 64969 | Reading | Pass 0, Fail 3 | 2007 |
| 64969 | Writing | Pass 1, Fail 0 | 2005 |
| 74038 | Mathematics | Pass 0, Fail 2 | 2008 |
| 74038 | Reading | Pass 0, Fail 2 | 2008 |
| 74038 | Writing | Pass 1, Fail 0 | 2007 |
| 74368 | Mathematics | Pass 1, Fail 0 | 2006 |
| 74368 | Reading | Pass 1, Fail 1 | 2007 |
| 74368 | Writing | Pass 0, Fail 3 | 2008 |
| 74380 | Mathematics | Pass 1, Fail 0 | 2006 |
| 74380 | Reading | Pass 1, Fail 4 | 2008 |
| 74380 | Writing | Pass 1, Fail 1 | 2007 |

## Chart J

**Track Test Results for selected students**

**Combination Subject Assessment Results - Measures 50c - 50-h**

10/8/2008

| Measure 9 - Asmt AIMS HS Overall Result | | | | Msr 50c-50h | Measure 50c | Measure 50d | Measure 50e | Measure 50f | Measure 50g | Measure 50h |
|---|---|---|---|---|---|---|---|---|---|---|
| Student ID | Last Fiscal Year Tested | Single Subject | AIMSCount PassFail | Last Fiscal Year Tested | Tested | Passed | Failed | Missed | ToTake | Excelled |
| 64969 | 2007 | Math | Pass 0, Fail 3 | 2007 | Rdg & Wrtg & Math | Wrtg | Rdg & Math | None | Rdg & Math | |
| 64969 | 2007 | Rdg | Pass 0, Fail 3 | | | | | | | |
| 64969 | 2005 | Wrtg | Pass 1, Fail 0 | | | | | | | |
| 74321 | 2007 | Math | Pass 1, Fail 0 | 2008 | Rdg & Wrtg & Math | Rdg & Wrtg & Math | None | None | None | Rdg & Wrtg & Math |
| 74321 | 2008 | Rdg | Pass 2, Fail 0 | | | | | | | |
| 74321 | 2008 | Wrtg | Pass 2, Fail 0 | | | | | | | |
| 74368 | 2006 | Math | Pass 1, Fail 0 | 2008 | Rdg & Wrtg & Math | Rdg & Math | Wrtg | None | Wrtg | |
| 74368 | 2007 | Rdg | Pass 1, Fail 1 | | | | | | | |
| 74368 | 2008 | Wrtg | Pass 0, Fail 3 | | | | | | | |
| 74380 | 2006 | Math | Pass 1, Fail 0 | 2008 | Rdg & Wrtg & Math | Rdg & Wrtg & Math | None | None | None | |
| 74380 | 2008 | Rdg | Pass 1, Fail 4 | | | | | | | |
| 74380 | 2007 | Wrtg | Pass 1, Fail 1 | | | | | | | |
| 74658 | 2008 | Rdg | Pass 0, Fail 1 | 2008 | Rdg & Math | None | Rdg & Math | Wrtg | Rdg & Wrtg & Math | |
| 74658 | 2008 | Math | Pass 0, Fail 1 | | | | | | | |
| 74842 | 2007 | Rdg | Pass 0, Fail 1 | 2007 | Rdg & Wrtg | Wrtg | Rdg | Math | Rdg & Math | |
| 74842 | 2007 | Wrtg | Pass 1, Fail 0 | | | | | | | |
| 74863 | 2007 | Rdg | Pass 1, Fail 0 | 2007 | Rdg & Wrtg | Rdg & Wrtg | None | Math | Math | |
| 74863 | 2007 | Wrtg | Pass 1, Fail 0 | | | | | | | |
| 74881 | | | | 2008 | None | None | None | Rdg & Wrtg & Math | Rdg & Wrtg & Math | |
| 75367 | 2008 | Math | Pass 0, Fail 1 | 2008 | Math | None | Math | Rdg & Wrtg | Rdg & Wrtg & Math | |

| | | | |
|---|---|---|---|
| Tested | = | Passed + | Failed |
| Missed | = | All Subjects - | Tested |
| To Take | = | Failed + | Missed |

# Chart K – Schedule of Tested Strands and Concepts

## AIMS Assessment

**Reading strands and concepts included in the assessments by school year and grade**

| Asmt Strand Concept | Fiscal Year | Test Level | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 3 | 4 | 5 | 6 | 7 | 8 | HS |
| **1-Reading Process** | | | | | | | | |
| 1-Print Concepts | FY 2005 - 2009 | X | | | | | | |
| 3-Phonics | FY 2005 - 2009 | X | | | | | | |
| 4-Vocabulary | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 6-Comprehension Strategies | FY 2005 - 2009 | X | X | X | X | X | X | X |
| **2-Comprehending Literary Text** | | | | | | | | |
| 1-Elements of Literature | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 2-Historical and Cultural Aspects | FY 2005 - 2009 | | | | | X | X | X |
| **3-Comprehending Informational Text** | | | | | | | | |
| 1-Expository Text | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 2-Functional Text | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 3-Persuasive Text | FY 2005 - 2009 | X | X | X | X | X | X | X |

**Mathematics strands and concepts included in the assessments by school year and grade**

| Asmt Strand Concept | Fiscal Year | Test Level | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 3 | 4 | 5 | 6 | 7 | 8 | HS |
| **1-Number Sense & Operations** | | | | | | | | |
| 1-Number Sense | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 2-Numerical Operations | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 3-Estimation | FY 2005 - 2009 | X | X | X | X | X | X | X |
| **2-Data Analy,Prob & Discrete Math** | | | | | | | | |
| 1-Data Analysis (Statistics) | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 2-Probability | FY 2005 - 2009 | X | X | X | X | X | X | X |
| 3/4-Discrete Mathematics | FY 2006 - 2009 | X | X | X | X | X | X | X |
| **3-Patterns,Algebra & Functions** | | | | | | | | |
| 1/2-Patterns, Functions & Relationships | FY 2006 - 2009 | X | X | X | X | X | | |
| 1-Patterns | FY 2005 - 2009 | | | | | | X | X |
| 2-Functions & Relationships | FY 2005 - 2009 | | | | | | X | X |
| 3/4-Algebraic Representations/Change | FY 2006 - 2009 | X | X | X | X | X | X | |
| 3-Algebraic Representations | FY 2005 - 2009 | | | | | | | X |
| 4-Analysis of Change | FY 2005 - 2009 | | | | | | | X |
| **4-Geometry & Measurement** | | | | | | | | |
| 1/2-Properties & Transformation | FY 2006 - 2009 | X | X | X | X | X | X | |
| 1-Geometric Properties | FY 2005 - 2009 | | | | | | | X |
| 2-Transformation of Shapes | FY 2005 - 2009 | | | | | | | X |
| 3/4-Coordinate Geometry/Measurement | FY 2006 - 2009 | X | X | X | X | X | | |
| 3-Coordinate Geometry | FY 2005 - 2009 | | | | | | X | X |
| 4-Measurement | FY 2005 - 2009 | | | | | | X | X |
| **5-Structure & Logic** | | | | | | | | |
| 1/2-Algorithms, Logic & Reasoning | FY 2006 - 2009 | X | X | X | X | X | X | |
| 1-Algorithms & Algorithmic Thinking | FY 2005 - 2009 | | | | | | | X |
| 2-Logic & Reasoning | FY 2005 - 2009 | | | | | | | X |

## AIMS Assessment

**Science strands and concepts included in the assessments by school year and grade**

| Assessment Strand and Concept | Fiscal Year | Test Level | | |
|---|---|---|---|---|
| | | 4 | 8 | HS |
| **1-Scientific Inquiry** | | | | |
| 1-Observations, Questions, and Hypotheses | FY 2008 - 2009 | X | X | X |
| 2-Scientific Testing (Investigating and Modeling) | FY 2008 - 2009 | X | X | X |
| 3-Analysis and Conclusions | FY 2008 - 2009 | X | X | X |
| 4-Communication | FY 2008 - 2009 | | X | X |
| **2- History and Nature of Science** | | | | |
| 1/2- History & Nature of Science | FY 2008 - 2009 | X | X | X |
| **3-Science in Personal and Social Perspectives** | | | | |
| 1/2-Changes in Environment Science & Technology in Society | FY 2008 - 2009 | X | X | |
| 1/2/3-Environment Science Technology in Society and Human Popul | FY 2008 - 2009 | | | X |
| **4-Life Science** | | | | |
| 1-Characteristics Of Organisms | FY 2008 - 2009 | | | X |
| 2-Life Cycles | FY 2008 - 2009 | | | X |
| 3-Organisms and Environments | FY 2008 - 2009 | | | X |
| 4 -Diversity, Adaptation, and Behavior | FY 2008 - 2009 | | | X |
| 5-Matter, Energy, and Organization in Living Systems (Including Human Systems) | FY 2008 - 2009 | | | X |
| 1/3/4-Organisms Environment Adaptation | FY 2008 - 2009 | X | | |
| 2/4-Reproduction & Heredity Adaptive Behavior | FY 2008 - 2009 | | X | |
| **5-Physical Science** | | | | |
| 1-Properties of Objects and Materials | FY 2008 - 2009 | | X | |
| 2-Position and Motion of Objects | FY 2008 - 2009 | | X | |
| 3-Energy and Magnetism | FY 2008 - 2009 | X | | |
| **6-Earth and Space Science** | | | | |
| 2-Earth's Processes and Systems | FY 2008 - 2009 | X | | |
| 3-Changes in the Earth and Sky | FY 2008 - 2009 | X | | |

## Chart L - Dimensions of AIMS Measures

| Related Dimension | 40-a | 40-b | 40-c | 40-d | 40-e | 40-f | 50-a | 50-b | 50-c | 50-d | 50-e | 50-f | 50-g | 50-h | 60-a |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Student AIMS Results | Student AIMS Progression | Student AIMS Component Result - Strand | Student AIMS Component Result - Concept | Student AIMS Component Result - Trait | Students Not Passing AIMS Component History | Student AIMS HS Annual Result | Student AIMS HS Overall Result | Student AIMS HS Tested Result | Student AIMS HS Passed Result | Student AIMS HS Failed Result | Student AIMS HS Missed Result | Student AIMS HS To Take Result | Student AIMS HS Excelled Result | School Calendar |
| AIMS Pass Fail | | | | | | | x | x | | | | | | | |
| AIMS Results Progression | | x | | | | | | | | | | | | | |
| AIMS Semester | x | | x | x | x | | | | | | | | | | |
| Assessment Date | x | | x | x | x | | | | | | | | | | |
| Assessment Results | x | | x | x | x | | | | | | | | | | |
| Assessment Strand | | | X | | | | | | | | | | | | |
| Assessment Strand Concept | | | | x | | x | | | | | | | | | |
| Assessment Test Level | x | | x | x | x | | | | | | | | | | |
| Assessment Trait | | | | | x | | | | | | | | | | |
| Date of 100th Session Day | | | | | | | | | | | | | | | x |
| Date of 40th Session Day | | | | | | | | | | | | | | | x |
| Date of First Session Day | | | | | | | | | | | | | | | x |
| Date of Last Session Day | | | | | | | | | | | | | | | x |
| Fiscal year | | | | | | | x | | | | | | | | x |
| Fiscal Year Range | | x | | | | x | | | | | | | | | |
| Grade | | | | | | | x | x | x | x | x | x | x | x | |
| Grade Range | | | | | | | | | | | | | | | x |
| Initial Assessment Test Level | | x | | | | | | | | | | | | | |
| Last Assessment Test Level | | x | | | | x | | | | | | | | | |
| Last Fiscal Year Tested | | | | | | | | x | x | x | x | x | x | x | |
| Need Group Combinations | x | | | | | | x | x | x | x | x | x | x | x | |
| Number of Times Tested | | | | | | x | | | | | | | | | |
| Over Under Age Category | | | | | | | x | x | x | x | x | x | x | x | |
| Pass Fail Indicator | x | | | | | | | | | | | | | | |
| Percent of Time Score Is Greater Than 50 Percent | | | | | | x | | | | | | | | | |
| Percent of Time Score Is Less Than 50 Percent | | | | | | x | | | | | | | | | |

| Related Dimension | 40-a Student AIMS Results | 40-b Student AIMS Progression | 40-c Student AIMS Component Result - Strand | 40-d Student AIMS Component Result - Concept | 40-e Student AIMS Component Result - Trait | 40-f Students Not Passing AIMS Component History | 50-a Student AIMS HS Annual Result | 50-b Student AIMS HS Overall Result | 50-c Student AIMS HS Tested Result | 50-d Student AIMS HS Passed Result | 50-e Student AIMS HS Failed Result | 50-f Student AIMS HS Missed Result | 50-g Student AIMS HS To Take Result | 50-h Student AIMS HS Excelled Result | 60-a School Calendar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage Score | | | x | x | | | | | | | | | | | |
| School District | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| School Track | | | | | | | | | | | | | | | x |
| Score | | | | | x | | | | | | | | | | |
| Session Days | | | | | | | | | | | | | | | x |
| Students | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| Test Subjects | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |

See Appendix ZZ for descriptions.

## *40-a Student AIMS Results*

a- Description

Student AIMS Results measure provides students results information for all test dates and all test levels in Reading, Writing, Mathematics and Science starting at FY 2005. Results values are: Exceeds, Meets, Approaches and Falls Far Below. The first two results are considered Passing the test. The latter two results are considered Failing the test. Tests at grade levels 3-8 are given once a year. Test level 10 which is the High school level are conducted twice a year and can be taken multiple time. The measure counts test takers by test subject, test level, test date, test result, Pass - Fail Indicator and various other criteria.

AIMS test levels are Grades 3-8 and High School (AKA Level 10). The underlying fact table includes data about the test subject, test level, test date, results, and school where test was taken, for all students whose tests have been scored. Student tests that were not scored were left out of the Data Warehouse fact tables.

Test level results (Falls Far Below, Approaches, Meets, Exceeds) are stored for each test taken by the student. Pass and Fail indicators values are derived from these results as follows:

"Falls Far Below" and "Approaches" = Fail

"Meets" and "Exceeds" = Pass

This information can be pivoted in various combinations of attributes, which includes assessment date, school where the test was taken, student demographics, test subject, test level, test result.

b- Measure Usage

This measure is the best source for comparative historical analysis at test level results (Falls Far Below, Approaches, Meets, Exceeds). Aside from the AIMS component measures (40-c, 40-d, 40-e, 40-f), this is the only measure which identifies the school in which the AIMS test was taken; all other measures use the *last school* that the student *attended* in the *fiscal year* that the test was taken.

c- Dimensions/ Attributes

*AIMS Semester; Assessment Date; Assessment Results; Assessment Test Level*; *Need Group Combinations; Pass Fail Indicator; School District: Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

The Data Warehouse uses the same AIMS data as the R&E department, i.e. post data corrections provided by the schools. Records of tests that were not scored (the results are not known) were not included in the Data Warehouse.

Test results of students not enrolled in a public school or lacking a valid SAIS ID, were not excluded from the Data Warehouse. When categorizing the tests by student demographics, these students without SAIS ID will be grouped under "Not Reported". As of December 2009, This group of tests was about 1.84 % of total test records (183,767 records out of 9,984,693 records).

Occasionally the operational systems have one SAIS ID for multiple students. When AIMS results are aggregated for these duplicate ids in the Data Warehouse, aggregations show out-of-range counts of passed/ failed test results, such as one student having failed a subject 8 times in one year. These inconsistencies are minimal (6,280 test records out of 9.9 mil test records = .06%, as of December 2009) and are not expected to have an effect on the analysis of the data.

When the school id in the student's assessment record does not exist on the school dimension table of the Data Warehouse, the school assignment for such student in the Data Warehouse is "Not Reported" and will show this way in the measure when viewed by school.

The mismatch of school ids occurs mostly in the following situation: for a student who moved to a private school and took the test there, since SAIS does not include enrollments in private schools, the school id in the AIMS record does not match the school id on the latest membership available in SAIS.

On occasions, the school in which a student took the test was not the student's school of enrollment.

## *40-b Student AIMS Progression*

a- Description

Student AIMS Progression measure provides information on student progression over time in grades 3-8 test levels for each test subject (Reading, Math, Writing, Science). Every student's test results in each subject are placed in a 6 slots array where the first slot represents 3rd Grade level, using the first letter of the result name and an N for the fiscal year in which the student test result is not available. Example for such an array is NMFAAA meaning that 3rd grade level result is not available, 4th grade level result is Meets, 5th grade level result is Falls Far Below and the next three test levels results are Approaches. The various arrays where classified into 6 progression categories to provide a concise view of the results. The measure counts students by test subject, progression category, initial and last test levels, fiscal year range and various other criteria.

Student test result progressions are grouped in 7 categories identifying the combination of test results, as shown in the table below.

| Category | Description |
|---|---|
| **Excelling** | All tests taken in the subject have E results |
| **Surpassing** | Any mix of E's and M's results |
| **Meeting** | All tests taken in the subject have M results |
| **Staggering** | Any mix of E/M and A/F results |
| **Approaching** | All test taken in the subject have A results |
| **Plodding** | Any mix of A's and F's results |
| **Falling far Below** | All tests taken in the subject have F results |

The Progression Hierarchy dimension includes the category dimension which may be expanded to show all of the combination of results, or may be collapsed and provide the aggregate information only.

If the student repeats the same test level in more than one school year, the best result is kept for that test level. Each test level is counted one time, regardless of the number of times that the test was repeated for the same level.

b- Measure Usage

This measure is dedicated to grade levels 3-8 and does not include High School level tests.

c- Dimensions / Attributes

*AIMS Results Progression; Fiscal Year Range; Initial Assessment Test Level; Last Assessment Test Level; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS ID on their AIMS assessment data are excluded from this measure.

## *40-c Student AIMS Component Result - Strand*

a- Description

Student AIMS Component Result – Strand measure provides information on % scores achieved in strands of Reading, Mathematics, and Science tests. The Reading, Mathematics and Science tests have each a structural hierarchy of Strands-Concepts- Questions. Questions are scored as correct or incorrect. Concepts are scored as raw score showing the number of correct answers and % score showing the % of correct answers. The score at a strand level considers all the scores of the underlying components; these scores are loaded to the data warehouse as submitted by the vendor. This measure counts students for each strand at each % score level for the test date in FYs 2005 –2008 and by various other criteria.

The test results of the subjects taken are provided as well in this measure allowing the analyst to focus on particular populations defined by test results e.g. Students in the Approaches category. Percentage correct is rounded to the nearest whole number. The percent correct values that now include 101 entries will be grouped for analysis in later Data Warehouse releases as needed.

This information may be analyzed by district, school, and student demographics. It should be noted that the school and district information reported in this measure is related to the school that the test was taken, unlike some of the measures that report the assessment results by subject, which are based on the attending school information.

To group the strands for each subject, select *Test Subject* first and then select *Asmt Strand* dimension under it.

b- Measure Usage

To display correct relationships, Asmt Strand or Trait attribute should be selected as subordinate to Test Subjects.

Do not select the "Strand or Trait" dimension together with the "Concept" dimension. The corresponding measures are not supporting such a hierarchical view. You will get meaningless information.

c- Dimensions / Attributes

*AIMS Semester; Assessment Date; Assessment Results; Assessment Strand; Assessment Test Level; Percentage Score; School District*; Students; *Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

AIMS Strands data is brought over to the Data Warehouse for FY 2005 and later, for Reading, Mathematics, and Science.

AIMS Math and Reading test results of 10/26/2004 (High School only) do not have strands and concepts information in the source system, therefore this information is missing from the Data Warehouse. Also missing are a few Mathematics strand 5 results from the 4/11/2005 AIMS test.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *40-d Student AIMS Component Result - Concept*

a- Description

Student AIMS Component Result – Concept measure provides information on % scores achieved in concepts of Reading, Mathematics and Science tests. The Reading, Mathematics and Science tests have each a structural hierarchy of Strands-Concepts- Questions. Questions are scored as correct or incorrect. Concepts are scored as raw score showing the number of correct answers and % score showing the % of correct answers. This measure counts students for each concept at each % score level for each test date in FYs 2005 – 2008 and by various other criteria.

The test results of each subject taken, as well as the subject concepts percentage correct scores are provided for the student. Percentage correct is rounded to the nearest whole number. The percent correct values that now include 101 entries will be grouped for analysis in later releases as needed.

This information may be analyzed by district, school, and student demographics. It should be noted that the school and district information reported in this measure is related to the school that the test was taken, unlike some of the measures that report the assessment results by subject, which are based on the attending school information.

To group the concepts with their strands for each subject, select *Test Subject first and Asmt Strand Concept* attribute under it.

b- Measure Usage

This measure is intended for use by schools and districts to analyze AIMS success and failure patterns and to identify student populations that need remedial instruction.

Do not select the "Strand or Trait" dimension together with the "Concept" dimension. The corresponding measures are not supporting such a hierarchical view. You will get meaningless information.

To analyze strands refer to measure # 40-c, Student AIMS Component Result - Strand.

c- Dimensions / Attributes

*AIMS Semester; Assessment Date; Assessment Results; Assessment Strand Concept; Assessment Test Level; Percentage Score; School District*; *Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

AIMS Concepts data is brought over to the Data Warehouse for FY 2005 and later for Reading, Mathematics and Science.

AIMS Math and Reading test results of 10/26/2004 (High School only) do not have strands and concepts information in the source system, therefore this information is missing from the Data Warehouse.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *40-e Student AIMS Component Result - Trait*

a- Description

This measure provides information on the raw scores achieved in each of the 6 traits by which the Writing test is evaluated. This measure counts students for a trait for each score for Writing tests conducted, by various other criteria. The Trait evaluation scale has 6 points. The raw trait score reflects a number from 1 to 6.

This information may be analyzed by district, school, and student demographics. It should be noted that the school and district information reported in this measure is related to the school that the test was taken, unlike some of the measures that report the assessment results by subject, which are based on the attending school information.

The only test subject available in this measure is Writing; since Writing traits are not broken down into smaller dimensions, selecting *Asmt Strand concept* attribute in this measure does not provide any additional information.

b- Measure Usage

This measure is confined to the *Writing* subject and its Trait.

c- Dimensions / Attributes

*AIMS Semester; Assessment Date; Assessment Results; Assessment Test Level; Assessment Trait*; *School District*; *Score; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

AIMS Writing Traits data is brought over to the Data Warehouse for FY 2005 and later. In AIMS High School Writing assessment 676 out of 36,331 of 10/26/2004 test results, and 47 assessments out of 47 of 06/24/2008 test results, do not have valid traits information. These traits have invalid codes entered by the vendor to indicate the text was indecipherable.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *40-f Students Not Passing AIMS Component History*

a- Description

This measure provides information about concept level scores of students who persistently failed AIMS subjects. Students included in this measure are High School students that failed all AIMS tests taken in a particular subject, (from *Student AIMS HS Failed Results* measure) and students in failing progression categories (from the *Student AIMS Progression* measure). The concept score history of every student is scanned, the number of occurrences in which the score is less than 50% is counted and then the percent of time the concept score is less than 50% calculated. The measure counts students by concepts, the percent of time the score in the concept is less than 50% and various other criteria.

The span of the fiscal years in which the student has failed the AIMS test and the last test level are provided for analysis. When a student has failed in the non-High School tests as well as High School tests, the information is combined for the student i.e. test level will be the High School level.

This information may be analyzed by district, school, and student demographics. It should be noted that the school and district information reported in this measure is related to the school that the test was taken, unlike some of the measures that report the assessment results by subject, which are based on the attending school information.

In this measure, strand and concept are organized in a hierarchy and can be viewed as such, when the Concept dimension is selected under the Strand dimension. Once a student passes a test subject the history of previously failed tests are excluded from this measure.

b- Measure Usage

To group the concepts with their strands for each subject, select *Asmt Strand Concept* attribute within *Asmt Strand or Trait* dimension within *Test Subject*.

This measure provides information for Reading, Mathematics and Science.

c- Dimensions / Attributes

*Asmt Strand Trait Concept; Fiscal Year Range; Last Assessment Test Level; Number of Times Tested; Percent of Time Score Is Greater Than 50 Percent; Percent of Time Score Is less Than 50 Percent; School District*; *Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

AIMS Concepts data is brought over to the Data Warehouse for FY 2005 and later for Reading and Mathematics.

AIMS Math and Reading test results of 10/26/2004 (High School only) do not have strands and concepts information in the source system, therefore this information is missing from the Data Warehouse.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

# AIMS Assessment - High School Level Measures:

## *50-a Student Assessment AIMS HS Annual Result*

a- Description

This measure provides an aggregation of test results of each student by test subject in each fiscal year. This measure relates to High School AIMS test only; students are included when they take High School level AIMS test, regardless of their school grade. The underlying fact table of this measure accumulates the number of times each student has passed or failed each subject in a single fiscal year, and categorizes them by assigning a "Pass-Fail Description" to the subject tested by student, such as 'Passed 2, Failed 0', 'Passed 1, Failed 1'.

Each AIMS subject test may repeat 3 times in one fiscal year, therefore the Pass-Fail-Description may not indicate a number more than 3 for each subject in this measure. Occasionally a student's tested subject appears under Pass-Fail-Description with a higher number of tests in one fiscal year. These conditions are caused by duplicate information entered for non-public-school students and should be ignored.

In this measure school id and grade are assigned to the student's assessment record based on the student's membership, unlike the Student Assessments AIMS Results measure # 40-a which uses the school in which the test was taken. The latest school and grade attended in the fiscal year in which the test subject was taken are assigned to the student assessment. In this measure, when there is no membership information for the student during the year that the test was taken the assessment is assigned "Not Reported" school id and grade. In case of concurrent enrollment, the school is selected based on a predefined priority of school type - See Appendix G - School Type for the values.

b- Measure Usage

This measure is constructed for analysis of student performance in a single fiscal year. When a student repeats a test subject in more than one year, the AIMS test subject has one row in each fiscal year regardless of the results of the tests.

c- Dimensions/ Attributes

*AIMS Pass Fail* ; *Fiscal Year; Grade; Need Group Combinations*; *Over Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

A few cases of duplicate entries exist in the source systems for tested subjects of some students in non-public schools, for the same student number and test subject in the same fiscal year. These conditions cause unexpected Pass-Fail-Description (over 3 pass and fail conditions) and should be ignored. Assessment records that do not have valid SAIS ID are excluded from this measure.

## *50-b Student Assessment AIMS HS Overall Result*

a- Description

This measure provides an aggregation of test results for each student by single test subject (Reading, Writing, Mathematics) over the entire history of the High School level AIMS tests a student has taken since 2005. Students are included when they take a High School level AIMS test, regardless of their school grade. It accumulates the number of times each student has passed or failed a single subject, and categorizes them by assigning a "Pass-Fail Description" to the subject tested by student, such as 'Passed 2, Failed 0', 'Passed 1, Failed 3'.

Each time a student takes a test in a subject, the pass/fail count and description for that test subject are updated and Last Fiscal Year Tested is set to the fiscal year of the latest test for the test subject. School and grade are assigned based on the student's membership, unlike the Student Assessments AIMS Results, measure # 40-a which uses the school in which the test was taken. The last grade and school attended in the fiscal year that the latest test was taken in the subject is assigned to the student assessment. In this measure, when there is no membership information for the student during the last year that the test was taken the assessment is assigned "Not Reported" school id and grade. In case of concurrent enrollment, the school is selected based on a predefined priority of school type - See Appendix G - School Type for the values.

This measure may be used to assess the information by district, school attended, grade, student demographics and fiscal year. For illustration of the derivation of the underlying fact see Chart E.

b- Measure Usage

This measure is intended for analysis of student performance in each subject over time. Test dates are not available in this measure and the fiscal year, school, and grade associated with this measure are based on the date of latest test taken in a single subject. See Chart F above for illustration of the computation of the fact underlying this measure.

c- Dimensions/ Attributes

*AIMS Pass Fail* ; *Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-c Student Assessment AIMS HS Tested Result*

a- Description

This measure provides an aggregation of tested subjects for each student over the entire history of the student AIMS tests since 2005, by combinations of test subjects e.g. "Reading and Writing", "Reading and Math", "Reading, Writing and Math".

This measure relates to High School AIMS test results only; students are included when they take a High School level AIMS test, regardless of their school grade. The underlying fact table of this measure accumulates the subjects taken by combination of subjects as follows for fiscal years prior to 2008:

Reading
Writing
Mathematics
Reading and Mathematics
Reading and Writing
Writing and Mathematics
Reading and Writing and Mathematics

Science is added to the above combination of subjects effective 2008.

The fiscal year and grade associated with a student tested subjects are the fiscal year of the latest test taken, regardless of subject, and the grade attended at that time. For an illustration of derivation of the fact underlying this measure see Chart C above.

b- Measure Usage

This measure focus is the combination of test subjects taken over the entire test history of students and may be used to identify patterns of test taking by grade and student demographics. It is a building block for measure # 50-f Missed Subjects and may be displayed and analyzed in conjunction with measure # 50-f.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-d Student Assessment AIMS HS Passed Result*

a- Description

This measure provides an aggregation of test subjects passed by each student over the entire history of the student AIMS tests since 2005, by combinations of test subjects e.g. "Reading and Writing", "Reading and Math", "Reading, Writing and Math".

This measure relates to High School AIMS test results only; students are included when they take a High School level AIMS test, regardless of their school grade. The underlying fact table of this measure accumulates the subjects taken by combination of subjects as follows for fiscal years prior to 2008:

Reading
Writing
Mathematics
Reading and Mathematics
Reading and Writing
Writing and Mathematics
Reading and Writing and Mathematics

Science is added to the above combination of subjects effective 2008.

The fiscal year associated with a subject combination a student has passed is the fiscal year of the latest test taken (regardless of subject). The grade associated is the grade attended at the latest test taken. For an illustration of derivation of the fact underlying this measure see Chart F.

b- Measure Usage

This measure is intended for analysis of AIMS success patterns and trends in subject combinations by district, school, grade, and student demographics, across fiscal years. It does not provide detail information by date of test or by individual subjects.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-e Student Assessment AIMS HS Failed Result*

a- Description

This measure provides an aggregation of test subjects failed by each student over the entire history of the student AIMS tests since 2005, by combinations of test subjects e.g. "Reading and Writing", "Reading and Math", "Reading, Writing and Math".

This measure relates to High School AIMS test results only; students are included when they fail a High School level AIMS test, regardless of their school grade and are removed when they pass the test.

In this measure test subjects that a student failed are combined according to the following subject subsets prior to 2008:

Reading
Writing
Mathematics
Reading and Mathematics
Reading and Writing
Writing and Mathematics
Reading and Writing and Mathematics

Science is added to the above combination of subjects effective 2008.

The fiscal year and grade associated with a subject subset a student failed are the fiscal year of the latest test taken (regardless of subject) and the grade attended at that time. For an illustration of derivation of the fact underlying this measure see Chart F.

b- Measure Usage

This measure is intended for analysis of AIMS failure patterns and trends in subject combinations by district, school, grade, and student demographics, across fiscal years. This measure may be viewed and analyzed in conjunction with the Passed Subjects measure, to achieve a comprehensive analysis.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-f Student Assessment AIMS HS Missed Result*

a- Description

This measure provides an aggregation of test subjects missed by a student over the entire history of students AIMS tests starting from 2005, by combinations of test subjects e.g. "Reading and Writing", "Reading and Math", "Reading, Writing and Math".

The measure includes students that missed one, two or all four subjects: Reading , Writing, Mathematics, and Science.

There are 2 steps in the construction of the underlying fact table:

1. For students who have at least one tested subject (regardless of result), the missed subjects are derived from tested subjects.

2. For students who have no test records, i.e. assumed to have missed all 4 subjects, the following were included: students in grade 10 in FY 2005, students in grades 10-11 in FY 2006, students in grades 10-12 in FY 2007 or FY 2008.

The missed test subjects are combined to subsets as follows for fiscal years prior to 2008:

Reading
Writing
Mathematics
Reading and Mathematics
Reading and Writing
Writing and Mathematics
Reading and Writing and Mathematics

Science is added to the above combination of subjects effective 2008.

For student who missed 1 or 2 subjects, the Last Fiscal Year Tested is set to the fiscal year of the latest test taken and grade is the one attended at the latest test taken.

When all subjects are missed, the fiscal year and grade of the latest student's membership are used for last fiscal year tested and grade attributes.

For an illustration of the computation of the underlying fact table see Chart F.

b- Measure Usage

This measure provides perspectives on the combinations of missed test subjects, by district, school, grade, and student demographics. It may be viewed in conjunction with measure # 50-c – Subjects Tested to analyze trends and patterns of student test behavior.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-g Student Assessment AIMS HS To-Take Result*

a- Description

This measure provides an aggregation of test subjects remaining to take by students considering the entire history of the student AIMS tests since 2005, by combinations of test subjects e.g. "Reading and Writing", "Reading and Math", "Reading, Writing and Math".

This measure is based on derived facts: subjects "to take" are identified for the student by combining the "missed" subjects and the "failed" subjects.

For example if the student has passed Reading, failed Writing, and missed Mathematics, "to take" subject combination will be "Writing and Mathematics".

The following students will be included in this measure:

i. Students included in the "AIMS HS Failed Subjects" measure

ii. Students included in the "AIMS HS Missed Subjects" measure

The combination of subjects To Take are for fiscal years prior to 2008:

Reading
Writing
Mathematics
Reading and Mathematics
Reading and Writing
Writing and Mathematics
Reading and Writing and Mathematics

Science is added to the above combination of subjects effective 2008.

For a detail illustration of the computation of the underlying derived fact, see Chart F.

b- Measure Usage

This measure is constructed to support the planning of remedial instruction for students who failed or hesitate to take AIMS tests. In addition to analysis by district, school, grade, and student demographics, it can be drilled down to the student level, providing lists of students that need attention. This measure does not provide detail information by date of test or by individual subjects.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Since the assessment data in the Data Warehouse starts with 2005, some of the older students might be missing prior years test records and therefore show as needing to take some subjects.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

## *50-h Student Assessment AIMS HS Excelled Result*

a- Description

This measure is a subset of "*Student Assessment AIMS HS Passed Subjects".* It includes the students who have earned a score of "Exceeds" in all three subjects, Reading and Writing and Mathematics, over the entire history of AIMS tests since 2005.

This measure relates to High School AIMS test results only. Students are included when they pass all high school level AIMS tests with "Exceeds" score, regardless of their school grade.

Once included in this measure, the student is never removed. Unlike the other assessment measures, this measure has only one subjects combination: "Reading and Writing and Mathematics".

b- Measure Usage

This measure is intended to support analysis of patterns and trends of excellence in High School AIMS. A drill down to student level can provide the list of excelling students. The measure does not provide detail information by date of test or by subjects. It has only one combination subject for excelling students which may be analyzed by district, school, grade, and student demographics.

c- Dimensions/ Attributes

*Grade*; *Last Fiscal Year Tested; Need Group Combinations*; *Over-Under Age Category; School District; Students; Test Subjects*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

Since the assessment data in the Data Warehouse starts at 2005, any student that excelled in all subjects but took one or more of the subjects prior to 2005 is not included in this measure.

Students who do not have valid SAIS IDs on their AIMS assessment data are excluded from this measure.

# D – School Calendar

## *60-a School Calendar*

a- Description

This measure provides a count of school calendars by fiscal year and track, identifying the range of grades offered and the number of days that the school was in session. The first day, 40th day, 100th day, and the last day of school are provided for analysis as well. If the school has only a deactivated calendar, the deactivated calendar is used. If the school does not have a calendar, the calendar of its district is used. Schools may offer partial instructions on session days; partial days are added together to give the counts for full days that the school is in session. This measure provides information for analysis by the lowest and highest grades offered by the school, as well as county and school information.

If a school has more than one track in a year, each track is counted separately.

The range of grades offered by a school, as presented in this measure, is based on the information in the Enterprise source information. The grade information is independent of student membership in the school, and whether any students enrolled in those grades or not.

b- Measure Usage

This measure can also be used for obtaining the parameters of individual districts and schools when needed for analysis of other measures. To select Distance Learning Programs filter on School Nature.

c- Dimensions / Attributes

*Date Of 100th Session Day; Date Of 40th Session Day; Date Of First Session Day; Date Of Last Session Day; Fiscal Year; Grade Range; School District; School Track; Session Days*

Please refer to Chart L above for Measure and Dimension relationships.

Please refer to Appendix ZZ for dimension descriptions presented in alphabetical order.

d- Source Data Considerations

When identifying the lowest grade offered by the school, individual education program codes are bypassed.

The calendar information includes 8 schools that have track numbers higher than 4 defined for their schools in FY 2003. This is erroneous data and should be considered as track 1.

# III. Appendices

## A - Phases of Arizona Education Data Warehouse Plan

1. **AEDW Phase 1 - Student Membership & AIMS -**
   - Personal data
   - School Membership
     - Enrollment
     - Withdrawal
     - Readmission
     - District of residence transfer **
   - School/District data
   - Grade Membership
     - Promotion, demotion during the school year
     - Promotion, Retention, Exits at the end of school year
     - Community college classes taken**
   - AIMS Results

   ** The highlighted items are populated in the data warehouse in Phase I; however the measures to incorporate their info for analysis will be developed in later Phases.

2. **AEDW Phase 2 - Student Needs, Programs, Assessments & Other**
   - **Summer withdrawal**
   - Student needs
     - Special Education
     - Limited English Proficiency
     - Economic Disadvantage
     - Social Disadvantage
     - Behavioral
     - Academic Disadvantage
     - Gifted
     - Other
   - Program participation
     - Special Education Programs
     - English Language Programs
     - Early Childhood Programs
     - Support Programs
   - Programs Assessment
     - English Proficiency
     - Early Childhood **
   - Enterprise Related Data
   - AIMS Strands & Concepts
   - Student Transactions Integrity (for Data Management analysts only)

3. **AEDW Phase 3 - Student Attendance & Absence ()**
   - Absence - reported, funded
   - Attendance – reported, funded

- Concurrent membership at multiple schools
- Full Time Equivalency
- Payer Factors
- Weighted ADM
- Voucher Students
- AIMS Science test – already defined in the DW but data not activated

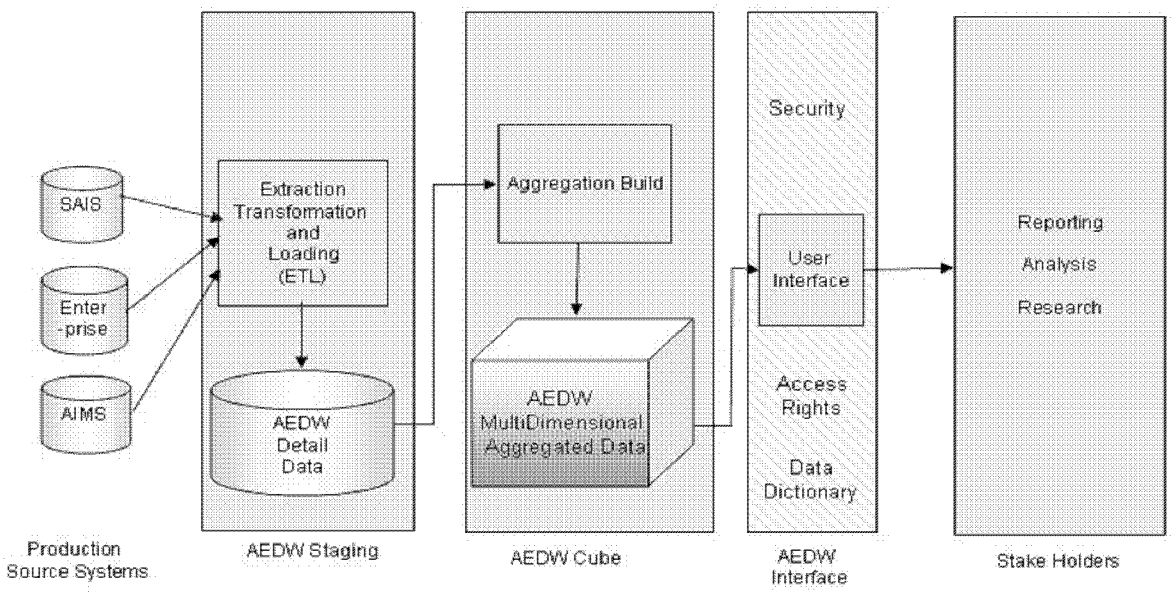
4. **AEDW Phase 4 - Schools ()**
   - Many of the school measures are computed by the agency divisions and published in a dissociated manner.
   - Integration of all school level information is crucial for decision making at all levels, school up to legislature
   - The following list of school information is by no means exhaustive. Exploration is underway
   - School/District Finances
     - State Funding (Appor/Char & Classroom Site Fund)
     - Federal Titles Funding
     - Grants
     - Tutor Fund
     - Nutrition Programs & Food Distribution
     - Budgets
     - Annual Financial Reports
   - School Performance
     - AYP, AZ Learn, Growth
     - Graduation Rates
     - Dropout Rate
     - School Improvement
     - Sped Compliance Monitoring
     - State Performance Plan/APR
   - School Statistics
     - EDEN/EDFACT
     - Other

5. **AEDW Phase 5 - Teachers ()**
   - Teacher Certification
   - SDER
   - Highly Qualified Teachers

6. **AEDW Phase 6 - Other Student Programs & Provisions ()**
   - Exploration in progress
   - Systems identified so far:
     - AZ Safe
     - Career and Technical Adult Education
     - Other

# Appendix B

## B - Data Warehouse Creation Diagram



# C - Computation of Passed, Failed, Missed, To-Take

| | Possible test results across all subjects. | | | Subjects Taken | | | Subject passed | | | Subjects Failed | | | Subject Missed | | | Subjects to Take | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **case #** | **Reading** | **Writing** | **Math** | **Reading** | **Writing** | **Math** | **Reading** | **Writing** | **Math** | **Reading** | **Writing** | **Math** | **Reading** | **Writing** | **Math** | **Reading** | **Writing** | **Math** |
| 1 | p | m | m | y | | | y | | | | | | | y | y | | y | y |
| 2 | f | m | m | y | | | | | | y | | | | y | y | y | y | y |
| 3 | m | p | m | | y | | | y | | | | | y | | y | y | | y |
| 4 | m | f | m | | y | | | | | | y | | y | | y | y | y | y |
| 5 | m | m | p | | | y | | | y | | | | y | y | | y | y | |
| 6 | m | m | f | | | y | | | | | | y | y | y | | y | y | y |
| 7 | p | p | m | y | y | | y | y | | | | | | | y | | | y |
| 8 | p | f | m | y | y | | y | | | | y | | | | y | | y | y |
| 9 | f | p | m | y | y | | | y | | y | | | | | y | y | | y |
| 10 | f | f | m | y | y | | | | | y | y | | | | y | y | y | y |
| 11 | p | m | p | y | | y | y | | y | | | | | y | | | y | |
| 12 | p | m | f | y | | y | y | | | | | y | | y | | | y | y |
| 13 | f | m | p | y | | y | | | y | y | | | | y | | y | y | |
| 14 | f | m | f | y | | y | | | | y | | y | | y | | y | y | y |
| 15 | m | p | p | | y | y | | y | y | | | | y | | | y | | |
| 16 | m | p | f | | y | y | | y | | | | y | y | | | y | | y |
| 17 | m | f | p | | y | y | | | y | | y | | y | | | y | y | |
| 18 | m | f | f | | y | y | | | | | y | y | y | | | y | y | y |
| 19 | p | p | p | y | y | y | y | y | y | | | | | | | | | |
| 20 | p | p | f | y | y | y | y | y | | | | y | | | | | | y |
| 21 | p | f | p | y | y | y | y | | y | | y | | | | | | y | - |
| 22 | f | p | p | y | y | y | | y | y | y | | | | | | y | | - |
| 23 | p | f | f | y | y | y | y | | | | y | y | | | | | y | y |
| 24 | f | p | f | y | y | y | | y | | y | | y | | | | y | | y |
| 25 | f | f | p | y | y | y | | | y | y | y | | | | | y | y | - |
| 26 | f | f | f | y | y | y | | | | y | y | y | | | | y | y | y |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| p=passed; f=failed; m=missed (not taken/graded) | | | | | | | | | | | | | | | | | | |

# Appendix D

## D - AIMS HS Measures Relationship and Sample Chart

## Passed, Failed, Missed, Tested, To-Take measure

The chart on the next page is a sample of 5 measures combined on one report. This report emphasizes the relationship between these measures and shows how these facts are computed.

**Passed** column and **To-Take** column are complements: the row for each subject complements the row for the other two subjects. For example, the number of students who have passed Reading only equals the number of students who need To-Take Writing and Math, and so on. The same rule applies to **Missed** and **Tested**, they complement each other. The number of students who missed Reading equals the number of students who tested for Writing and Math.

For each student To-Take is calculated by adding the subjects failed to the subjects missed. When applying the formula (To-Take = Failed + Missed) the combination subjects should be converted into single subjects, meaning that to calculate this formula for "Reading", we need to add "Reading", "Reading and Writing", "Reading and Math", and "Reading, Writing, and Math". This calculation is performed in the spreadsheet, to demonstrate the relationship of these dimensions.

| Assessment Measures Relation of Combination Subjects<br>12/4/2008 | | | | | | | | Calculate To-Take:<br>Single Subject<br>Failed + Missed = To-Take | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Last Fiscal Year | | Subject | Passed Measure 11 | Failed Measure 12 | Missed Measure 13 | Tested Measure 10 | To Take Measure 14 | Failed | Missed | To-Take |
| 2006 | 2 | Reading | 3,257 | 1,543 | 1,715 | 554 | 1,931 | 14,297 | 12,429 | 26,726 |
| 2006 | 3 | Writing | 3,472 | 2,339 | 2,901 | 1,000 | 3,104 | 14,515 | 13,169 | 27,684 |
| 2006 | 4 | Mathematics | 2,625 | 5,876 | 3,350 | 2,479 | 5,635 | 18,923 | 12,139 | 31,062 |
| 2006 | 5 | Reading and Mathematics | 3,104 | 2,809 | 1,000 | 2,901 | 3,472 | | | |
| 2006 | 6 | Reading and Writing | 5,635 | 1,938 | 2,479 | 3,350 | 2,625 | | | |
| 2006 | 7 | Writing and Mathematics | 1,931 | 2,231 | 554 | 1,715 | 3,257 | | | |
| 2006 | 8 | Reading and Writing and Mathematics | 48,380 | 8,007 | 7,235 | 67,868 | 18,698 | | | |
| | | | | | | | | | | |
| 2007 | 2 | Reading | 2,368 | 1,661 | 469 | 271 | 1,368 | 13,831 | 13,287 | 27,118 |
| 2007 | 3 | Writing | 3,426 | 1,699 | 673 | 370 | 1,456 | 12,756 | 13,392 | 26,148 |
| 2007 | 4 | Mathematics | 1,337 | 6,569 | 2,170 | 1,331 | 6,094 | 18,947 | 13,928 | 32,875 |
| 2007 | 5 | Reading and Mathematics | 1,456 | 3,117 | 370 | 673 | 3,426 | | | |
| 2007 | 6 | Reading and Writing | 6,094 | 1,796 | 1,331 | 2,170 | 1,337 | | | |
| 2007 | 7 | Writing and Mathematics | 1,368 | 2,004 | 271 | 469 | 2,368 | | | |
| 2007 | 8 | Reading and Writing and Mathematics | 61,936 | 7,257 | 11,117 | 82,571 | 20,987 | | | |
| | | | | | | | | | | |
| 2008 | 2 | Reading | 6,968 | 4,814 | 558 | 316 | 4,312 | 39,336 | 20,468 | 59,804 |
| 2008 | 3 | Writing | 9,033 | 8,724 | 867 | 396 | 8,162 | 40,892 | 20,697 | 61,589 |
| 2008 | 4 | Mathematics | 4,040 | 16,294 | 3,846 | 2,043 | 15,940 | 52,331 | 22,029 | 74,360 |
| 2008 | 5 | Reading and Mathematics | 8,162 | 8,749 | 396 | 867 | 9,033 | | | |
| 2008 | 6 | Reading and Writing | 15,940 | 4,880 | 2,043 | 3,846 | 4,040 | | | |
| 2008 | 7 | Writing and Mathematics | 4,312 | 6,395 | 316 | 558 | 6,968 | | | |
| 2008 | 8 | Reading and Writing and Mathematics | 77,712 | 20,893 | 17,471 | 143,089 | 42,419 | | | |

# Appendix E

## E -Student Progression Through the School System

A student membership can go through the following activities during one school session: Enrollment, withdrawal, readmission, and transfer. At the conclusion of the school session the student's yearend status and summer withdrawal activities create additional events to be recorded and traced by the system. The entire membership activity of the student is tracked in the Student Transition process of the AEDW data warehouse.
A school year spans the entire fiscal year. (Regular session usually has early fall start & late spring end. Summer session takes place when regular session is over, and often overlaps fiscal years. Summer break takes place between summer session end and regular session begins, and often overlaps fiscal years).
A student membership is assumed to be active to the session's scheduled end date, unless an early withdrawal is submitted.
Student memberships (enrollments) in SAIS are governed by statute and by ADE policy. At the current time SAIS accepts data only for school regular session, not for summer session. In accordance with statute and ADE policy, virtually all aggregating and most statistical processes use only regular session memberships.

Brief descriptions of these activities are stated below.

**Student Enrollment**
An Enrollment is effective for a student beginning membership in a school for the first time and for a student who continues to be in membership as of the first day of school each fiscal year. The terms "First Day of Membership" and "Enrollment Date" are used interchangeably. Students beginning membership for the first time in a school may start at the beginning of the school year, or mid-year; and may be coming from out of state, from another school or district, or from dropout or detention. (See attached Enrollment Codes for detail of conditions and codes).

**Student Withdrawal**
A withdrawal is an activity that defines a student's exit from school prior to the schools regularly scheduled year-end date. The withdrawals are identified by Withdrawal Activity Codes, which categorize early exits. This includes among other things dropout, completion of minimal high school requirements, early graduation, transfer to another school, and excessive consecutive unexcused days of absence. This also includes virtual exit reasons such as age: the student who reaches age 22 before year-end is no longer eligible for generating funding. The student is not required to leave school, but a virtual Withdrawal Activity Code is issued to exclude that portion of membership for the student, so that the funding recipient does not over-anticipate their payment. (See attached for Withdrawal Activity Codes and their relation to readmission).

Withdrawal Reason Codes: Beginning with the 2004-05 school year, SAIS users are required by NCLB legislation to capture and report the new student level element Withdrawal Reason Code. Withdrawal Reasons are a **secondary reason** for the withdrawal (the primary reason

being the Withdrawal Activity Code). Withdrawal Reasons are optional, and will not apply to the great majority of students who withdraw from school prior to the last scheduled day of session. At this time no measure includes Withdrawal Reason Codes.

**Student Readmission**

After a withdrawal, a readmission is required for a student to resume attendance in the same school during the same school year. There is no limit to the number of withdrawals and readmissions a student may have in a single school year.

The Readmission Activity Code is related to the prior withdrawal activity code. A student may be readmitted after a withdrawal, provided the Withdrawal Activity Code is eligible for a subsequent readmission. (See attached Readmission Codes for detail of conditions and codes).

**Student Grade Transfer**

Student Grade Transfer indicates a transfer of a student from one grade to another, within the same school during the school year. The Student Grade Transfer provides data on exit from the current grade and placement in a new grade.

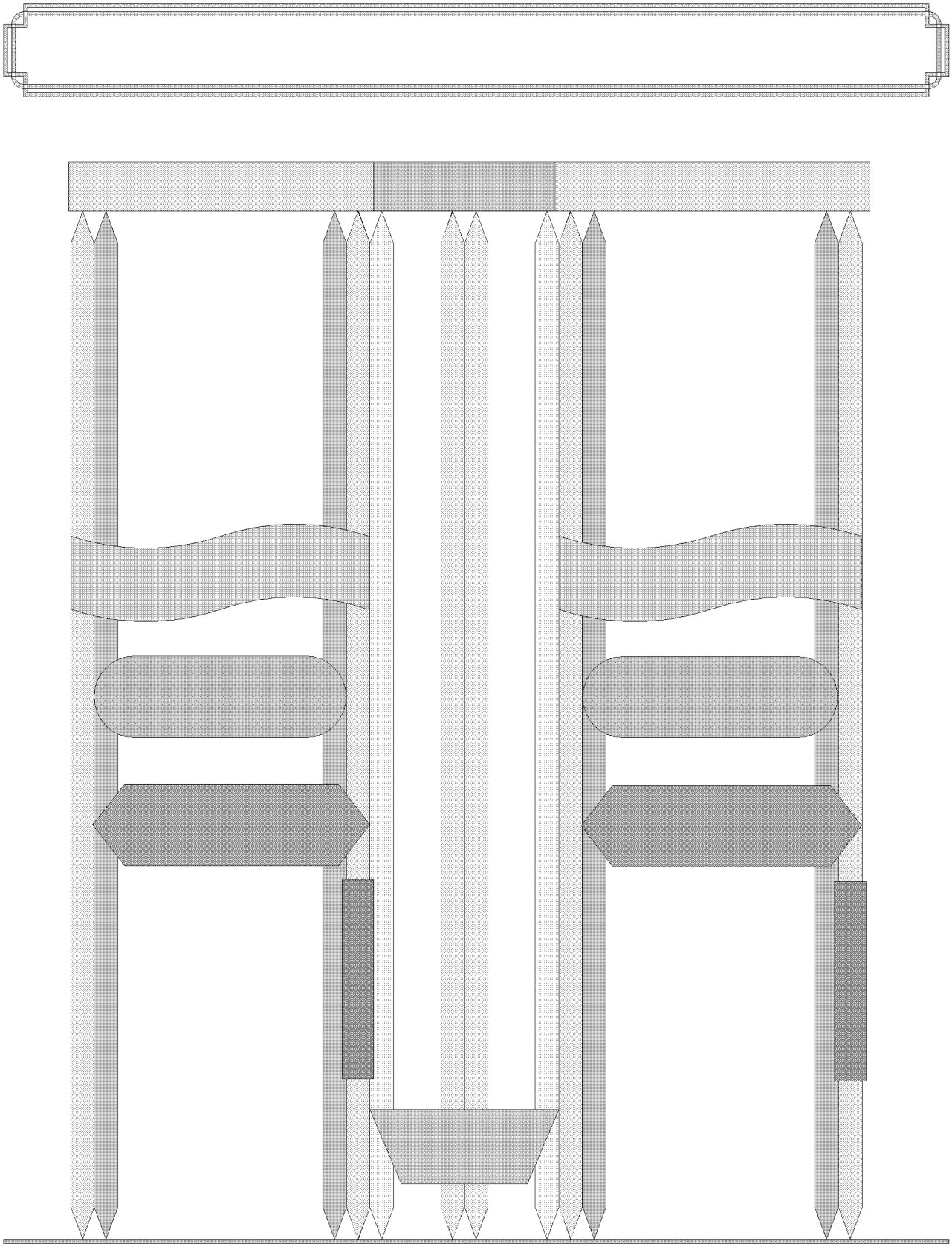
Occasionally a student is promoted to the next grade level or demoted to a lower grade level within a school year; and occasionally a student will be moved from one register to another, remaining in the same grade, during a school year. This situation is a lateral grade movement, in that there is no grade level change.

Grade Transfer codes are: D=Demoted, L=Lateral, P=Promoted

Promotion at the end of a school year and retention at the end of a school year are identified through Student Year End Status, not a grade transfer.

**Student Year End Status**

The Student Year End Status relates only to students who are in membership through the scheduled last day of school. Year End Status Code shows the student's state on *the last day of school*. Every student who is in membership at the end of the school year must be assigned a Year End Status Code. (See attached Year End Status Codes for the codes and conditions).



| Enrollment Activity Codes | | | |
|---|---|---|---|
| **Code** | **Enrollment Sequence** | **Previous school- last year** | **Previous School - This Year** |
| E1 | Initial enrollment | Same district, same school | |
| E2 | Initial enrollment | Same district, different school | |
| E3 | Initial enrollment | Different district | |
| E4 | Subsequent enrollment | | Different district, different school |
| E5 | Subsequent enrollment | | Same district, different School |
| E6 | Initial enrollment | Out of State | |
| E7 | Initial enrollment | Same district, different school, previously coded prior years as dropout | |
| E8 | Initial enrollment | Different district, different school, previously coded previous years as dropout | |
| R5 | Subsequent enrollment | | Same district, same school, student re-entering after withdrawing this year as dropout |
| E9 | Subsequent enrollment | | Same district, different school, previously coded this year as dropout |
| E10 | Subsequent enrollment | | Different district, different school, previously coded this year as dropout |
| E11 | Initial enrollment | In most recent schooling, student was home taught in AZ | |
| E12 | Initial enrollment | Same district, Same school, fifth year student, has not passed AIMS | |
| E13 | Initial enrollment | Same district, different School, fifth year student, has not passed AIMS | |
| E14 | Initial enrollment | Different district, different School, fifth year student, has not passed AIMS | |
| E15 | Initial enrollment | Previous school was an AZ detention facility | |
| E16 | Subsequent enrollment | | Previous school was an AZ detention facility |

| Withdrawal Activity Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| W1 | Transfer to another school | Withdrawn before scheduled end of school year to continue studies in another school, or to attend as a full-time post-secondary student. |
| W2 | Illness | Withdrawn before scheduled end of school year due to chronic illness (withdrawal may not be required; refer to district's chronic illness policy). |
| W3 | Expelled or long term suspension | Expelled or suspended on a long term basis before scheduled end of school year. |
| W4 | Absence or status unknown | Withdrawn before scheduled end of school year for 10 consecutive days of unexcused absence, status or location is unknown to the school or school district. |
| W5 | Dropout | School received verification that student has withdrawn from school before scheduled end of school year; student does not intend to complete requirements for a high school diploma. |
| W6 | Age | Withdrawn before scheduled end of school year because student is not of school age (under 6 or over 21 years of age). |
| W7 | Graduated | Student has completed course of study requirements for high school and received a passing score on the AIMS test (applies to mid-year graduates in grades 11 or 12). Graduates are issued a high school diploma by the school district. |
| W8 | Deceased | Student died before scheduled end of school year. |
| W9 | Transfer to be home taught | Student withdrawn before scheduled end of school year to be taught at home. |
| W10 | Transfer to detention | Withdrawn before scheduled end of school year because student was transferred to a state detention or correctional facility. |
| W11 | GED | Student withdrew before scheduled end of school year expressly for the purpose of obtaining a GED. Students of high school age must withdraw to take the GED test. Verbal notification at the time of withdrawal is sufficient to apply the W11 code. |

| Withdrawal Activity Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| W12 | Vocational school | Student withdrew before scheduled end of school year to continue studies at a technical or vocational school; this includes ALL schools or education programs that DO NOT meet Arizona requirements for obtaining a high school diploma. Verbal notification from a responsible adult is sufficient to apply the W12 code. |
| W13 | Completed (AIMS) | Student has completed course of study requirements for high school or Individual Education Plan but DID NOT receive a passing score on the AIMS test (applies to mid-year completers). Completers have concluded their high school education and are not expected to re-enroll. |
| WK | Student transferred to one calendar track within the same school. | Transferred to another calendar track within the same school before scheduled end of school year. |

| Readmission Activity Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| R1 | Readmission after a W1 | Student re-entering after withdrawing from this school as a W1 |
| R2 | Readmission after a W2 | Student re-entering after withdrawing from this school as a W2 |
| R3 | Readmission after a W3 | Student re-entering after withdrawing from this school as a W3 |
| R4 | Readmission after a W4 | Student re-entering after withdrawing from this school as a W4 |
| R5 | Readmission after a W5 | Student re-entering after withdrawing from this school as a W5 |
| R6 | Readmission after a W6 | Student re-entering after withdrawing from this school as a W6 |
| R7 | | Student Grade Reassignment |
| R9 | Readmission after a W9 | Student re-entering after withdrawing from this school as a W9 |
| R10 | Readmission after a W10 | Student re-entering after withdrawing from this school as a W10 |
| R11 | Readmission after a W11 | Student re-entering after withdrawing from this school as a W11 |
| R12 | Readmission after a W12 | Student re-entering after withdrawing from this school as a W12 |

| Year End Status Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| G | Graduated at year end | Student either (a) completed course of study requirements and **received a passing score on** the AIMS test; or (b) completed Individual Education Plan requirements and **received a passing score on** the AIMS test (used only in grades 11 or 12). Graduates are issued high school diplomas from the school district.[+] |
| C | Completed course of study at year end | Student either (a) completed course of study requirements but **DID NOT receive a passing score** on the AIMS test, (b) or completed Individual Education Plan requirements but **DID NOT receive a passing score** on the AIMS test (used only in grades 11 or 12). Completers have concluded their high school education and are not expected to re-enroll.[+*] |
| A | Attended - Concluded high school education and not expected to reenroll | Student (a) **NEITHER** met course study requirements or Individual Education Plan **NOR received a passing score on the** AIMS test; or (b) turned 22 years of age, or (c) was a twelfth grade foreign exchange student (used only in grades 11 or 12). Attendees have concluded their high school education and are not expected to re-enroll.[+*] |
| SA | Still Enrolled (AIMS) | Student is still enrolled because student (a) fulfilled course of study requirements but **DID NOT receive a passing score** on the AIMS test, or (b) completed Individual Education Plan requirements but **DID NOT receive a passing score** on the AIMS test (used only in grade 12).[+] |

[+] All changes related to the AIMS test will be collected beginning with the Graduating Cohort Class of 2002.

[*] Currently, there is NOT an official policy on completers or attendees. The definitions in this document will be revised to reflect State Board of Education policies, once established.

| Year End Status Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| SC | Still Enrolled (Course Study Requirements) | Student is still enrolled because the student either (a) **DID NOT** meet course of study requirements for graduation **but received a passing score** on the AIMS test, or (b) **DID NOT** complete Individual Education Plan **but received a passing score** on the AIMS test (used only in grade 12).[+] |
| SE | Still Enrolled (Met No Requirements) | Student is still enrolled because student (a) **NEITHER** met course study requirements **NOR received a passing score** on the AIMS test, or (b) **NEITHER** completed Individual Education Plan **NOR received a passing score** on the AIMS test (used only in grade 12).[+] |
| P | Promoted | Student was promoted to the next grade (used in all grade levels except grade 12). |
| R | Retained | Student was retained in the same grade. |

| Summer Withdrawal Activity Codes | | |
|---|---|---|
| **Code** | **Short Description** | **Long Description** |
| S1 | Summer transfer – out of district | Student transferred out of this school district during the summer. |
| S2 | Summer illness | Student will not be returning to school due to illness during the summer. (same criteria as W2) |
| S3 | Summer expulsion | Student will not be returning to school due to expulsion during the summer. (same criteria as W3) |
| S4 | Summer absence or status unknown | Students who are enrolled at the end of the prior school year but fail to show at any time during the next school year and whose status or location is unknown to the school or school district. |
| S5 | Summer dropout | Student dropped out during the summer. (same criteria as W5) |
| S6 | Summer not of school age | Student is not of school age during the summer. (same criteria as W6) |
| S7 | Summer early graduation | Student met course of study requirements and received a passing score on the AIMS test. (same criteria as W7)Valid for only grades 11 or 12. |
| S8 | Summer deceased | Student died during the summer. (same criteria as W8) |
| S9 | Summer transfer - home taught | Student became home taught during the summer. (same criteria as W9) |
| S10 | Summer transfer - detention | Withdrawn because student was transferred to a state detention or correctional facility during the summer. (same criteria as W10) |
| S11 | Summer GED | Student withdrew to receive a GED certificate during the summer. (same criteria as W11) |
| S12 | Summer transfer - vocational school | Student withdrew to attend a vocational school during the summer. (same criteria as W12) |
| S13 | Summer completer | Student met course study requirements during the summer but DID NOT receive a passing score on the AIMS test. (same criteria as W11) |
| S99 | Summer transfer – within district | Student transferred to another school within this district during the summer. (Criteria: none.) |

# Appendix G

## G - Selected List of Values

### CTDS Code

A 9-digit number assigned to each district or school. This identifier includes 4 parts: county, type of the institution, district and school. When the number is used for district the last 3 digits are zeros.

CTDS Code breakdown:

"C" = County number (2-digits long)
"T" = Type number (2-digits long)
"D" = District/Charter Holder ID number (2-digits long)
"S" = School site ID number (3-digits long)

If the CTDS Type code (3rd & 4th digit) is 85, 86, 87, or 89, it is a state board charter entity. If the CTDS 7th digit is a 7, 8, or 9, it is a district sponsored charter entity.

### Ethnicity

American Indian or Alaskan Native (I)
Asian or Pacific Islander (A)
Black or African-American (Not Hispanic) (B)
Hispanic or Latino (H)
White (Not Hispanic) (W)
Not Reported

### School Type

| Priority | School Type |
|---|---|
| 1. | Traditional Schools |
| 2. | Charter Facility, District Sponsored Charter Facility |
| 3. | Distance Learning |
| 4. | Accommodation School |
| 5. | Exceptional Education Facility - Institutional |
| 6. | Exceptional Education Facility - Residential |
| 7. | BIA School |
| 8. | BIA Contract Grant School |
| 9. | Juvenile Facility |
| 10. | Sheriff's Office |
| 11. | Vocational Technical Facility |
| 12. | All other types |

## Over-Under Age Category

- Under Age
- Within Statutory Range (Preschool and Kindergarten only)
- Within 12 Months of Statutory Range
- Within 13-23 Months of Statutory Range
- 24 Months and above Statutory Range
- Ungraded

# Appendix H

## H - Transition Types

**School Levels:**

- **Preschool**
- **Primary Level** - Grades K – 5
- **Middle Level** - Grades 6 – 8
- **High Level** - Grades 9 – 12

| Grade Transition Type (Grade To Grade) | Grade Transition Category | Description |
|---|---|---|
| N-PS | New to Preschool Level | New in system to Preschool |
| PS-PS | Within Preschool Level | Preschool to Preschool |
| PS-K | Preschool Level to Primary Level | Preschool to Kindergarten |
| PS-1 | Preschool Level to Primary Level | Preschool to First Grade |
| PS-EX | Exit System from Preschool Level | Preschool to Exit System |
| N-K | New to Primary Level | New in System to Kindergarten |
| K-K | Within Primary Level | Kindergarten to Kindergarten |
| K-1 | Within Primary Level | Kindergarten to Grade 1 |
| K-2 | Within Primary Level | Kindergarten to Grade 2 |
| K-PS | Primary Level to Preschool Level | Kindergarten back to Preschool |
| K-EX | Exit System from Primary Level | Kindergarten to Exit System |
| N-1 | New to Primary Level | New in System to Grade 1 |
| 1-1 | Within Primary Level | Grade 1 to Grade 1 |
| 1-2 | Within Primary Level | Grade 1 to Grade 2 |
| 1-3 | Within Primary Level | Grade 1 to Grade 3 |
| 1-K | Within Primary Level | Grade 1 back to Kindergarten |
| 1-EX | Exit System from Primary Level | Grade 1 to Exit System |
| Grades 2 and 3 --- | ----- Similar to Grade 1 ----- | …… |
| N-4 | New to Primary Level | New in System to Grade 4 |
| 4-4 | Within Primary Level | Grade 4 to Grade 4 |
| 4-5 | Within Primary Level | Grade 4 to Grade 5 |
| 4-6 | Within Primary Level | Grade 4 to Grade 6 |
| 4-3 | Within Primary Level | Grade 4 to Grade 3 |
| 4-EX | Exit System from Primary Level | Grade 4 to Exit System |
| N-5 | New to Primary Level | New to Grade 5 |
| 5-5 | Within Primary Level | Grade 5 to Grade 5 |
| 5-6 | Primary Level to Middle Level | Grade 5 to Grade 6 |
| 5-7 | Primary Level to Middle Level | Grade 5 to Grade 7 |
| 5-4 | Within Primary Level | Grade 5 to Grade 4 |
| 5-EX | Exit System from Primary Level | Grade 5 to Exit System |
| N-6 | New to Middle Level | New in System to 6 Grade |

| Grade Transition Type (Grade To Grade) | Grade Transition Category | Description |
|---|---|---|
| 6-6 | Within Middle Level | Grade 6 to Grade 6 |
| 6-7 | Within Middle Level | Grade 6 to Grade 7 |
| 6-5 | Middle Level to Primary Level | Grade 6 to Grade 5 |
| 6-EX | Exit System from Middle Level | Grade 6 to Exit System |
| Grade 7 ---- | ----- Similar to Grade 6 ----- | …… |
| N-8 | New to Middle Level | New to grade 8 |
| 8-8 | Within Middle Level | Grade 8 to Grade 8 |
| 8-9 | Middle Level to High Level | Grade 8 to Grade 9 |
| 8-10 | Middle Level to High Level | Grade 8 to Grade 10 |
| 8-7 | Within Middle Level | Grade 8 to Grade 7 |
| 8-EX | Exit System from Middle Level | Grade 8 to Exit System |
| Grade 9 ---- | ----- Similar to Grade 10 ----- | …… |
| N-10 | New to High Level | |
| 10-10 | Within High Level | |
| 10-11 | Within High Level | |
| 10-12 | Within High Level | |
| 10-9 | Within High Level | |
| 10-EX | Exit System from High Level | |
| Grade 11---- | ----- Similar to Grade 10 ----- | …… |
| N-12 | New to High Level | New Grade 12 |
| 12-12 | Within High Level | Grade 12 to Grade 12 |
| 12-11 | Within High Level | Grade 12 to Grade 11 |
| 12-EX | Exit System from High Level | Grade 12 to Exit System |

# Appendix I

## I - Arizona Counties

# Appendix J

## J - Need Groups

| Needs Description by Needs Group | | | |
|---|---|---|---|
| **Group** | **Group Name** | **Need Id** | **Need Description** |
| 1 | **Independent** | -1 | Not Reported |
| | | 41 | Independent |
| | | | |
| 2 | **Special Education** | 1 | Autism |
| | | 2 | Emotional Disability |
| | | 3 | Emotional Disability (separate facility, private school |
| | | 4 | Hearing Impairment |
| | | 5 | Multiple Disabilities |
| | | 6 | Multiple Disabilities - Severe Sensory Impairment |
| | | 7 | Mild Mental Retardation |
| | | 8 | Moderate Mental Retardation |
| | | 9 | Other Health Impairment |
| | | 10 | Orthopedic Impairment |
| | | 11 | Preschool - Speech/Language Delay |
| | | 12 | Preschool - Moderate Delay |
| | | 13 | Preschool - Severe Delay |
| | | 14 | Specific Learning Disability |
| | | 15 | Speech/Language Impairment |
| | | 16 | Severe Mental Retardation |
| | | 17 | Traumatic Brain Injury |
| | | 18 | Visual Impairment |
| | | | |
| 3 | **Gifted** | 19 | Quantitative (Math) Giftedness |
| | | 20 | Language Arts (Verbal) Giftedness |
| | | 38 | Non-Verbal Reasoning Giftedness |
| | | | |
| 4 | **Language** | 21 | Limited English Proficiency (LEPS) |
| | | | |
| 5 | **Economic Disadvantage** | 22 | NCLB Indicator 2 |
| | | 23 | NCLB Indicator 1 |
| | | 24 | Homeless |
| | | 25 | Migrant |
| | | 40 | Homeless - Unaccompanied Youth |

| Needs Description by Needs Group | | | |
|---|---|---|---|
| **Group** | **Group Name** | **Need Id** | **Need Description** |
| | | 42 | Vocational/Career |
| | | 43 | Health, Dental and Eye Care |
| | | 44 | Supporting Guidance/ Advocacy |
| | | 45 | Other Support Services |
| | | | |
| **6** | **Social Disadvantage** | 26 | Immigrant |
| | | 34 | Refugee |
| | | 39 | Evacuee |
| | | | |
| **7** | **Behavioral** | 27 | Neglected |
| | | 28 | Delinquent |
| **8** | **Health** | 29 | Home Bound |
| | | 30 | Chronic Illness/Condition |
| | | | |
| **9** | **Academic Disadvantage** | 35 | Social Studies |
| | | 36 | Other Academic Services |
| | | 31 | Math |
| | | 32 | Language Arts (reading and/or writing) |
| | | 33 | Science |
| | | | |
| **10** | **No Need** | 37 | No Need |

# Appendix K

## K - Yearend Outcome

| Yearend Outcome | | | |
|---|---|---|---|
| **Lookup ID** | **Short Desc** | **Description** | **Section Id** |
| 3372 | S7 | Graduated - During Summer | 210 |
| 6178 | S13 | Completed High School Without Passing AIMS - During Summer | 210 |
| 6177 | S11 | Withdrawn for GED - During Summer | 210 |
| 6180 | S12 | Withdrawn for Vocational School - During Summer | 210 |
| 6176 | S9 | Withdrawn for Home Teaching - During Summer | 210 |
| 3371 | S6 | Withdrawn Due to Age - During Summer | 210 |
| 3370 | S5 | Declared Dropout - During Summer | 210 |
| 3367 | S2 | Withdrawn Due to Illness - During Summer | 210 |
| 3373 | S8 | Deceased - During Summer | 210 |
| 3368 | S3 | Expelled - During Summer | 210 |
| 6179 | S10 | Moved to Detention - During Summer | 210 |
| 3369 | S4 | Status unknown - During Summer | 210 |
| 6181 | S99 | Transferred Within Same District - During Summer | 210 |
| 3366 | S1 | Transferred to Another District - During Summer | 210 |
| 3382 | WR | NULL | 211 |
| 3374 | W1 | Transferred to Another School or Home Teaching - During Session | 211 |
| 3375 | W2 | Withdrawn Due to Illness - During Session | 211 |
| 3376 | W3 | Expelled - During Session | 211 |
| 3377 | W4 | Withdrawn Due to Absence - During Session | 211 |
| 3378 | W5 | Declared Dropout - During Session | 211 |
| 3379 | W6 | Withdrawn Due to Age - During Session | 211 |
| 3380 | W7 | Graduated - During Session | 211 |
| 3381 | W8 | Deceased - During Session | 211 |
| 6182 | W9 | Withdrawn for Home Teaching - During Session | 211 |
| 6183 | W10 | Moved to Detention - During Session | 211 |
| 6184 | W11 | Withdrawn for GED - During Session | 211 |
| 6185 | W12 | Withdrawn for Vocational School - During Session | 211 |
| 6186 | W13 | Completed High School Without Passing AIMS - During Session | 211 |
| 6188 | WK | Transferred to New Track in Same School - During Session | 211 |
| 3383 | WT | Transferred to New Grade in Same School - During Session | 211 |
| 6187 | WR | Same school, same grade, new register | 211 |
| 6509 | P | Year End Status - Promoted | 274 |
| 6502 | R | Year End Status - Retained | 274 |

| Yearend Outcome | | | |
|---|---|---|---|
| **Lookup ID** | **Short Desc** | **Description** | **Section Id** |
| 6503 | G | Year End Status - Graduated | 274 |
| 6504 | C | Year End Status - Completed High School without Passing AIMS | 274 |
| 6506 | SA | Year End Status - Grade 12 Further Enrollment for AIMS | 274 |
| 6507 | SC | Year End Status - Grade 12 Further Enrollment for Curriculum | 274 |
| 6508 | SE | Year End Status - Grade 12 Further Enrollment to Meet Requirements | 274 |
| 6505 | A | Year End Status - Attended | 274 |
| 6757 | EX | Year End Status - Undeterminable Outcome | 274 |

# Appendix L

## L - Dropout Code Descriptions

| Code | Description |
|---|---|
| S3 | Expelled - During Summer |
| S4 | Status unknown - During Summer |
| S5 | Declared Dropout - During Summer |
| S11 | Withdrawn for GED - During Summer |
| S12 | Withdrawn for Vocational School - During Summer |
| W3 | Expelled - During Session |
| W4 | Withdrawn Due to Absence - During Session |
| W5 | Declared Dropout - During Session |
| W11 | Withdrawn for GED - During Session |
| W12 | Withdrawn for Vocational School - During Session |

# Appendix M

## M - AIMS Levels 3-8 Progression Category

| Category | Description |
|---|---|
| Excelling | All tests taken in the subject have E results |
| Surpassing | Any mix of E's and M's results |
| Meeting | All tests taken in the subject have M results |
| Staggering | Any mix of E/M and A/F results |
| Approaching | All test taken in the subject have A results |
| Plodding | Any mix of A's and F's results |
| Falling far Below | All tests taken in the subject have F results |

# Appendix N

## N - Language Assessment Progression Category

| Category | Description |
|---|---|
| **Learning Mode** | ELL - ELL |
| | ELL - ELLR |
| | ELL - Not Reported |
| | ELLR - ELL |
| | ELLR - ELLR |
| | IFEP - ELLR |
| | Not Reported - ELL |
| | Unknown - ELL |
| **Learning Resumed** | ELLR - Not Reported |
| | IFEP - ELL |
| | RFEP - ELL |
| | RFEP - ELLR |
| | FEPY1 - ELL |
| | FEPY1 - ELLR |
| **Proficiency Attained** | ELL - RFEP |
| | ELL - IFEP |
| | ELLR - RFEP |
| | IFEP - IFEP |
| | IFEP - FEPR |
| | IFEP - Not Reported |
| | RFEP - RFEP |
| | RFEP - Not Reported |
| | Not Reported - IFEP |
| **Proficiency Verified** | ELL - FEPY1 |
| | ELLR - FEPY1 |
| | IFEP - FEPY1 |
| | RFEP - FEPY1 |
| | FEPY1 - RFEP |
| | FEPY1 - Not Reported |
| **Proficiency Confirmed** | ELL - FEPY2 |
| | ELLR - FEPY2 |
| | IFEP - FEPY2 |
| | RFEP - FEPY2 |
| | FEPY1 - FEPY1 |
| | FEPY1 - FEPY2 |
| | FEPY2 - RFEP |
| **Not Reported** | Not Reported |
| **Unknown** | Unknown - Unknown |

# Appendix O

## O - Transformation of English Language Proficiency Assessment Results

**The SAIS system implemented new rules for overall assessment results codes starting in FY 2009. In order to maintain consistency of codes over all fiscal years starting with FY 2006 assessments, the Data Warehouse applied these rules to all assessment data from 2006 on. The chart below shows the rules.**

The correct value for Student Assessment element Overall Assessment Result is derived based on three data elements, Student Assessment element Overall Proficiency Level, ELL Program Participation elements Program Code and Program Exit Reason.

| Code in transaction | Short Description | Long Description | Business Rule |
|---|---|---|---|
| 1 | New English Language Learner | | Note: Not Valid for FY09, replaced by code 7, but is still present in older data |
| 2 | Continuing ELL | | Note: Not Valid for FY09, replaced by code 7, but is still present in older data |
| 3 | Reclassified Fluent English Proficient (Reclassified FEP) | The proficiency level of this assessment shows the ELL student to be proficient. This student previously participated in an ELL program. | If Overall Proficiency Level = Proficient (P)<br>And there is Language Program Participation in previous fiscal year.<br>If no Participation in previous FY, check two fiscal years before<br>Or current year most recent Program Participation element Program Exit Reason Code is (1) Reclassified FEP by Reassessment |
| 4 | Initial Fluent English Proficient (Initial FEP) | The proficiency level of this assessment shows the student to be proficient. This student has never participated in an ELL program in Arizona. | If Overall Proficiency Level = Proficient (P)<br>And current and prior fiscal years' Program Participation is NULL<br>If no Participation in previous FY, check two fiscal years before.<br>Or if Proficiency Level = Proficient and if previous program Participation cannot be determined for the previous two fiscal years, set Overall Assessment Result = Initial Fluent English Proficient |

| Code in transaction | Short Description | Long Description | Business Rule |
|---|---|---|---|
| 5 | ELL After Reclassification (ELLAR) | The proficiency level of this assessment qualifies the student to be eligible to participate in an ELL program again. | If Overall Proficiency Level does not equal Proficient (P)<br>And most recent, of the past two years, Program Participation element Program Exit Reason Code is (1) Reclassified FEP by Reassessment |
| 6 | Continuing Fluent English Proficient (Continuing FEP) | | Note: Not Valid for FY09, replaced by codes 8 and 9, but is still present in older data |
| 7 | English Language Learner (ELL) | The proficiency level of this assessment qualifies the student to be eligible to participate in an ELL program. | If Overall Proficiency Level does not equal Proficient (P)<br>And there is Program Participation in current or previous fiscal year<br>If no Participation in previous FY, check two fiscal years before for program enrollment, and no program element Reason Code (1) Reclassified FEP by Reassessment.<br>Or if Proficiency Level ≠ Proficient and if previous program Participation cannot be determined for the previous two fiscal years, set Overall Assessment Result = English Language Learner |
| 8 | Continuing FEP Year 1 | This student was previously Reclassified FEP the prior fiscal year and is being monitored. | If Overall Proficiency Level = Proficient (P)<br>And there is no Program Participation in the current fiscal year, most recent Program Participation in the previous fiscal year shows element Program Exit Reason Code is (1) Reclassified FEP by Reassessment in previous fiscal year |
| 9 | Continuing FEP Year 2 | This student was previously Reclassified FEP and is being monitored in the second year. | If Overall Proficiency Level = Proficient (P)<br>And there is no Program Participation in the current fiscal year, or in the previous fiscal year, most recent Program Participation element Program Exit Reason Code is (1) Reclassified FEP by Reassessment in fiscal year of two years before |

Approved on 4/13/09

# Appendix P

## P - Calendar and Date Types

Below is a description of various calendar dates used in the data warehouse:

1- Gregorian Calendar

2- Julian Date

3- LEA/School Calendar

### 1- Gregorian Calendar

The Gregorian calendar is a solar calendar and counts days as the basic unit of time, grouping them into years of 365 or 366 days. A Gregorian year is divided into twelve months of irregular length, which are identified by name or number. A calendar date is fully specified by the year number, the month, and the day of the month numbered sequentially starting at 1 for each month; such as September 9, 2009 or 9/9/2009. Leap years add a 29th day to February, which normally has 28 days.

The Gregorian calendar is the internationally accepted civil calendar, which was first adopted in 1582 by a handful of countries, with other countries adopting it over the following centuries.

Every year that is exactly divisible by four is a leap year, except for years that are exactly divisible by 100; the centurial years that are exactly divisible by 400 are still leap years. For example, the year 1900 is not a leap year, the year 2000 is a leap year.

### 2- Julian Date

The Julian date format commonly used in computer programming and computations has no relation to neither the Julian Calendar, nor Julian date or day number.

Computer Julian date format, commonly used in computer programming, is a date formatted to mean the number of elapsed days since the beginning of a particular year. The day number is a count of days since January 1st of the year. For example, the Julian date for the calendar date of September 9, 2009 would be 2009252, and February 29, 1996 would be 1996060.

The purpose of this format is to make it easy to compute an integer (whole number) difference between one calendar date and another calendar date, as well as other comparisons and computations on dates.

Julian calendar is a solar calendar introduced by Julius Caesar in Rome in 46 B.C., Julian calendar has a year of 12 months and 365 days and a leap year of 366 days every fourth year. Julian calendar was eventually replaced by the Gregorian calendar.

A Julian date or day number is the number of elapsed days since the beginning of a cycle of 7,980 years invented by Joseph Scaliger in 1583. The 7,980 year cycle was derived by combining several traditional time cycles (solar, lunar, and a particular Roman tax cycle) for which 7,980 was a common multiple. The Julian date is a calendar notation in which the date is represented by one number. Julian date or day numbers are widely used in astronomy. The Julian day number can be considered a very simple calendar, where its calendar date is just an integer.

## 3- LEA / School Calendar

LEA calendar is a schedule of instructions for a school. School Calendar identifies the days that the school is in session and assigns a sequential number to the session days of a fiscal year. The school calendar enables ADE to calculate specific reporting periods (such as 40th and 100th day) for a school.
A calendar may be associated with any type of entity. If the dependent entity (e.g. school) operates by its own specific calendar, it must submit that calendar. Otherwise the calendar of the parent entity (e.g. District/Charter Holder/Private School) will be used by the Student Database and the Data Warehouse. Private Schools are also required to submit a calendar. The implementation of the LEA Calendar component is integrated with the Student Database. The track number corresponds to the LEA Calendar which is set up and activated for the school; TAPBI schools use calendar track zero.
A.R.S. §15-341.01 states that "Notwithstanding any other law, school instruction shall be conducted in each public school in this state for school sessions that total at least one hundred eighty( 180) days each school year". Schools that have been exempt from operating on a school year, in accordance with A.R.S. §15-801A, will be required to have at least one hundred and forty-four (144) days that school has to be in session for FY 2005-2006.
Should a change to the LEA Calendar affecting the 40th or 100th day occur after attendance has been entered into SAIS Online, attendance records may need to be adjusted accordingly to comply with SAIS rules that prohibit attendance reporting from crossing boundaries set at the 40th and 100th day of instruction.

# Appendix Q

## Q - AIMS Grade Ranges

This information applies to **Measure 30g- Student Language Assessment Progress And AIMS Count.**

When an AIMS test does not exist in the destination year of the ELL assessment fiscal year range, Measure 30g shows "Not Reported" in the AIMS subject results columns. AIMS test is administered only for grades 3-8, and 10-12. Therefore, ELL progress measured for the students who attended any other grade in the destination year will not have AIMS test result to report.

This table highlights the grade ranges for which AIMS results are not available.

To select grades with applicable AIMS results set filter on Last Grade and select grades 3 to 8 and 10 to 12.

| Grade Range |
|---|
| NotReported - NotReported |
| NotReported - KG |
| NotReported - 1 |
| NotReported - 2 |
| NotReported - 3 |
| NotReported - 7 |
| NotReported - 9 |
| NotReported - 10 |
| NotReported - 12 |
| PS - PS |
| PS - KG |
| PS - 1 |
| KG - NotReported |
| KG - PS |
| KG - KG |
| KG - 1 |
| KG - 2 |
| KG - 3 |
| KG - 4 |
| KG - UE |
| 1 - NotReported |
| 1 - KG |
| 1 - 1 |
| 1 - 2 |
| 1 - 3 |
| 1 - 4 |
| 2 - NotReported |
| 2 - KG |
| 2 - 1 |
| 2 - 2 |
| 2 - 3 |
| 2 - 4 |
| 2 - 5 |
| 3 - NotReported |
| 3 - 1 |
| 3 - 2 |
| 3 - 3 |
| 3 - 4 |
| 3 - 5 |
| 3 - 6 |
| 3 - 7 |
| 4 - NotReported |
| 4 - 1 |

| |
|---|
| 4 - 2 |
| 4 - 4 |
| 4 - 5 |
| 4 - 6 |
| 4 - 7 |
| 4 - 8 |
| 5 - NotReported |
| 5 - 4 |
| 5 - 5 |
| 5 - 6 |
| 5 - 7 |
| 5 - 8 |
| 5 - 9 |
| 6 - NotReported |
| 6 - 2 |
| 6 - 6 |
| 6 - 7 |
| 6 - 8 |
| 6 - 9 |
| 6 - 10 |
| 7 - NotReported |
| 7 - 6 |
| 7 - 7 |
| 7 - 8 |
| 7 - 9 |
| 7 - 10 |
| 7 - 11 |
| 8 - NotReported |
| 8 - KG |
| 8 - 6 |
| 8 - 7 |
| 8 - 8 |
| 8 - 9 |
| 8 - 10 |
| 8 - 11 |
| 9 - NotReported |
| 9 - 8 |
| 9 - 9 |
| 9 - 10 |
| 9 - 11 |
| 9 - 12 |
| 10 - NotReported |
| 10 - 9 |
| 10 - 10 |
| 10 - 11 |
| 10 - 12 |
| 11 - NotReported |
| 11 - 9 |
| 11 - 10 |
| 11 - 11 |
| 11 - 12 |
| 12 - NotReported |
| 12 - 9 |
| 12 - 10 |
| 12 - 11 |
| 12 - 12 |
| UE - KG |
| UE - 1 |
| UE - 2 |
| UE - UE |

# Appendix ZZ

## ZZ - Dimensions Descriptions

| | Data Element | Description |
|---|---|---|
| 1. | **Affected Fiscal Year** | Fiscal year calculated in the data warehouse for summer withdrawals, to associate student summer activities with the previous or current school year. |
| 2. | **AIMS Pass Fail** | Pass-Fail Description for the results of the test for each subject; e.g. "Pass 0, Fail 1", "Pass 1, Fail 1". Since the student can take each subject up to 3 times in one fiscal year, in the **Student AIMS HS Annual Result** measure the total of passed and failed for each subject is between 1 and 3. In the **Student AIMS HS Overall Result** measure the values of Pass-Fail are higher e.g. "Pass 1, Fail 4". |
| 3. | **AIMS Results - Mathematics** | The results of AIMS test in Mathematics subject. As used in the ELL measure, this is the result of the test taken in the destination (to) fiscal year of the ELL assessment years. |
| 4. | **AIMS Results Progression** | An array of test results for test levels taken in a subject by the student. |
| 5. | **AIMS Results - Reading** | The results of AIMS test in Reading subject. As used in the ELL measure, this is the result of the test taken in the destination (to) fiscal year of the ELL assessment years. |
| 6. | **AIMS Results - Science** | The results of AIMS test in Science subject. As used in the ELL measure, this is the result of the test taken in the destination (to) fiscal year of the ELL assessment years. |
| 7. | **AIMS Results - Writing** | The results of AIMS test in Writing subject. As used in the ELL measure, this is the result of the test taken in the destination (to) fiscal year of the ELL assessment years. |
| 8. | **AIMS Semester** | AIMS assessment Label, identifying the semester that the test was administered. Spring, Fall, Summer |
| 9. | **Annual Attendance Session Days** | Annual attendance session days is the sum of attendance time during a fiscal year converted to days, and is viewed as resources utilized. |
| 10. | **Annual Available Resource Session Days** | Annual available resource amount defines how much of the session days a student can utilize as his/her instruction resource in a fiscal year. It is calculated as the student's membership session days in the year weighted by the applicable student's FTE. |
| 11. | **Annual Resource Efficiency** | Annual Resource Efficiency is the ratio of student attendance amount to the student's available resource amount (membership session days weighted by the applicable FTE) in the year. This ratio shows how efficiently the student used the resources allocated to him/her. |
| 12. | **Annual Resource Loss Session Days** | Annual Resource Loss for an interval is the difference between student's available resource amount and the attendance amount in the year. (See Available Resource and Attendance for more information) In normal situations where the student attends one school and FTE is = 1.0, resource loss would be equal to absence number of days. |
| 13. | **Assessment Date** | The day the student took the test.<br>Assessment date may be used in a hierarchical or a non-hierarchical form.<br>Various date formats are available as follows: Day Name, Day of Month, Fiscal Year, Month Name, Month of Year. |

| | Data Element | Description |
|---|---|---|
| 14. | **Assessment Results** | Detail description of the test results: "Falls Far Below" "Approaches" "Meets" "Exceeds". |
| 15. | **Assessment Strand** | The name of the assessment strand for reading, mathematics and science |
| 16. | **Assessment Strand Concept** | The name of the assessment concept within the strands. When this attribute is selected for strand information, the description will only display "Stand Level". |
| 17. | **Assessment Test Level** | Description of the level of complexity of the test, e.g. "Third Grade", "Eighth Grade". Test level "Tenth Grade" identifies all high school grades. |
| 18. | **Assessment Trait** | The name of the assessment trait for writing |
| 19. | **Average Years Per Grade** | Average Years Per Grade is calculated by dividing the number of years that a student attended Arizona public schools by the number of grades he attended during those years. |
| 20. | **Average Years Per School** | Average Years Per School is calculated by dividing the number of years that a student attended Arizona public schools by the number of schools he attended during those years. |
| 21. | **Community College** | This works the same as the attending school; presenting a group of attributes related to the school. |
| 22. | **Date of 100th Session Day** | The date of the 100th day that the school has been in session in a given fiscal year |
| 23. | **Date of 40th Session Day** | The date of the 40th day that the school has been in session in a given fiscal year |
| 24. | **Date of First Session Day** | The first day that the school started instructions in a given fiscal year. |
| 25. | **Date of Last Session Day** | The last day of instructions for the school in a given fiscal year. |
| 26. | **District Of Attendance** | Identifies District of Attendance for a student during the membership interval. See School/District for attributes. |
| 27. | **District Of Residence** | Identifies the district that the student resided during a membership interval. See School/District for attributes. |
| 28. | **Dropout Code:** | |
| 29. | **Dropout Code** | Dropout code is a subset of withdrawals and summer withdrawals codes that has been designated as dropout code. See Appendix L – Dropout Code Descriptions for values. |
| 30. | **Dropout Code Description** | This is the description of the dropout code for in session as well as summer dropouts. See Appendix L – Dropout Code Descriptions for values. |
| 31. | **Dropout Fiscal Year** | Fiscal Year in which the student dropped out of Arizona public schools. |
| 32. | **Dropout Grade** | The name of the grade that the student was attending at the time of dropout; e.g. "Kindergarten", "Fifth Grade". |
| 33. | **Dropout Recovery Indicator** | Indicates that the student has returned to the public schools subsequent to a dropout in a prior year. |
| 34. | **Dropout School** | The last school that the student was attending in the year of dropout. See School/District for attributes. |
| 35. | **ELL Assessment** | As used in ELL measures, ELL Assessment identifies the subject for the language assessment that the student has taken. It includes Oral, Reading, and Writing. |
| 36. | **ELL Assessment Proficiency Progress - Oral** | Student's progress in ELL assessment -Oral. i.e. Emergent, Basic, Intermediate |
| 37. | **ELL Assessment Proficiency Progress - Reading** | Student's progress in ELL assessment -Reading. i.e. Emergent, Basic, Intermediate |

| | Data Element | Description |
|---|---|---|
| 38. | ELL Assessment Proficiency Progress - Writing | Student's progress in ELL assessment -Writing. i.e. Emergent, Basic, Intermediate |
| 39. | ELL Assessment Result | Identifies overall English language proficiency level of the student. i.e. RFEP - Reclassified Fluent English Proficient ; ELL - English Language Learner |
| 40. | **ELL Assessment Result Fiscal Year Range** | Span of fiscal years, from the fiscal year of the first available language assessment result to the fiscal year of the most recent result. Assessment results brought into the DW from FY 2006 on. |
| 41. | **ELL Assessment Result Progression** | This dimension has 4 components: |
| 42. | **From ELL Assessment Result** | Relates to the First assessment available for a student<br>See Appendix O for ELL results and business rules. |
| 43. | **To ELL Assessment Result** | relates to the last assessment result available for a student |
| 44. | **ELL Assessment Result Progression Description** | Assessment result pairs defined by From Result –To Result and assigned to a progression category. |
| 45. | **ELL Assessment Result Progression Category** | Classification of result pairs. i.e Learning Mode, Proficiency Attained<br>See Appendix N Assessment Result Progression Category |
| 46. | ELL Proficiency Level | Student's proficiency level as determined by ELL assessment for each subject/type - Oral, Reading, Writing. i.e. Emergent, Basic, Intermediate |
| 47. | **Enrollment Date** | The date student was enrolled or readmitted to the school, transferred to a different grade. |
| 48. | **Enrollment Date Hierarchy** | Fiscal Year, Month, and Date Hierarchy allows a top-down view of the aggregated data in collapsed or expanded date format. May also be used in non-hierarchical form. Various data formats are available as follows : Day Name, Day of Month, Fiscal Year, Month Name, and Month of Year. |
| 49. | **Enrollment - Readmission Code :** | |
| 50. | **Enrollment-Readmission Code** | For more information about enrollment and readmission See Appendix E – Student Progression thru the school system. |
| 51. | **Enrollment-Readmission Code Description** | A description of the code |
| 52. | **Fiscal Year** | The fiscal year in which an activity has occurred. |
| 53. | **Fiscal Year Range** | Range of the fiscal years from the first fiscal year to the last fiscal year in which an activity or progression has occurred. |
| 54. | **From Fiscal Year** | The initial fiscal year in a range of fiscal years that the student has performed an activity. (4 digit year) |
| 55. | **To Fiscal Year** | The latest fiscal year in a range of fiscal years that the student has performed an activity. (4 digit year) |
| 56. | From ELL Assessment Result | Relates to the First assessment available for a student. |
| 57. | **From School** | The student transitioned from this school |
| 58. | **Grade** | The name of the grade that the student was attending; e.g. "Kindergarten", "Fifth Grade". |

| | Data Element | Description |
|---|---|---|
| 59. | **Grade Range** | Range of the grades that the student has attended while participating in programs, from initial grade to last grade. |
| 60. | **Grade Transition:** | |
| 61. | **Grade Transition Type** | describing the origin (from) and destination (to) grades, e.g. “grade 4 to Grade 5”, “Grade 3 to Grade 2”. The attribute values include “new to the system” for enrollment codes E6 and E11 with no prior membership found e.g. “New to grade 1”, and “Eit from the system” when there is no subsequent membership, e.g. “grade 10 to eit”. Eits from memberships in a fiscal year cannot be computed until all of data is brought into the data warehouse for the net year. |
| 62. | **Grade Transition Category** | grouping of Transition Types to school levels e.g. “Preschool to Primary Level”, “Primary Level to Middle Level”, “Eit System from Middle Level”. |
| 63. | **Transition Description Hierarchy** | The hierarchy allows expansion and collapse of information by Category and by type. |
| 64. | **Grade End Date** | This date indicates the end of a grade membership period. This is a derived data element which is created for the student transition process. It is calculated every time a student has a transition within grades, or within schools, including the start of a new year. See Date for hierarchy attributes. |
| 65. | **Grade Start Date** | This date indicates the start of a grade membership interval, as captured from enrollment or grade transfer. See Date for hierarchy attributes. |
| 66. | **Highest Grade** | The name of the highest grade that the school offers; e.g. "Kindergarten", "Fifth Grade". |
| 67. | **Initial Assessment Test Level** | The first AIMS assessment test level that the student has taken. |
| 68. | **Interval Attendance Session Days** | Attendance session days is the sum of attendance time during an interval converted to days, and is viewed as resources utilized. |
| 69. | **Interval Available Resource Session Days** | Available resource amount for a membership interval defines how much of the session days a student can utilize as his/her instruction resource. It is calculated as the student’s membership session days in that interval weighted by the applicable student’s FTE for the interval. |
| 70. | **Interval Membership Session days** | Membership session days is a count of the number of school session days when the student has been enrolled in the school. |
| 71. | **Interval Resource Efficiency** | Resource Efficiency for an interval is the ratio of student attendance amount to the student’s available resource amount (membership session days weighted by the applicable FTE) in that interval. This ratio shows how efficiently the student used the resources allocated to him/her. |
| 72. | **Interval Resource Loss Session Days** | Resource Loss for an interval is the difference between student’s available resource amount and the attendance amount in that interval. (See Available Resource and Attendance for more information) In normal situations where the student attends one school and FTE is = 1.0, resource loss would be equal to absence number of days. |
| 73. | **Language Program Participation Fiscal Year Range** | Span of the fiscal years, from the first FY of student participation in a language program to the fiscal year of the most recent participation in the language program. |
| 74. | **Last Assessment Test Level** | The last AIMS assessment test level that the student has taken. e.g. "Third Grade", “Eighth Grade". Test level “Tenth Grade” identifies all high school grades. |
| 75. | **Last Fiscal Year Tested** | Most recent fiscal year that the student took this subject test. |
| 76. | **Lowest Grade** | The name of the lowest grade that the school offers; e.g. "Kindergarten", "Fifth Grade". |

| | Data Element | Description |
|---|---|---|
| 77. | **Membership End Date** | This is the date that the student membership period ended. If the student had a withdrawal, then this is the withdrawal date, otherwise this date is set to last day of school in session for the school year. |
| 78. | **Membership Start Date** | The day the student was enrolled or readmitted to the school, or transferred to a different degree. "First Day of Membership" and "Enrollment Date" are used interchangeable. |
| 79. | **Need Duration Session Days** | Need duration session days is the count of distinct days that the student has participated in one or more programs to service a particular need, when the school has been in session. |
| 80. | **Need End Date** | Needs are defined and in effect for one school year. Needs end date is the last day that the need was in effect in the school year and may be provided from the source systems. Often the needs end date is missing from the source data and is derived from other info existing in the data warehouse |
| 81. | **Need Group** | Grouping of needs that are similar in nature serviced by distinct group of programs and often having the same funding source. See Appendix J - Need Groups for the values. |
| 82. | **Need Group Combinations** | Various combinations of the need groups that have been determined for a student. In addition an "independent" category is defined for students who have no needs defined and did not participate in any programs and services in a school year. |
| 83. | **Need Group Hierarchy -** | Need Group and Need hierarchy allows a top-down view of the aggregated data in collapsed or expanded mode. |
| 84. | **Need Start Date** | Needs start date is when the need was identified for the student in a school year. |
| 85. | **Needs** | A necessity to enhance the capabilities and performance of a student. See Appendix J - Need Groups for the values. |
| 86. | **Number of Classes** | The number of community college classes that a high school student has taken within one fiscal year. |
| 87. | **Number of Distinct Programs** | Number of all distinct program a student attended in fiscal year across all program areas. |
| 88. | **Number of Evaluations** | The number of language assessment tests that a student has taken from FY 2006. |
| 89. | **Number Of Grades Attended** | The number of grades that the student attended in public schools is counted; it does not include any grades repeated, skipped or attended outside of the Arizona public school system. |
| 90. | **Number of Need Determination Events** | The number of times that a need has been determined for the student. For Limited English Proficiency determination represents a AZELLA test. For Special Education Needs it represents an evaluation by an appropriate professional team. For needs addressed by support programs, a variety of processes tailored to the specific needs are used. |
| 91. | **Number Of Schools Attended** | The number of public schools that the student has attended in Arizona, bypassing repeating school ids. |
| 92. | **Number of Times Tested** | Number of times that the student has taken an AIMS test subject. |
| 93. | **Number of Levels Tested** | The count of AIMS test levels a student has taken |
| 94. | **Number Of Years Attended** | Number of years attended is calculated by counting only the years that the student has membership in the Arizona schools, bypassing any years with no membership. |
| 95. | **Number of Years In Program** | Count of the number of years that a student has participated in a particular program or in a particular program area (SPED, Language, Support Programs). |
| 96. | **Over Under Age Category** | The difference in month's between the age of the student and the age required for the grade by Arizona statutes, is classified into categories. See Appendix G – |

| | Data Element | Description |
|---|---|---|
| | | Over-Under Age Category. |
| 97. | **Participation Rate** | This is the ratio of the number of session days that the student participated in the program to the school's calendar session days. This rate is calculated for single fiscal years for the Annual Program Participation measure and for ranges of fiscal years for the Cumulative Program Participation measure. |
| 98. | **Participation Session Days** | Number of days that the student has participated in a program, when the school has been in session. This number is calculated for single fiscal years for the Annual Program Participation measures and for ranges of fiscal years for the Cumulative Program Participation measures. |
| 99. | **Pass Fail Indicator** | This data element indicates whether a student has passed a single subject of a test that she/he has taken or not. Test results are stored in the operational database in a column called "Perform". The values of Perform are transformed into Pass/Fail indicators for data warehouse as follows:<br><br>Performance / Pass Set in DW / Fail Set in DW<br>1 (Falls Far Below) / 0 (Not passed) / 1 (Failed)<br>2 (Approaches) / 0 (Not passed) / 1 (Failed)<br>3 (Meets) / 1 (Passed) / 0 (Not failed)<br>4 (Exceeds) / 1 (Passed) / 0 (Not failed)<br><br>If Perform = 0 (not graded) the test results are not loaded to the data warehouse. |
| 100. | **Percent of Time Score Is Greater Than 50 Percent** | This is a ratio calculated by comparing number of occurrences in which concept % correct scores were 50% or more to the total number of time the concept was tested. |
| 101. | **Percent of Time Score Is Less Than 50 Percent** | This is a ratio calculated by comparing number of occurrences in which concept % correct scores were less than 50% to the total number of time the concept was tested. |
| 102. | **Percentage Score** | The percent correct value as submitted by the vendor conducting the AIMS test. This value is imported for each concept as well as each strand. |
| 103. | **Program Area** | There are over 80 programs offered by Arizona public schools, grouped in 3 areas, each with a specific purpose: Special Education, Language, and Support Programs / Services. |
| 104. | **Program Area Combination** | The combination of program areas that the student has participated in one year. When used in Annual Program Participation measures, single program areas (SPED, Bilingual, and Support programs) will display. |
| 105. | **Program Name** | The name of the program in which the student participates. This dimension can be selected as a hierarchy that will show Program Area and Program Name in an expandable/collapsible mode. |
| 106. | **Program Participation End Date** | The last day that the student participated in a program in a fiscal year. |
| 107. | **Program Participation Start Date** | The first day that the student participated in a program in a fiscal year |
| 108. | **Progression Category** | Student test result progressions are grouped in 7 categories identifying the combination of test results. See Appendix M for values. |
| 109. | **Recovery Fiscal Year** | Fiscal Year in which the student returned to Arizona public schools, after dropping out. |
| 110. | **Recovery Grade** | The first grade that the student attended in the year of recovery after dropping out. |
| 111. | **Recovery School** | The first school that the student attended in the year of recovery after dropping out. See School/District for attributes. |
| 112. | **School Day** | The sequential number of the day that the school was in session. |

| | Data Element | Description |
|---|---|---|
| 113. | **School/District** : | School district provides a group of entity attributes, allowing analysis of data by various entity groups and orders: |
| 114. | County | Name of the county. |
| 115. | District City | Name of the city in which the school district is located. |
| 116. | District CTDS | A 9-digit number which identifies county, institution type, district, and school. The last 3 digits are zeros to indicate a district CTDS. See Appendix G - CTDS for a detail description. |
| 117. | District ID | A sequential number that identifies the school district, assigned when the district is added to the system. |
| 118. | District Name | The name of the district. If multiple district names exist on the data warehouse for the same district, the latest fiscal year name will be displayed. |
| 119. | District Type | Describes the type of the district; e.g. "School District - Unified", "BIA School". |
| 120. | District Zip Code | Zip code of the district address. |
| 121. | School City | Name of the city in which the school is located. |
| 122. | School CTDS : | A 9-digit number which identifies county, institution type, district, and school. See Appendix G - CTDS for a detail description. |
| 123. | School ID : | A sequential number that identifies the school, assigned when the school is added to the system. |
| 124. | School Name | The name of the school. If multiple school names exist on the data warehouse for the same school, the latest name will be displayed. |
| 125. | School Nature | A code that describes the nature and function of the school; e.g. "Distance Learning Program", "School". |
| 126. | School Type | Describes the type of the school; e.g. “Charter Facility”, “In A High School District” See Appendix G – School types for the values.<br>*To select Traditional Schools, set filter for School Type and select the following types:<br>Accommodation School,<br>In A High School District,<br>In A Unified School District,<br>In An Elementary In High School District,<br>In An Elementary Not In High School District |
| 127. | School Zip Code | Zip code of the school address. |
| 128. | **School Track** | An identifier that shows the education track for the school. Normally track 1 is the main education track for the school. TAPBI school have used track 0 prior to 2010 |
| 129. | **School Year Outcome Code** | This is a constructed dimension that shows the student stance at the end of the year. Withdrawals during session, withdrawals during summer and yearend status are combined to a comprehensive list of codes. See Appendix K - Yearend Outcome Codes for the values. |
| 130. | **School Year Outcome Code Description** | A description of the code. |
| 131. | **Score** | The raw score value as submitted by the vendor conducting the AIMS test. This value is imported for each trait . |
| 132. | **Session Days** | The number of days that the school was in session, offered instructions. Session days are identified in the school calendar by fiscal year. |
| 133. | **Special Enrollment** | Special enrollment codes are used for the students who attend a school in a district other than their district of residence. |
| 134. | **SPED Grade** | Special Education grade that the student was attending. |

| | Data Element | Description |
|---|---|---|
| 135. | **SPED Grade Range** | Identifies the range of special education grades that the student has attended while participating in programs, from an Initial Grade to the Last Grade. |
| 136. | **SPED Primary Need** | For Federal reporting - the most severe need of a student with multiple disabilities, based on Federal definitions of severity. |
| 137. | **SPED Self Contained Eligibility** | Flags whether membership interval reflects student receiving special education in a self-contained classroom (funding issue) |
| 138. | **SPED State Fund Eligibility** | |
| 139. | **Student ADM Integrity** | Integrity validates the complete body of data submitted to SAIS for each single student on a Fiscal Year basis. The logic primarily determines the students who have valid membership according to the State's education code and the student records that are included for State funding allocation. Illogical conditions within the data will cause the data for that student to be flagged as an Integrity failure. Student ADM Integrity dimension as used here, is the consolidation of 40th day and 100th day. Here only transactions that failed both 40th day and 100th day are defined as "Failed". |
| 140. | **Student ADM 100th Day Integrity** | The integrity checks for all the Average Daily Membership (ADM) failure points involve validation of each student's personal and membership data. ADM 100th day covers the membership period between school day 41 and the 100th school day. |
| 141. | **Student ADM 40th Day Integrity** | The integrity checks for all the Average Daily Membership (ADM) failure points involve validation of each student's personal and membership data. ADM 40th day covers the membership period between the enrollment date and the 40th school day. |
| 142. | **Student October 1st Integrity** | October Enrollment includes integrity checks which ensures that each student included in the count has a valid enrollment that follows the particular FY rules for inclusion in the count. This is currently disabled. |
| 143. | **Student ELL Integrity** | ELL includes integrity checks associated with a student's ELL Assessments, Language Program Participation, Grade Membership, Overlaps and Concurrencies. |
| 144. | **Student FED SPED Integrity** | Special Education (SPED) includes integrity checks associated with a student's special needs and their relationship to the programs assigned to address the student needs. Through FY 2005, all Student Detail SPED validations were at the State level. Federal SPED Census reporting counts for the first of October of each FY were started in FY 2006. |
| 145. | **Student SPED Integrity** | Special Education (SPED) includes integrity checks associated with a student's special needs and their relationship to the programs assigned to address the student needs. Through FY 2005, all Student Detail SPED validations were at the State level. Federal SPED Census reporting counts for the first of October of each FY were started in FY 2006. |
| 146. | **Student Support Program Integrity** | Support Programs includes integrity checks associated with establishing eligibility for the support program grants or programs. |
| 147. | **Student Age** | The age of the student in months, relative to the earliest participation start date of a program in a school in a FY. |
| 148. | **Students:** | Student Dimension provides a group of attributes, allowing analysis of data by single and multiple attributes: |
| 149. | Birth Country | Country in which the student was born. |
| 150. | Birth State | The name of the state in USA or its territories in which the student was born. |
| 151. | Cohort | The 4-digit fiscal year at the end of which a student is expected to graduate. This data is calculated in SAIS and updated based on the student status. |

| | Data Element | Description |
|---|---|---|
| 152. | Ethnicity | Student ethnic origin description – See Appendix G – Ethnicity for the values. |
| 153. | Gender | Female, Male, Unknown. |
| 154. | Home Language | The name of the language spoken at home. |
| 155. | Public SAISID | Student ID from the SAIS system. |
| 156. | Student | Student full name displayed as "last name, first name middle name". |
| 157. | **Summer Withdrawal Date** | The last day of membership of the student in the school during summer. |
| 158. | **Summer Withdrawal Date Hierarchy** | Fiscal Year, Month, and Date Hierarchy allows a top-down view of the aggregated data in collapsed or expanded date format. May also be used in a non-hierarchical form. Various data formats are available as follows: Day Name, Day of Month, Fiscal Year, Month Name, and Month of Year. |
| 159. | **Test Subjects** | Subject of the test taken: Reading, Writing, Math, and Science. |
| 160. | **To ELL Assessment Result** | Relates to the last assessment result available for a student. |
| 161. | **To School** | The student transitioned to this school |
| 162. | **Transition Indicators** | 1- Partial transition = Concurrent membership in multiple schools<br>2- Full transition = student membership is transferred to another school |
| 163. | **Partial Transition and Full Transition** | Partial transition relates to students that add to their main school membership an additional concurrent membership in another school. Concurrent memberships occur mainly at High School level where students attend concurrently a regular High School and a Technological school. Full Transition means that a student completely leaves one school to attend another school. |
| 164. | **Tuition Payer** | The tuition payer factor code identifies how the tuition is paid |
| 165. | **Withdrawal Code:** | Label of withdrawal type – See Appendix E – Student Progression thru the school system for more information about withdrawals. |
| 166. | **Withdrawal Code Description** | Explains the reason of student withdrawals. |
| 167. | **Withdrawal Date** | Withdrawal date is the last day of membership of the student in the school. |
| 168. | **Year End Enrollment Code:** | |
| 169. | **Yearend Enrollment code** | Labels of yearend outcome for students enrolled on the last day of school. This is a subset of Yearend Outcome codes that excludes In session Withdrawals. It includes Summer Withdrawal codes and Yearend status codes. See Appendix K – Yearend Outcome codes. These codes have nothing to do with Enrollment codes. |
| 170. | **Year End Enrollment Description** | Description of the yearend enrollment code. |

***Walton Family Foundation***
***Proposal Cover Sheet and Checklist***

Please provide the information listed below and attach to the proposal as a cover sheet.

Name of Organization: **Arizona Charter Schools Association**

Address: **7500 N Dreamy Draw Drive, Suite 220**
**Phoenix, AZ 85020**

Phone: **602-944-0644**
Fax: **602-680-5743**
501(c)(3) Number: **860791960**

Date of Request:

Amount of Request: **$745,000**
Over what period of time: **3 years**

Key Proposal/Project Contact(s): **Rebecca Gau, Vice President**
Address (if different than organization address):
Phone:
Email Address:

Name of Project/Proposal: **Arizona's Performance Management**

## Purpose of the Grant, Goals, Activities and Anticipated Results

### *Statement of Need/Problem to be Addressed*

The Arizona Charter Schools Association proposes to launch a comprehensive performance management system that will primarily serve Arizona's 502 charter schools, but will also be available to the state's 1500 district schools. This system, called the Success Center Online, combines formative assessment, interim assessment, and summative assessment with rapid-time response to intervention techniques and teacher collaboration tools in one user-friendly interface developed by Spiral Universe (www.spiraluniverse.com). Our total request of $745,000 over three years will cover the infrastructure and human resource costs associated with ramping up a state-wide implementation, providing technical support and professional development for leaders and teachers.

Why does Arizona need this system? Currently, the Association has two staff members to run the Success Center – its technical assistance department that drills school improvement down to the student level, showing schools how to apply the data to make data-driven change at their schools, analyzing the effectiveness of instruction and curriculum, and making decisions as Professional Learning Communities (PLCs). The Association must reach a broader base of schools in order to truly raise the overall achievement and quality of charter schools. This means adding trainers, an IT help desk and administrative support to reach more schools in addition to creating an online assessment and communication system (the Success Center Online, partnered with Spiral Universe) that puts the training into action and allows the Success Center to reach even more schools electronically.

Additionally, if schools are offered the proposed online tool for formative assessment that contains test questions aligned to the particular state standards, and a majority of charter schools subscribe, a universe of immediately accessible, easily analyzable, and supremely informative data presents itself.

To accomplish this, the Success Center Online must have the following capabilities:

- Online Deployment
- Alignment with Arizona State Standards in Reading, Writing, Mathematics, and Science
- Linked to Bloom's Taxonomy
- A Diagnostic Test
- Instant Feedback
- Professional Development
- Accessible Data
- Modifiable for Unique School Issues
- Easily integrated into a school's culture

- Ability to Easily and Cost Effectively Upgrade
- Student Information System (SIS) Option
- Growth Percentiles

Spiral Universe is the first choice for its functionality, user interface, and revenue model. It provides functionality in addition to the 12 critical components listed in the full proposal. The user interface for Spiral Universe is designed to be intuitive based on the expected familiarity of users with basic operating system functions like opening and saving documents.

**The Association is requesting a total of $745,000 over three years to build infrastructure, hire support staff and develop the online system, with disbursement as follows: an initial installment of $285,000 at the beginning of Year 1 to fund the launch of the Success Center. A 2:1 match of income earned in 2010 not to exceed $310,000 is proposed to assist in covering costs incurred during 2011, followed by a 1:2 match of income earned in 2011 not to exceed $150,000 to supplement expenses incurred during 2012.**

***Specific, Measurable Project Goals***

*The top priority of the Association is to improve student achievement in charter schools.* To meet this charge, the Success Center has developed six goals, with measurable outcomes:

1. *High Student Achievement*: NAEP scores, median growth percentiles, percent passing state tests, percent that improve academic performance after two or more years of Success Center Online.
2. *Teachers are effective data producers and data-driven decision-makers*: Percent of participating teachers that use diagnostic tests, the Success Center Online interim assessment, student-level GAP analysis, Response to Intervention techniques, and Success Center Online analysis tools.
3. *Teachers are effective members of their Professional Learning Communities:* Percent of teachers in Success Center Online schools that participate in the online community.
4. *School leaders are effective data consumers*: Percent of participating school leaders that use staff management tools in Success Center Online.
5. *School leaders provide quality direction and support for their teachers*: Percent of schools that provide data-driven professional development.
6. *Schools, principals, leaders and policymakers have high quality data to measure individual student level growth*: Association data on quality and transparency accessible and current, number of successful partnerships with stakeholders.

***Specific Activities/Strategies to Carry Out the Goals of this Project***

To meet these goals the Association must reach a majority of the state's 502 charter schools, including small and rural schools that often don't have staff or budget for extensive live trainings, and provide them with assessment resources, data analysis tools and the collaborative process and infrastructure to carry out the best practices outlined in

the six goals. The key strategy to reach these schools is to increase staff capacity and remove barriers to understanding and using data. The Success Center Online by definition provides capacity and tools that allow teachers to carry out these goals by

- Aligning all levels of assessment – formative, interim and summative – with state standards and performance objectives.
- Providing instant feedback and remediation to students.
- Walking a teacher step-by-step through the key questions they must ask themselves while examining assessment results in real time.
- Teaching teachers how to use data while they actually use data.
- Not overwhelming teachers with unnecessary data, but providing the key student-level facts that should drive instruction.
- Providing easy to understand professional development consistently over time – not just a one-time training.
- Providing leaders with a window on classroom progress in real time.
- Providing parents with a window on student progress in real time.

Additional strategies within the Success Center include

- Add an additional trainer to increase the number of regional trainings.
- Add an IT help desk to remove barriers to using educational technology, specifically Spiral Universe.
- Add administrative support to allow training staff to spend more time in schools and less time managing logistics.
- Increase marketing efforts to drive schools to the Success Center and Success Center Online.

***How these Activities/Strategies Match the WFF Stated Focus Area***

Research shows that data-driven decision-making and collaborative problem solving at any school will improve student outcome. In addition, building a value-added data repository for charter schools will help in advocacy efforts by providing data in real time to all stakeholders, as well as allowing for research into best practices and which schools are most effective.

***Anticipated Results***

The Association's Success Center will have multiple stakeholders – schools, the authorizer, the public, funders, policy makers – but only one goal: *to improve student achievement by giving teachers and administrators the analytical tools they need to refine student learning for increased outcomes.* The Association expects that schools participating in the Success Center Online will show significant improvement in test scores.

## Sustainability

***Plan for Sustaining this Project after the Grant Period***

Spiral Universe has proposed a partnership where the Association takes over most of the training and tier one support (primarily training issues) for schools. In return, fifty percent of the $3,750 per school revenue would go to the Association. This would mean approximately $1,875 in shared revenue from each school who signs up to offset the

$20,000/year on-going cost for the Association (to cover Spiral Universe technical support to us). In addition, the Association will generate revenue from implementation, training, and IT support from schools

| Success Center Service | Professional Fee |
|---|---|
| Success Center Partnerships | $1,400 per month plus travel |
| Individual Workshops[1] | $1,400 each, plus travel |
| General Data / Research Consulting | $100 per hour |
| Regional Workshops[2] | $100 per day |
| IT Consulting / Help Desk | $1,000 per school per year |
| Success Center Online | $1,875 per school |

Using this model, and given other associated costs, the project would be self-sustaining in less than three years.

## Organizational Management and Background

### *Staff Key to this Project and their Responsibilities*

Rebecca Gau, currently the Association's Vice President is a nationally known published education research analyst. She has her Master's degree in Public Policy from Duke University, where she specialized in quantitative analysis and education policy. The Success Center is the culmination of all her national and local education policy, data analysis, and change management experience. Ms. Gau will be the project Contact Person.

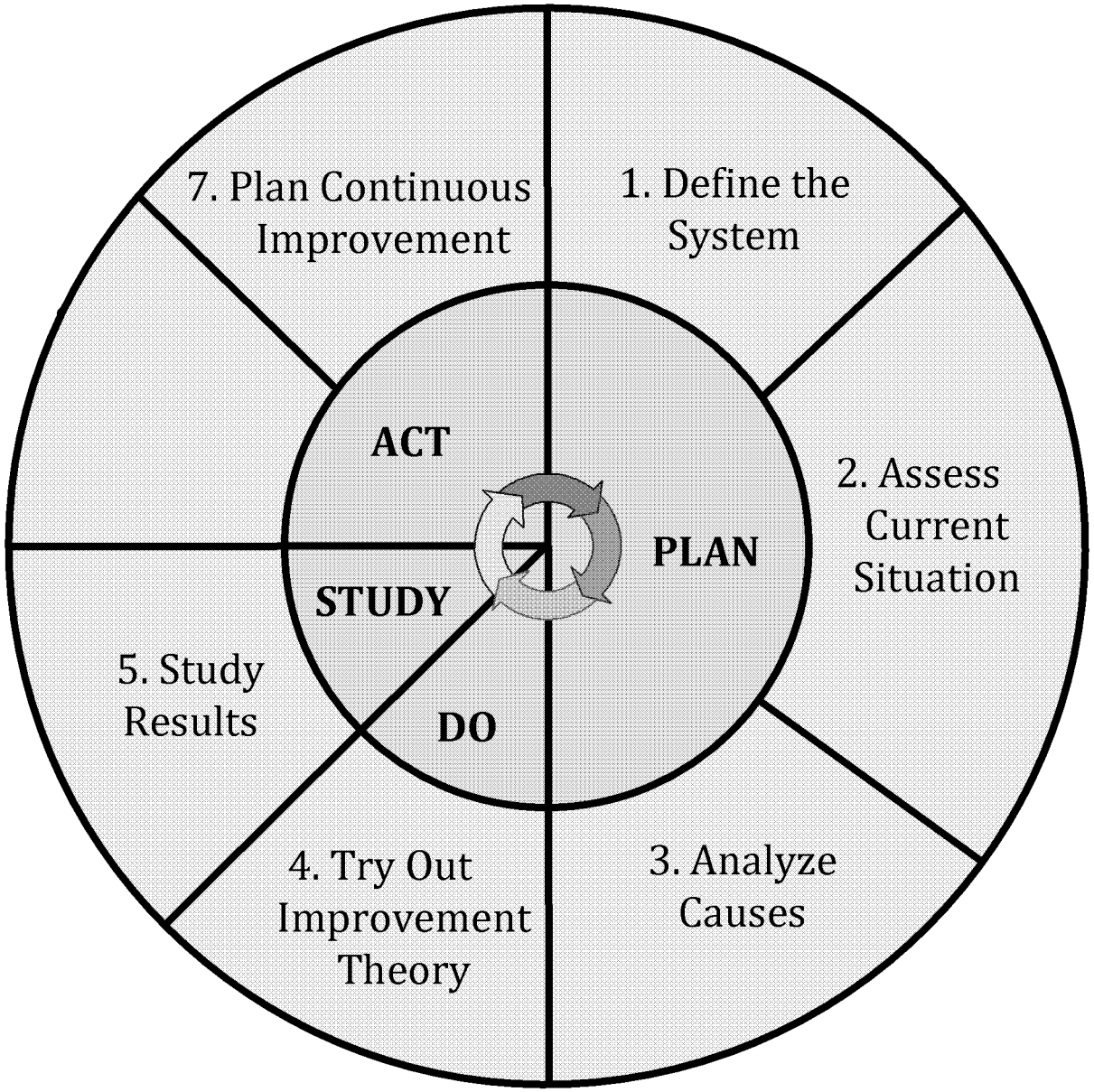
Kerry McConnell is the Success Center Coordinator and Data Manager for the Association. She holds two B.S. from the University of Illinois Urbana-Champaign, one in computer science and one in psychology. She also holds an M.S. from the University of Pittsburgh in cognitive psychology. After graduating from the University of Pittsburgh, Ms. McConnell worked for a small software company developing a routing solution for delivery companies. The Success Center Online is an intersection of all three of these interests combining modern technology to make statistics and information accessible to teachers so they can teach more effectively.

The Spiral Universe team working with the Association will be headed by David Blickstein (Spiral's Director of Technology) who will manage and oversee implementation and development. Blickstein earned a degree in computer science from Rutgers University, and went on to specialize in systems software.

[1] Includes Private Data Boot Camps and Success Center Online Implementation Training Workshops.

[2] Includes group Data Boot Camps, Data Basic Training and Success Center Online Users Conferences

# The Improvement Cycle



# ARIZONA DEPARTMENT OF EDUCATION
# Data Warehouse for Student Information
# SECURITY AND ACCESS REQUIREMENTS for External Users

## INTRODUCTION

The Arizona Department of Education considers all information and data concerning students and school staff contained in ADE systems or obtained from Arizona Education Data Warehouse (AEDW) be treated as sensitive and confidential.

Access to and use of such information and/or data are subject to legitimate business needs and shall only be authorized for researchers whose research affiliation and purposes are viewed as beneficial to public education. At no time is such information to be disseminated in a manner having malicious intent, or exhibiting a lack of confidentiality, professionalism, or integrity.

Even though researchers are permitted to access only unidentifiable student information, they must abide by State and federal laws governing the release of student records. Under no circumstances shall records and reports be released to any party unless such release is in strict accordance with the provisions of, and to the entities identified in: Public Law 93-80--Privacy Rights of Parents and Students, commonly known as the "Buckley Amendment"; the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. § 1232g and 34 CFR Part 99.

The Data Management staff will process and grant requests for access to data only after the appropriateness of the request has been reviewed and all prerequisites are met, in accordance with the guidelines and procedures outlined in this document. All requests for access to Data Warehouse student/staff information will be logged and available for public review.

### Data Warehouse User Requirements

Rights to access the AEDW are personal and nontransferable. All persons external to ADE who gain access to information from the Arizona Education Data Warehouse in any form must adhere to the following:

**Users must:**

1. Be responsible for the information obtained, use it appropriately, and only for authorized purposes;
2. Only use individual records or anything that could generate personally identifiable information for the validation of queries/programming;
3. Destroy student level records that have been provided from the Data Warehouse student information pursuant to a formal agreement within time limitations defined in the agreement and provide certification to the Data Management staff that such records have been destroyed;
4. Provide to the Data Management team, prior to publication/release, any documents generated as a result of using data received from the Data Warehouse, for review and verification that the stated purpose has been honored;
5. Understand that deliberate or accidental misuse of information may result in one or more of the following: loss of access, disciplinary action, prosecution under the scope of all applicable federal and state laws;
6. Ensure the data obtained is stored and transmitted securely and not available or disclosed to unauthorized parties; and
7. Encrypt the data on mobile computing devices containing any data retrieved from the Data Warehouse that pertains to an individual's level, status, or identity (student or staff).

**Users must not:**

1. Use the results of information provided by or generated from AEDW data to determine the identity of any student or employee;
2. Allow any unauthorized use of information provided by or generated from the AEDW data;
3. Share any data with any other individual(s) that has the potential to be personally identifiable; and
4. Publish reports with cell sizes of less than 10. (Reports must mask these cells so that personal identities cannot be extrapolated.)

**ADE Student Information Data Warehouse**
**Request for Access**

**Requester Information:**

Name of Requester: _____Title: _____

Institute: _____

Phone Number: _____ Network Logon ID: _____

Email Address: _____

**Purpose for Request:** (Briefly explain research purpose(s) and attach documentation that clarifies research plan and/or objectives.)

Data Warehouse Information

**Types of Data Needed:** (Describe briefly.)

Data Warehouse Information

**Statement of Understanding**

By signing this security agreement, I hereby certify that I will maintain the confidentiality of student and school staff data accessed through the Arizona Education Data Warehouse.
I understand that granted rights to access the AEDW are nontransferable. If I leave the position that allowed me access to this system, I will notify ADE Support Center and Data Management immediately and I will neither access nor disclose any data previously accessed through this system. To do so would be in violation of the Family Educational Rights and Privacy Act (FERPA).

The information obtained from AEDW will be used for the sole purpose of generating aggregate statistics that will be used to evaluate the effectiveness of educational programs in Arizona.

**This is to certify that I have read and understand this agreement. I will comply with the policy and be bound by its intent.**

**Signature of Requester** _____ **Date** _____

**Data Usage Expiration Date if Applicable**_____

**Please submit this form with original signatures to the ADE Data Management team.**

# Arizona Department of Education

| | | | |
|---|---|---|---|
| **GUIDELINE:** | Data Extract Request and Release Guidelines | **Guideline No:** | IT XX-YY-0906171500 |
| **Scope:** | ADE | **Effective:** | |
| **Expiration:** | This guideline is to be reviewed, and either revised or allowed to renew unchanged by: | | |
| | | **Key Contact(s):** | R. Rachkofski, M. Cruz |

I. PURPOSE

The purpose of this guideline is to establish the authority and procedures for releasing data extracts of sensitive and confidential student detail information or aggregated data created from this data to associated schools, school districts and charter schools, and to such agencies or entities that may have a legitimate need to view them, and the legal right to do so.

II. GUIDELINE

It is the Arizona Department of Education's (ADE) operating principle to safeguard sensitive and/or confidential information pertaining to a student's identity, and the associated data related to the identified student when it is extracted from ADE databases and physically or electronically delivered to the appropriate school, locale education agency (LEA), charter school entity, or other duly authorized agency. Legal mandates require that data be submitted by educational entities to ADE. Those data or subsets of data are to be made available to those entities, or to any legally authorized agency, upon request. The chief administrator or a designated senior official of the educational entity should make a formal request. When other agencies, such as the Attorney General or Auditor General have a need and the right to possess any student-level data collected by ADE, both the process of requesting and the delivery of data should be properly documented for public inspection and auditing purposes to ensure that the transfer of information followed proscribed procedures.

III. PROCEDURE SUMMARY

**Note**: For a more detailed description of the Data Request Workflow please refer to Appendix A.

A. The LEA or other agency requiring a data extract notifies ADE's Data Management Team of the specific data request and its intended use. This should be done by means of a letter on the LEA's or agency's letterhead, signed by the agency head, chief administrator, or a senior official. An alternate method of request can be via e-mail with a recognizable and verifiable e-mail return address. The requester will be sent the Request/Release form attached below. Pending the completion and return of the form along with the identity verification of the requester (i.e. photocopy of driver's license or employee badge), the request will be vetted by the Data Management team and the result of this process will be to authorize, reject (with cause), or further clarify the requirements with the requesting agent.

B. If the request is rejected, a Data Management representative will notify the requester and explain the reasons for that decision. Adjustments to the request may be made and resubmitted if appropriate.

C. If the request is authorized either directly or after needed clarifications have been made, an estimate of the delivery time will be made. The complexity of the request, workload, and staffing levels may all be contributing factors to this estimate.

D. The Data Management analyst will generate the extract and load it into a package on an encrypted Web server. A notification (with full instructions) will be sent to the recipient. The recipient will navigate to the site and click a link and enter the username and password previously assigned. Using this SSL (Secure Socket Layer) technology, the file will then be decrypted for the recipient.

E. For later reference, quality control inspection, and audit purposes, the original request, the extraction script, and the result set will be archived.

# Arizona Department of Education

## RELEASE/RECEIPT FOR DATA EXTRACT OR RELEASE

**Directions:** **Please complete all portions of this form. The completed form must be retained as a permanent record.**

**Section A: Requestor Information**

***Date of Request:*** _____

***Name and Title*** _____

***Address:*** _____

***Email Address:*** _____

***Phone Number:*** _____ ***Fax Number:*** _____

**Section B: Please check what type of data user you are:**

☐ Internal ADE Employee ☐ External User

**Section C: Check the following fields that apply regarding the data request**

| | | |
|---|---|---|
| ☐ Data will be published | ☐ Data resides on ADE Public Website | ☐ New Report Request |
| ☐ Data is reported to FEDS | ☐ Data Warehouse User (Section E) | ☐ Other |
| ☐ Data is for Promotional Purpose | ☐ Authorized to receive Educational Data | ☐ ADE collects the Data |
| ☐ Data is Student Level (Section G&I) | ☐ Data is Confidential (Section G&I) | ☐ Raw Data |

**Section D: Precise Description of the Data Requested, and its Intended Use:**

**Full description of data request (include attachment if necessary):**

**Intended use for data:**

**Which Fiscal Year or Reported Year?:**

**Due Date:**

**Level of Aggregation:**

☐ Raw Data/Student Level ☐ School Level ☐ LEA Level ☐ SEA-Level

**Type of Aggregation:**

| | | |
|---|---|---|
| ☐ Grade | ☐ Ethnicity | ☐ Gender |
| ☐ SPED | ☐ ELL | ☐ Other Support Programs |

☐ Assessment ☐ Other (Please Describe):_____

**Section E: Data Warehouse Users**

If you are a trained Data Warehouse User do you see student level non masked data? ☐ Yes ☐ No

If **Yes** what is the Entity Name and ID number? _____

**Users must:**

1. Be responsible for the information obtained, use it appropriately, and only for authorized purposes;
2. Only use individual records or anything that could generate personally identifiable information for the validation of queries/programming;
3. Destroy student level records that have been provided from the Data Warehouse student information pursuant to a formal agreement within time limitations defined in the agreement and provide certification to the Data Management staff that such records have been destroyed;
4. Provide to the Data Management team, prior to publication/release, any documents generated as a result of using data received from the Data Warehouse, for review and verification that the stated purpose has been honored;
5. Understand that deliberate or accidental misuse of information may result in one or more of the following: loss of access, disciplinary action, prosecution under the scope of all applicable federal and state laws;
6. Ensure the data obtained is stored and transmitted securely and not available or disclosed to unauthorized parties; and
7. Encrypt the data on mobile computing devices containing any data retrieved from the Data Warehouse that pertains to an individual's level, status, or identity (student or staff).

**Users must not:**

1. Use the results of information provided by or generated from AEDW data to determine the identity of any student or employee;
2. Allow any unauthorized use of information provided by or generated from the AEDW data;
3. Share any data with any other individual(s) that has the potential to be personally identifiable; and
4. Publish reports with cell sizes of less than 10. (Reports must mask these cells so that personal identities cannot be extrapolated.)
5. Before any data is published it must be submitted to the Data Warehouse Group for approval

**Section F: ADE Employee Who Is Authorizing the Release of Data:**

The undersigned ADE employee (a) understands that the information described above may include sensitive, personal, or confidential data, (b) affirms that she or he is duly authorized to release ADE information, and (c) hereby authorizes its release to the entity/person below.

_____ _____
(ADE Employee Signature) (Date)

_____ _____
(ADE Employee Printed Name) (ADE Department or Unit)

**Section G: Person Who is Requesting the Data:**

The undersigned acknowledges receipt of information as described above, understands that it may include sensitive or personal or confidential information, and accepts responsibility for safeguarding it as appropriate. The undersigned is aware of the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. §1232g; 34 CFR Part 99), understands that it is a federal law that protects the privacy of student educational records, and recognizes that there are severe penalties for its violation.

_____ _____
(Signature) (Date)

_____ _____
(Printed Name) (Requesting Agency, Department or Educational Entity)

**Section H: ADE Employee Who Is Actually Releasing the Data:**

The undersigned ADE employee affirms (1) that the person receiving the data extract described above was properly identified by photo credential as checked below, and (2) that ADE has received proper authorization from the responsible local education agency to release its data, as checked below. Proper written authorization is a letter of

release on the requesting agency's letterhead signed (by the agency head, chief administrator, or a senior official), or other appropriate formal document including identifiable and verifiable e-mail.

1) I identified the person who is receiving the information by the following photo credential:

☐ *driver's license* ☐ *employee badge* ☐ *other (describe):*_____

2) I have attached a photocopy of the photo credential:

3) The responsible LEA/agency authorized release of this information by:

☐ *written authorization* ☐ *other (describe):*_____

_____ _____
(ADE Employee Signature) (Date)

_____ _____
(ADE Employee Printed Name) (ADE Department or Unit)

**Section I: FERPA**

The purpose of FERPA is two-fold: to assure that parents and eligible students can access the student's education records, and to protect their right to privacy by limiting the transferability of their education records without their consent. 120 Cong. Rec. 39862. As such, FERPA is not an open records statute or part of an open records system. The only parties who have a right to obtain access to education records under FERPA are parents and eligible students. Journalists, researchers, and other members of the public have no right under FERPA to gain access to education records for school accountability or other matters of public interest, including misconduct by those running for public office. Nonetheless, as explained in the preamble to the NPRM, 73 FR 15584–15585, we believe that the regulatory standard for defining and removing personally identifiable information from education records establishes an appropriate balance that facilitates school accountability and educational research while preserving the statutory privacy protections in FERPA. The simple removal of nominal or direct identifiers, such as name and SSN (or other ID number), does not necessarily avoid the release of personally identifiable information. Other information, such as address, date and place of birth, race, ethnicity, gender, physical description, disability, activities and accomplishments, disciplinary actions, and so forth, can indirectly identify someone depending on the combination of factors and level of detail released.

Senate Engrossed House Bill

State of Arizona
House of Representatives
Forty-ninth Legislature
Second Regular Session
2010

# HOUSE BILL 2298

AN ACT

AMENDING SECTION 15-203, ARIZONA REVISED STATUTES; RELATING TO THE STATE BOARD OF EDUCATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 15-203, Arizona Revised Statutes, is amended to read:

15-203. Powers and duties

A. The state board of education shall:

1. Exercise general supervision over and regulate the conduct of the public school system and adopt any rules and policies it deems necessary to accomplish this purpose.

2. Keep a record of its proceedings.

3. Make rules for its own government.

4. Determine the policy and work undertaken by it.

5. Appoint its employees, on the recommendation of the superintendent of public instruction.

6. Prescribe the duties of its employees if not prescribed by statute.

7. Delegate to the superintendent of public instruction the execution of board policies and rules.

8. Recommend to the legislature changes or additions to the statutes pertaining to schools.

9. Prepare, publish and distribute reports concerning the educational welfare of this state.

10. Prepare a budget for expenditures necessary for proper maintenance of the board and accomplishment of its purposes and present the budget to the legislature.

11. Aid in the enforcement of laws relating to schools.

12. Prescribe a minimum course of study in the common schools, minimum competency requirements for the promotion of pupils from the third grade and minimum course of study and competency requirements for the promotion of pupils from the eighth grade. The state board of education shall prepare a fiscal impact statement of any proposed changes to the minimum course of study or competency requirements and, on completion, shall send a copy to the director of the joint legislative budget committee and the executive director of the school facilities board. The state board of education shall not adopt any changes in the minimum course of study or competency requirements in effect on July 1, 1998 that will have a fiscal impact on school capital costs.

13. Prescribe minimum course of study and competency requirements for the graduation of pupils from high school. The state board of education shall prepare a fiscal impact statement of any proposed changes to the minimum course of study or competency requirements and, on completion, shall send a copy to the director of the joint legislative budget committee and the executive director of the school facilities board. The state board of education shall not adopt any changes in the minimum course of study or competency requirements in effect on July 1, 1998 that will have a fiscal impact on school capital costs.

14. Supervise and control the certification of persons engaged in instructional work directly as any classroom, laboratory or other teacher or indirectly as a supervisory teacher, speech therapist, principal or superintendent in a school district, including school district preschool programs, or any other educational institution below the community college, college or university level, and prescribe rules for certification, including rules for certification of teachers who have teaching experience and who are trained in other states, which are not unnecessarily restrictive and are substantially similar to the rules prescribed for the certification of teachers trained in this state. The rules shall:

(a) ALLOW A VARIETY OF ALTERNATIVE TEACHER AND ADMINISTRATOR PREPARATION PROGRAMS, WITH VARIATIONS IN PROGRAM SEQUENCE AND DESIGN, TO APPLY FOR PROGRAM APPROVAL. THE BOARD SHALL ADOPT RULES PURSUANT TO THIS SUBDIVISION DESIGNED TO ALLOW FOR A VARIETY OF FORMATS AND SHALL NOT REQUIRE A PRESCRIBED ANSWER OR DESIGN FROM THE PROGRAM PROVIDER IN ORDER TO OBTAIN APPROVAL FROM THE STATE BOARD. THE STATE BOARD SHALL EVALUATE EACH PROGRAM PROVIDER BASED ON THE PROGRAM'S ABILITY TO PREPARE TEACHERS AND ADMINISTRATORS AND TO RECRUIT TEACHERS AND ADMINISTRATORS WITH A VARIETY OF EXPERIENCES AND TALENTS. THE BOARD SHALL PERMIT UNIVERSITIES UNDER THE JURISDICTION OF THE BOARD OF REGENTS, COMMUNITY COLLEGES IN THIS STATE, PRIVATE POSTSECONDARY INSTITUTIONS LICENSED BY THIS STATE, SCHOOL DISTRICTS, CHARTER SCHOOLS AND PROFESSIONAL ORGANIZATIONS TO APPLY FOR PROGRAM APPROVAL AND SHALL CREATE APPLICATION PROCEDURES AND CERTIFICATION CRITERIA THAT ARE LESS RESTRICTIVE THAN THOSE FOR TRADITIONAL PREPARATION PROGRAMS. ALTERNATIVE PREPARATION PROGRAM GRADUATES SHALL:

(i) HOLD A BACHELOR'S DEGREE FROM AN ACCREDITED POSTSECONDARY EDUCATION INSTITUTION.

(ii) DEMONSTRATE PROFESSIONAL KNOWLEDGE AND SUBJECT KNOWLEDGE PROFICIENCY PURSUANT TO SECTION 15-533.

(iii) OBTAIN A FINGERPRINT CLEARANCE CARD PURSUANT TO SECTION 15-534.

(iv) COMPLETE TRAINING IN STRUCTURED ENGLISH IMMERSION AS PRESCRIBED BY THE BOARD.

(v) COMPLETE TRAINING IN RESEARCH BASED SYSTEMATIC PHONICS INSTRUCTION AS PRESCRIBED IN SUBDIVISION (b) OF THIS PARAGRAPH.

(vi) DEMONSTRATE THE REQUIRED PROFICIENCY IN THE CONSTITUTIONS OF THE UNITED STATES AND ARIZONA AS PRESCRIBED IN SECTION 15-532.

(b) Require applicants for all certificates for common school instruction to complete a minimum of forty-five classroom hours or three college level credit hours, or the equivalent, of training in research based systematic phonics instruction from a public or private provider.

(c) ~~The rules shall~~ Not require a teacher to obtain a master's degree or to take any additional graduate courses as a condition of certification or recertification.

(d) ~~The rules shall~~ Allow a general equivalency diploma to be substituted for a high school diploma in the certification of emergency substitute teachers.

(e) ~~The rules shall~~ Allow but shall not require the superintendent of a school district to obtain certification from the state board of education.

15. Adopt a list of approved tests for determining special education assistance to gifted pupils as defined in and as provided in chapter 7, article 4.1 of this title. The adopted tests shall provide separate scores for quantitative reasoning, verbal reasoning and nonverbal reasoning and shall be capable of providing reliable and valid scores at the highest ranges of the score distribution.

16. Adopt rules governing the methods for the administration of all proficiency examinations.

17. Adopt proficiency examinations for its use. The state board of education shall determine the passing score for the proficiency examination.

18. Include within its budget the cost of contracting for the purchase, distribution and scoring of the examinations as provided in paragraphs 16 and 17 of this subsection.

19. Supervise and control the qualifications of professional nonteaching school personnel and prescribe standards relating to qualifications. The standards shall not require the business manager of a school district to obtain certification from the state board of education.

20. Impose such disciplinary action, including the issuance of a letter of censure, suspension, suspension with conditions or revocation of a certificate, upon a finding of immoral or unprofessional conduct.

21. Establish an assessment, data gathering and reporting system for pupil performance as prescribed in chapter 7, article 3 of this title.

22. Adopt a rule to promote braille literacy pursuant to section 15-214.

23. Adopt rules prescribing procedures for the investigation by the department of education of every written complaint alleging that a certificated person has engaged in immoral conduct.

24. For purposes of federal law, serve as the state board for vocational and technological education and meet at least four times each year solely to execute the powers and duties of the state board for vocational and technological education.

25. Develop and maintain a handbook for use in the schools of this state that provides guidance for the teaching of moral, civic and ethical education. The handbook shall promote existing curriculum frameworks and shall encourage school districts to recognize moral, civic and ethical values within instructional and programmatic educational development programs for the general purpose of instilling character and ethical principles in pupils in kindergarten programs and grades one through twelve.

26. Require pupils to recite the following passage from the declaration of independence for pupils in grades four through six at the commencement of

the first class of the day in the schools, except that a pupil shall not be required to participate if the pupil or the pupil's parent or guardian objects:

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness. That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. . . .

27. Adopt rules that provide for teacher certification reciprocity. The rules shall provide for a one year reciprocal teaching certificate with minimum requirements including valid teacher certification from a state with substantially similar criminal history or teacher fingerprinting requirements and proof of the submission of an application for a fingerprint clearance card pursuant to title 41, chapter 12, article 3.1.

28. Adopt rules that provide for the presentation of an honorary high school diploma to a person who has never obtained a high school diploma and who meets both of the following requirements:

(a) Currently resides in this state.

(b) Provides documented evidence from the Arizona department of veterans' services that the person enlisted in the armed forces of the United States and served in World War I, World War II, the Korean conflict or the Vietnam conflict.

29. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the duties of the department of education and that relate to quality of life, trade and economic development in this state in a manner that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.

30. Adopt rules to define and provide guidance to schools as to the activities that would constitute immoral or unprofessional conduct of certificated persons.

31. Adopt guidelines to encourage pupils in grades nine, ten, eleven and twelve to volunteer for twenty hours of community service before graduation from high school. A school district that complies with the guidelines adopted pursuant to this paragraph is not liable for damages resulting from a pupil's participation in community service unless the school district is found to have demonstrated wanton or reckless disregard for the safety of the pupil and other participants in community service. For the purposes of this paragraph, "community service" may include service learning. The guidelines shall include the following:

(a) A list of the general categories in which community service may be performed.

(b) A description of the methods by which community service will be monitored.

(c) A consideration of risk assessment for community service projects.

(d) Orientation and notification procedures of community service opportunities for pupils entering grade nine, including the development of a notification form. The notification form shall be signed by the pupil and the pupil's parent or guardian, except that a pupil shall not be required to participate in community service if the parent or guardian notifies the principal of the pupil's school in writing that the parent or guardian does not wish the pupil to participate in community service.

(e) Procedures for a pupil in grade nine to prepare a written proposal that outlines the type of community service that the pupil would like to perform and the goals that the pupil hopes to achieve as a result of community service. The pupil's written proposal shall be reviewed by a faculty advisor, a guidance counselor or any other school employee who is designated as the community service program coordinator for that school. The pupil may alter the written proposal at any time before performing community service.

(f) Procedures for a faculty advisor, a guidance counselor or any other school employee who is designated as the community service program coordinator to evaluate and certify the completion of community service performed by pupils.

32. To facilitate the transfer of military personnel and their dependents to and from the public schools of this state, pursue, in cooperation with the Arizona board of regents, reciprocity agreements with other states concerning the transfer credits for military personnel and their dependents. A reciprocity agreement entered into pursuant to this paragraph shall:

(a) Address procedures for each of the following:

(i) The transfer of student records.

(ii) Awarding credit for completed course work.

(iii) Permitting a student to satisfy the graduation requirements prescribed in section 15-701.01 through the successful performance on comparable exit-level assessment instruments administered in another state.

(b) Include appropriate criteria developed by the state board of education and the Arizona board of regents.

33. Adopt guidelines that school district governing boards shall use in identifying pupils who are eligible for gifted programs and in providing gifted education programs and services. The state board of education shall adopt any other guidelines and rules that it deems necessary in order to carry out the purposes of chapter 7, article 4.1 of this title.

34. For each of the alternative textbook formats of human-voiced audio, large-print and braille, designate alternative media producers to adapt existing standard print textbooks or to provide specialized textbooks, or both, for pupils with disabilities in this state. Each alternative media

producer shall be capable of producing alternative textbooks in all relevant subjects in at least one of the alternative textbook formats. The board shall post the designated list of alternative media producers on its website.

35. Adopt a list of approved professional development training providers for use by school districts as provided in section 15-107, subsection J. The professional development training providers shall meet the training curriculum requirements determined by the state board of education in at least the areas of school finance, governance, employment, staffing, inventory and human resources, internal controls and procurement.

36. Adopt rules to prohibit a person who violates the notification requirements prescribed in section 15-183, subsection C, paragraph 7 or section 15-550, subsection C from certification pursuant to this title until the person is no longer charged or is acquitted of any offenses listed in section 41-1758.03, subsection B. The board shall also adopt rules to prohibit a person who violates the notification requirements, certification surrender requirements or fingerprint clearance card surrender requirements prescribed in section 15-183, subsection C, paragraph 8 or section 15-550, subsection D from certification pursuant to this title for at least ten years after the date of the violation.

37. Adopt rules for the alternative certification of teachers of nontraditional foreign languages that allow for the passing of a nationally accredited test to substitute for the education coursework required for certification.

B. The state board of education may:

1. Contract.

2. Sue and be sued.

3. Distribute and score the tests prescribed in chapter 7, article 3 of this title.

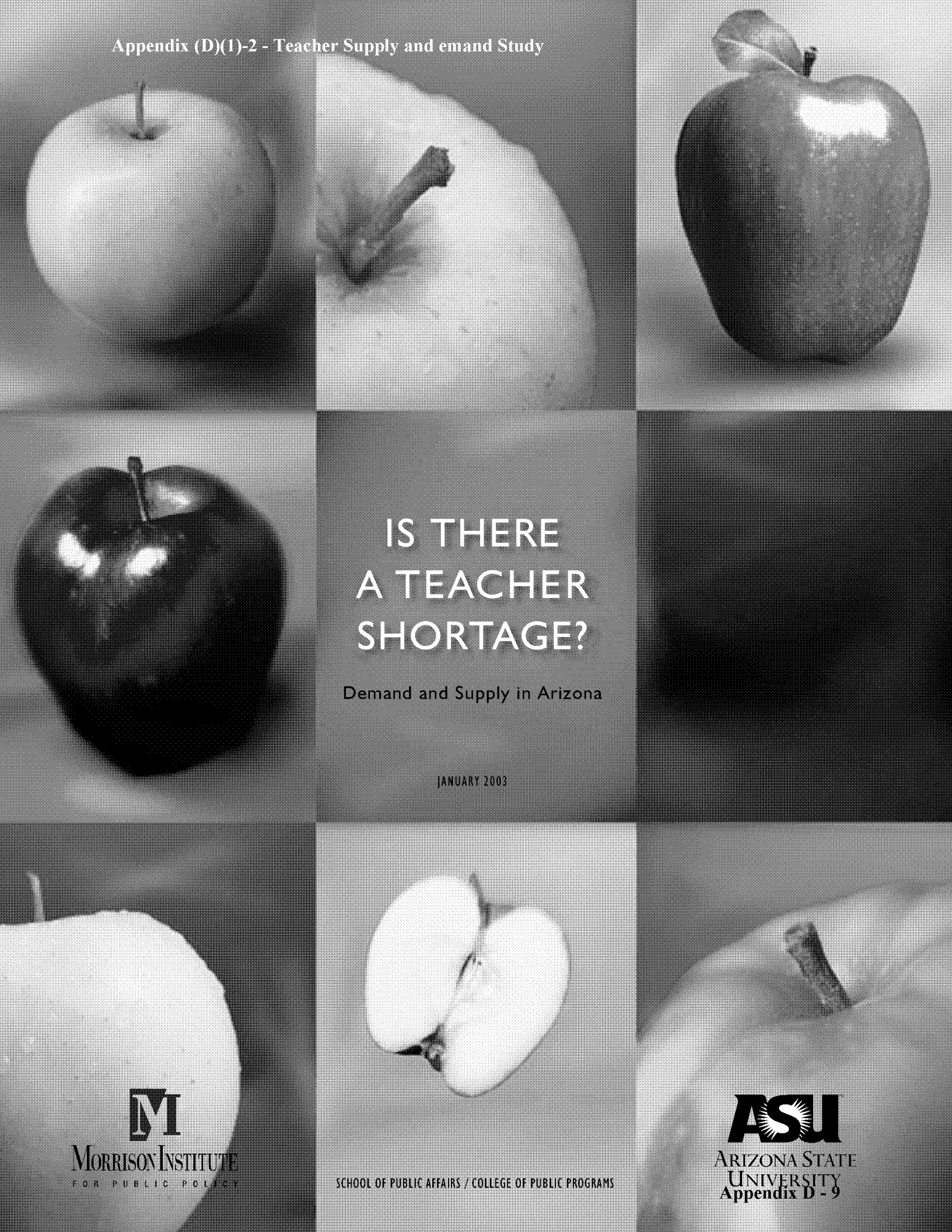
4. Provide for an advisory committee to conduct hearings and screenings to determine whether grounds exist to impose disciplinary action against a certificated person, whether grounds exist to reinstate a revoked or surrendered certificate and whether grounds exist to approve or deny an initial application for certification or a request for renewal of a certificate. The board may delegate its responsibility to conduct hearings and screenings to its advisory committee. Hearings shall be conducted pursuant to title 41, chapter 6, article 6.

5. Proceed with the disposal of any complaint requesting disciplinary action or with any disciplinary action against a person holding a certificate as prescribed in subsection A, paragraph 14 of this section after the suspension or expiration of the certificate or surrender of the certificate by the holder.

6. Assess costs and reasonable attorney fees against a person who files a frivolous complaint or who files a complaint in bad faith. Costs assessed pursuant to this paragraph shall not exceed the expenses incurred by the state board in the investigation of the complaint.

Sec. 2. Preparation program providers; reapplication

Any preparation program provider currently approved or in the application process with the state board of education may reapply for program approval pursuant to section 15-203, subsection A, paragraph 14, subdivision (a), Arizona Revised Statutes, as amended by this act, upon the effective date of this act.



# IS THERE A TEACHER SHORTAGE?

## Demand and Supply in Arizona

JANUARY 2003

MORRISON INSTITUTE FOR PUBLIC POLICY

SCHOOL OF PUBLIC AFFAIRS / COLLEGE OF PUBLIC PROGRAMS

ARIZONA STATE UNIVERSITY

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# IS THERE A TEACHER SHORTAGE?

## Demand and Supply in Arizona

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# EXECUTIVE SUMMARY

## Is There a Teacher Shortage? K-12 Demand and Supply in Arizona

Arizona has had little reliable data or thoughtful analysis on teacher demand and supply in the state. Yet, conventional wisdom in Arizona is that the state has a dire teacher shortage. Consequently, this report addresses the question, "What is the nature and extent of the teacher shortage in Arizona?"

This is an important question. Arizona policymakers must understand the issue because misconceptions will lead to poor policy decisions and wasted resources. Thus, this report presents new research and policy recommendations that can serve as a point of departure for understanding and discussing teacher demand and supply in Arizona. Among the findings:

### *Arizona does not presently have an overall shortage of teachers, but a delicate balance exists between demand and supply.*

Teacher attrition and a fast-growing population of new students will create substantial demand in Arizona for K-12 teachers over the next eight years. This has led to widespread assumptions that the state faces a significant teacher shortage. This study, however, indicates that Arizona actually may have a small overall surplus of teachers each year between now and 2010. A total of the number of new teachers being produced by Arizona teacher education institutions, the number of certified teachers coming from other states, and the number of inactive certified teachers in Arizona expected to return to the classroom appears to be slightly greater than the overall predicted statewide need. However, each of the major components of the demand-supply equation for the teaching workforce could be affected — positively or adversely — by factors such as policy changes, the economy, and the political environment.

### *Despite an overall surplus, teacher shortages already occur in specific regions and subject-matter areas, and these shortfalls may worsen in the near term.*

Most of the data presented in this report address demand and supply for the state as a whole. When demand and supply are disaggregated, however, a somewhat different picture emerges — demand outstrips the number of teachers available in certain locations and subject-matter areas.

Demand for teachers is projected to exceed available supply in Arizona's western regions (especially Yuma), some exurban Phoenix areas (locales beyond the suburbs that exhibit rural qualities but appear to be in the path of urban growth) and, to a lesser extent, in urban Phoenix school districts. Changing demographics also will complicate the search for teachers in many locations. Population projections indicate that Arizona's school-age children will be increasingly Hispanic — a trend that may require more teachers with special language training than are available for hire. And, although media attention has focused on the need for math and science teachers, it appears that the greatest hiring challenge for schools is finding enough certified special education teachers. Even in locations where there are enough overall teachers to go around, teachers are not applying in adequate numbers for positions generally perceived to be difficult, either because of their location or because of student characteristics.

### *Managing attrition and encouraging the return of inactive certified teachers will be crucial to ensure a sufficient teacher pool.*

Inactive certified teachers who return to the classroom are the smallest component of supply, but they are crucial to alleviate shortfalls. Inactive certified teachers, however, have not been carefully tracked or surveyed in Arizona until now. A new statewide survey of Arizona inactive certified teachers provides some insight into what might prevent their departure (attrition) and what it would take to increase the rate at which they enter or reenter the classroom. While many teachers leave the profession for personal reasons such as raising a family or retirement, others leave because of unsatisfactory aspects of the classroom environment or school system. Even so, as much as one-third of this pool may seriously consider teaching again, especially if pay were increased or class size reduced. Thus, certain policy changes could motivate inactive teachers to return in greater numbers.

*Policy changes are needed to increase and monitor Arizona's supply of teachers, especially in specific areas.*

This report shows that Arizona's teacher supply is in a delicate balance with the demand for new teachers. From 2006 to 2010, there will be on average only about 1.2 applicants per new teaching position each year — with shortfalls likely in specific locations (especially fast-growing rural school districts) and in certain subject-matter areas (such as special education and LEP programs). To make sure that Arizona has enough teachers in the future — especially in view of the state's reliance on in-migrants and returning inactive certified teachers — teacher production, recruitment and retention efforts must be increased.

Policies and program recommendations are provided in four areas: production and recruitment, compensation, changes in the classroom environment, and data tracking.

## Production and Recruitment

- Increase production of teacher graduates at Arizona training institutions.
- Strengthen state-level efforts at out-of-state recruiting.
- Remove and/or streamline certification requirements.
- Create incentives to motivate inactive certified teachers to return to the classroom.
- Target recruitment in critical areas.

## Compensation

- Offer tuition reimbursement or similar programs.
- Consider offering differentiated or "combat" pay.
- Fund non-student days.

## Classroom Environment

- Reduce paperwork burden.
- Improve discipline and safety.

## Data Tracking

- Establish a dynamic database and an annual report on teacher demand and supply.
- Improve data collection and distribution of information on student needs.

Quantifying the demand and supply of teachers in Arizona is a complicated task. Not only are there many factors influencing the labor market for teachers, but the data on this matter are difficult to find and use. Nevertheless, using the best available data at this time, researchers found that there is no overall K-12 teacher shortage in Arizona. However, there is still cause for concern and a need for action in Arizona. The labor market is tight and will continue to be so in the future. Additionally, shortages were revealed in specific areas. While this study focused on the quantity of Arizona's teachers, ensuring that Arizona has enough **quality** teachers is by far the more important issue.

# ABOUT THIS STUDY

## Is There a Teacher Shortage? K-12 Demand and Supply in Arizona

Little reliable data and very few analyses on teacher demand and supply in Arizona have been available prior to this study. Yet many people have declared that a dire shortage of teachers is imminent. Consequently, Morrison Institute developed a research design to answer the question, "What is the nature and extent of the teacher shortage in Arizona?"

Arizona policymakers need good information on this issue because misconceptions about where, and in what subjects, a teacher shortage may occur could lead to poor policy decisions and wasted resources.

The key components that drive teacher demand are:

- New positions created due to student growth
- Current positions vacated due to attrition from:
  - Retirement
  - Leaving the profession before retirement
  - Leaving the state ("out-migration")

The key components that comprise the teacher supply are:

- New trainees from Arizona colleges (the "pipeline" of students receiving bachelor degrees in education, as well as those attending postbaccalaureate teacher preparation programs)
- Certified teachers who move in from other states ("in-migration")
- Arizona certified teachers who have not been teaching ("inactive certified teachers") but who decide to return to the profession

Charter schools were included in calculations of demand and supply for this study (both certified and noncertified). Emergency certified teachers were not. (For further discussion on components and measures of teacher demand and supply see Appendix A.)

**The time period examined for this study is 2002 to 2010.** In the process of gathering data for the analysis of teacher demand and supply, researchers obtained all currently available statistical information and also conducted surveys and interviews. A detailed list of data sources is provided in Appendix B.

Researchers also used input from a variety of expert sources. A panel was convened of Arizona Department of Education (ADE) staff, school district personnel, educators, state agency data managers, and higher education representatives to comment on the aggregate data and provide insight into the findings. Researchers also consulted economists, national education experts, school district superintendents, and the Arizona Education Association.

This report is divided into four sections. The first discusses overall teacher demand and supply in Arizona. The second addresses specific areas of need for teachers. The third reports on a survey of inactive certified teachers and discusses the potential for not only reducing their attrition but also recruiting them back into the active teacher workforce. The fourth section provides recommendations for increasing the overall supply of teachers in Arizona.

### Teacher Data Lacks Standardization

A variety of data sources from different institutions were used to conduct this analysis. Researchers found, however, that there is little standardization among these sources in methodologies or definitions. Thus, it was not always possible to make comparisons of teacher data across different sources.

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# DELICATE BALANCE: STATEWIDE DEMAND AND SUPPLY

*Arizona does not presently have an overall shortage of teachers, but a delicate balance exists between demand and supply.*

Teacher attrition and a fast-growing population of new students will create substantial demand in Arizona for K-12 teachers over the next eight years. This has led to widespread assumptions that the state faces a significant teacher shortage. This study, however, reveals that Arizona actually may have a small overall teacher surplus each year between 2002 and 2010. A total of the number of new teachers being produced by Arizona teacher education institutions, the number of certified teachers coming from other states, and the number of inactive certified teachers in Arizona expected to return to the classroom appears to be slightly greater than the overall predicted statewide need.

This section examines the major components of the demand-supply equation for the teaching workforce. Each of these components could be affected — positively or adversely — by policy changes, the economy, or the political environment.

## Components of K-12 Teacher Demand

Calculations based on student growth projections indicate that Arizona will need about 6,880 new teachers each year to accommodate anticipated demand through 2005. Of these, approximately 1,420 annually will be needed to accommodate student population growth, while 5,460 annually will be needed to replace teacher attrition. For the period 2006 to 2010, demand will be slightly lower — about 5,980 new teachers each year. Of these, approximately 1,420 teachers annually will be needed to accommodate student population growth, and another 4,560 to meet attrition.

### Student Population Growth

Arizona's annual growth rate for school enrollment over the last four years has varied between about 3 percent and 6.5 percent (ADE, 2002d). ADE reports that about 51,740 teachers (those identified by ADE as regular public or charter school teaching staff, as opposed to classified staff, nurses, psychologists, and others) served about 921,870 students in the 2001-2002 school year — providing about 1 teacher for 17.8 students. By the 2009-2010 school year, about 1,123,690 students will likely be enrolled in Arizona public schools, including charters, according to the Center for Business Research at Arizona State University. Using the 1:17.8 ratio of teachers to students, these students will require 63,130 teachers — an estimated total increase of about 11,390 teachers over the next eight years, or about 1,420 teachers per year, to maintain the current teacher-student ratio. (See Table 1. More detailed enrollment calculations projected by the Center for Business Research are shown in Appendix C.)

**TABLE 1** **Projected Growth of Arizona K-12 Students and Teachers, 2001-2002 to 2009-2010**

| | Number in 2001-2002 | Projected Number 2009-2010 | Total Change | Average Change per Year |
|---|---|---|---|---|
| **Public School Students** | 921,870[1] | 1,123,690[3] | 201,820 | 25,230 |
| **Public School Teachers** | 51,740[2] | 63,130[4] | 11,390 | **1,420** |

Source: Morrison Institute for Public Policy, 2002.

Data: (1) Arizona Department of Education, 2002d; (2) Arizona Department of Education, 2002c and 2002f; Arizona State Board for Charter Schools, 2002. (3) Center for Business Research, 2001a; (4) Number of teachers needed if the 1:17.8 teacher/student ratio is maintained.

### Teacher Demand and Supply 101

**Demand for New Teachers**

- Student population growth
- Attrition due to:
  - Retirement
  - Leaving the profession before retirement
  - Leaving the state

**Supply of New Teachers**

- New trainees graduating from Arizona colleges
- Teachers certified in other states who move to Arizona (in-migrants)
- Return of inactive certified teachers to the classroom

### Attrition

Three types of attrition affect the demand for teachers — retirement, leaving the profession before retirement, and leaving the state.

### Retirement

Almost all of Arizona's K-12 teachers are participants in the Arizona State Retirement System (ASRS). While ASRS was unable to project the number of teachers likely to retire by 2010, the agency does track the average age of Arizona's retired teachers and the average age of the current Arizona teaching workforce. These data were then used to estimate retirement ages for Arizona teachers. The age at which teachers retire, however, can be sensitive to changes in the economy. Therefore, "minimum" and "maximum" retirement ages were used to account for future variations. The number of yearly retirees used for demand calculations in this report was derived from an average of the two.

According to ASRS, the average age of all living retired Arizona teachers is 64 (ASRS 2001). Using 64 as a maximum average retirement age, about 10 percent of all teachers (those age 55 and over in the year 2000) would leave the classroom by the 2009-10 school year. This is an average of about 470 per year and would represent the lowest annual number of teachers likely to retire in Arizona (see Table 2a).

On the other hand, ASRS officials have rough-estimated that the average age of new retirees during 2001 was about 55. This is probably a low estimate because the demographics of the Arizona teacher workforce indicate that most current teachers would not be eligible for full benefits if they retired at 55. Using 55, therefore, as a minimum average retirement age, Arizona could expect about 3,030 retirees per year through 2005, and 1,220 per year between 2006 and 2010 (see Table 2b). These would represent the highest likely numbers of teacher retirees annually.

Averaging the yearly number of retirees based on retirement at age 64 and retirement at age 55 produces an estimated 1,750 retirees per year through 2005 and about 850 per year between 2006 and 2010.

**TABLE 2a** **Retirement Projections for Arizona's Teachers, 2000-2010: Retirement Age 64**

| Age | Percent Teachers in 2000[1] | Number of Teachers in 2000[2] | Time Range for Cohort to Reach Age 64 | Estimated Number of Teachers Turning 64 Each Year |
|---|---|---|---|---|
| 55 and over | 10% | 4,700 | 2001-2010 | 470 |

**TABLE 2b** **Retirement Projections for Arizona's Teachers, 2000-2010: Retirement Age 55**

| Age | Percent Teachers in 2000[1] | Number of Teachers in 2000[2] | Time Range for Cohort to Reach Age 55 | Estimated Number of Teachers Turning 55 Each Year |
|---|---|---|---|---|
| 50 and up | 30.9% | 15,130 | 2001-2005 | 3,030 |
| 45 - 49 | 12.5%[3] | 6,110 | 2006-2010 | 1,220 |

Source: Morrison Institute for Public Policy, 2002.

Data: (1) U.S. Department of Education, 2002; (2) Arizona Department of Education, 2002c; (3) U.S. Department of Education data was for ages 40-49; U.S. Census Bureau (2000) provided the proportion of teachers in that cohort aged 45-49.

### Teacher-Student Ratio Policies Affect Demand

Changes in class-size policies can dramatically alter teacher demand, essentially creating shortages or surpluses almost overnight. Currently, Arizona's average teacher-student ratio is 1:17.8 statewide. Actual teacher-student ratios, however, vary considerably among individual districts, within districts themselves, and between elementary and secondary schools. Small changes in class size can have a large statewide effect on the number of teachers needed. For example, a slight reduction in the average Arizona teacher-student ratio to 1:17 would increase the need for teachers by about 380 annually. Conversely, a slight increase in the teacher-student ratio to 1:19 would reduce the need for new teachers by about 500 annually.

### Leaving the Profession Before Retirement

Arizona-specific data are not available on teacher attrition, but it is well known that attrition rates vary with age. Based on national attrition rates, approximately 1,990 Arizona teachers under age 45 can be expected to leave the profession annually. Population growth was accounted for by averaging yearly attrition for 2000 and 2010. Tables 3a and 3b show the estimated percentage and number for each age range.

**TABLE 3a** **Arizona Teachers (under age 45) Leaving the Profession Each Year, 2000**

| Age | Number of Arizona Teachers in 2000[1] | National Yearly Attrition Rate 1994-1995[2] | Estimated Number of Arizona Teachers Leaving the Profession Each Year |
|---|---|---|---|
| 22-24 | 2,480 | 3.8% | 90 |
| 25-29 | 4,320 | 10.0% | 430 |
| 30-39 | 14,000 | 6.7% | 940 |
| 40-44 | 6,920 | 3.9%[3] | 270 |
| **TOTAL** | | | **1,730** |

**TABLE 3b** **Arizona Teachers (under age 45) Leaving the Profession Each Year, 2010**

| Age | Estimated Number of Arizona Teachers in 2010[4] | National Yearly Attrition Rate 1994-1995[2] | Estimated Number of Arizona Teachers Leaving the Profession Each Year |
|---|---|---|---|
| 22-24 | 3,200 | 3.8% | 120 |
| 25-29 | 5,570 | 10.0% | 560 |
| 30-39 | 18,050 | 6.7% | 1,210 |
| 40-44 | 8,920 | 3.9%[3] | 350 |
| **TOTAL** | | | **2,240** |

Source: Morrison Institute for Public Policy, 2002.

Data: (1) Arizona Department of Education, 2002c; U.S. Department of Education, 2002; and U.S. Census Bureau, 2000 (see note below); (2) U.S. Department of Education, 1997; (3) Attrition rate for 40-49 age group; (4) Center for Business Research, 2001a.

Note: Attrition data for the 1999-00 *Schools and Staffing Survey* have not yet been released. Previous years surveys (1988-89, 1991-92,1994-95) show the trend increased slightly in most age groups. Aggregate age proportions are from the 1999-00 survey, but age ranges released for attrition rates did not match those released for the age of teachers. Thus, Arizona data from the 2000 U.S. Census was applied to ADE teacher counts to determine the proportions of teachers in each age subcategory. Attrition for teachers age 45 and over was dealt with in the retirement section above. In those calculations all teachers aged 45 or over in 2000 were subtracted from the teaching pool by 2010 regardless of the reason or exact age at which they left. Thus, including them in calculations for leaving the profession would count them twice. Charter school teachers were included in 2010 teacher estimates. For 2000 they were added using the proportion of charter school teachers compared to regular public school teachers in 2001-02.

### Leaving the State

ASU's Center for Business Research estimates that 3 percent of Arizona residents leave the state each year (Center for Business Research, 2001b). Assuming that teachers leave at the same rate as the general population, and accounting for population growth, about 1,720 teachers can be expected to move to other states each year.

### District Hopping

Teachers who move from one school district to another within Arizona are "district hopping." While they increase the hiring needs of local districts each year, they do not add to overall statewide needs. Therefore, district hopping teachers are not considered in calculations of teacher demand.

**TABLE 4** **SUMMING UP Estimated Yearly Demand for Teachers**

| Factor | 2002-2005 | 2006-2010 |
|---|---|---|
| Student Growth | 1,420 | 1,420 |
| Attrition Total | 5,460 | 4,560 |
| Retirement | 1,750 | 850 |
| Leaving Profession | 1,990 | 1,990 |
| Leaving Arizona | 1,720 | 1,720 |
| **Total Demand** | **6,880** | **5,980** |

Source: Morrison Institute for Public Policy, 2002.

## Components of K-12 Teacher Supply

Arizona can expect about 7,130 new K-12 teachers to be available to enter the workforce each year through 2005 and 6,930 from 2006 to 2010. One component of these — 2,670 — will be newly certified trainees (graduates and post-baccalaureate recipients) from the state's colleges that are accredited by ADE's Certification Division. The remainder will be either in-migrants relocating from out of state or inactive certified teachers returning to the profession.

### Arizona's College Pipeline

As of Spring 2002, Arizona had 12 accredited colleges that created a "pipeline" of potential K-12 teachers. Together, these colleges annually generate about 2,970 people who are eligible to take the Arizona teacher exam and receive a state teaching certificate (see Figure 1). Of these, about 1,630 are eligible in elementary education, 1,080 in secondary education, and 260 in special education.

Of the total 2,970 trainees, approximately 10 percent (about 300 students each year) do not go into teaching, according to a survey of each pipeline institution (Morrison Institute, 2002). Consequently, Arizona can expect a newly certified supply of about 2,670 teachers each year from Arizona's college pipeline.

The same survey also revealed that some Arizona pipeline institutions are concerned they may have to reduce enrollment due to budget cuts, while other pipeline institutions said they planned to increase enrollment over the next 10 years. Should both occur, the number of new teachers produced each year would remain relatively steady. By Fall 2002, however, additional Arizona community colleges unveiled new teacher training opportunities consisting of postbaccalaureate programs in education. To the extent that these programs tap into a new pool of teacher education students, they would increase the supply of new teachers. The supply may be further increased because teachers can also be trained at colleges that are not accredited by ADE, though these teachers must file additional documentation to receive their certificate.

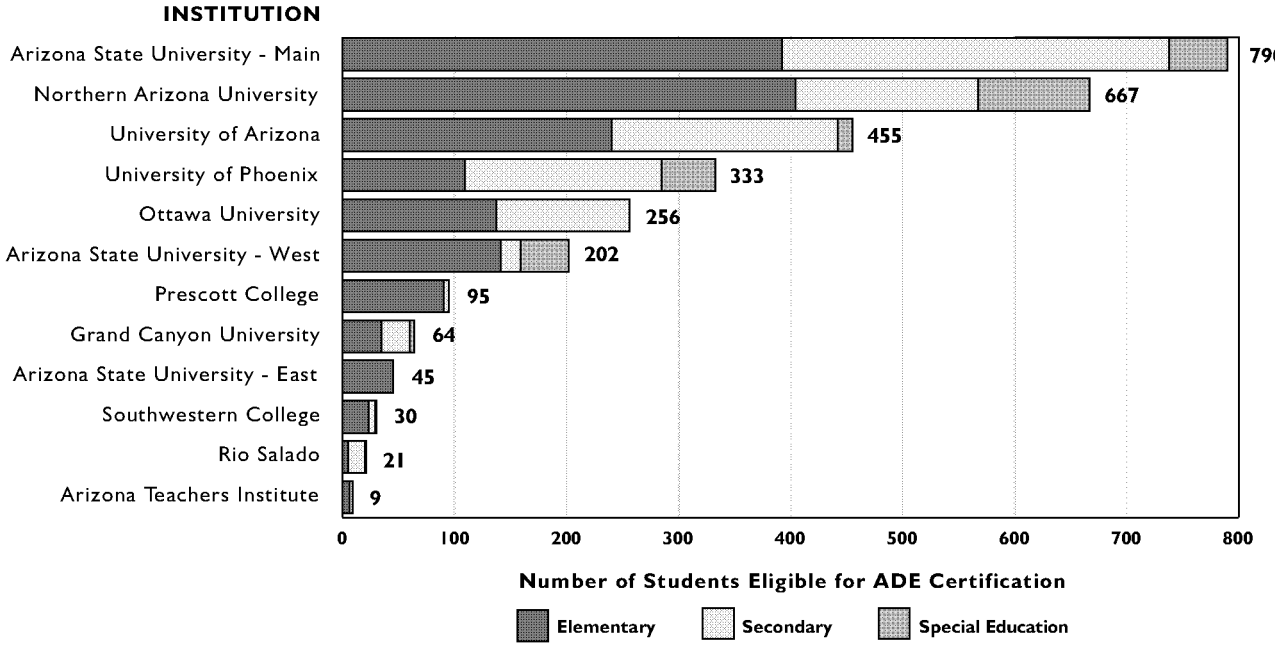
### In-migrants

Every year, teachers from other states move to Arizona, at least partially offsetting the number of Arizona teachers who leave. In-migrating teachers certified in other states do not automatically qualify for a standard or provisional Arizona teaching certificate, but they may apply for a reciprocal provisional certificate, allowing them to teach for up to two years while they complete the requirements for an Arizona certificate. The number of these reciprocal certificates is tracked by ADE.

Some in-migrating teachers, however, take a different route to certification. They obtain an Arizona emergency certificate, which allows them to teach while they complete state certification requirements. But ADE data do not differentiate emergency certificates issued to in-migrants from those issued to current Arizona residents. Therefore, it is not possible to get an accurate count of all in-migrating teachers based on existing ADE data.

As an alternative means of calculating in-migration, this study estimated the number of in-migrating teachers based on

**FIGURE 1** **Arizona Accredited Pipeline Institutions Produced About 2,970 Potential Teachers in 2001-2002**




Source: Morrison Institute for Public Policy, 2002.

Arizona's overall adult in-migration. Although cyclical, the state's adult in-migration generally occurs at a rate of about 5 percent of the total population (Center for Business Research, 2001b). Assuming teachers migrate to Arizona at the same rate as the general adult population, and accounting for population growth, an estimated 2,880 teachers move to Arizona each year.

**Supply Due to In-migration**

| | 2002 | 2010 |
|---|---|---|
| Current Teaching Population | 51,740 | 63,130 |
| Rate of In-migration | 5% | 5% |
| Total Teacher In-migration | 2,590 | 3,160 |

### Returning Arizona Inactive Certified Teachers

A final component of the overall teacher supply equation is the pool of inactive certified teachers — people who are certified to teach but for one reason or another are not currently employed in the classroom. These might be individuals who have taken a few years off to raise a family, or recent college graduates who have decided to travel for a period of time before embarking on a teaching career. Every year a portion of these inactive certified teachers decide to join — or rejoin — the teacher pool, and they are not otherwise accounted for by the pipeline institutions or in-migration. Accurate Arizona data on this component do not exist, so national data were used to estimate these values for the state.

The previous section on the demand for teachers showed that Arizona will need to hire about 6,880 new teachers each year through 2005, and 5,980 new teachers each year from 2006 to 2010. National data show that 23 percent of new hires typically are reentrants into the teaching profession (U.S. Department of Education, 1998). In Arizona, therefore, returning inactive teachers would represent about 1,580 new hires through 2005 and 1,380 from 2006 to 2010. An examination of ADE data suggests that there is an adequate number of inactive certified teachers in Arizona to accommodate this number of returnees each year.

## Finding the Balance

**The current figures for annual teacher demand and supply show no overall shortage of teachers in Arizona; however, the surplus is very small** (see Table 5). With an estimated annual demand of 6,880 through 2005 and 5,980 from 2006 to 2010, and an annual estimated supply of 7,130 through 2005 and 6,930 from 2006 to 2010, the difference — 250 teachers through 2005 and 950 from 2006 to 2010 — is narrow. Furthermore, this estimated surplus could be affected by both the accuracy of the assumptions in the calculations and other factors that include:

- **The condition of Arizona's overall labor market.** Absent substantial changes in demand and supply, the teacher applicant pool by 2010 yields about 1.2 new applicants for each open position. This surely creates difficulties for some school districts hoping to fill positions with high quality individuals. The "law of demand and supply" would normally suggest that the labor market should adjust to long-term demand through the dynamics of the free market, for example through higher salaries. Teacher salaries, however, are subject to price controls, including state per pupil funding, therefore the labor market for teachers cannot be expected to adapt freely.
- **The actual number of Arizona-grown teachers who decide to enter Arizona classrooms.** Pipeline colleges do not carefully track their graduates' employment. When surveyed, most could estimate the number of graduates that had taken a classroom job, but they could not distinguish at all between those who worked in Arizona and those who moved out of state.
- **The actual number of in-migrating teachers who enter the classroom.** Not all in-migrating teachers actually enter the classroom. No reliable data, however, capture the number who do.
- **The actual number of teachers who leave the profession or move out of state each year.** Few K-12 school districts conduct exit interviews or track where their teachers go when they leave. Without these procedures it is difficult to determine an accurate attrition rate for Arizona.
- **The Teacher-Student Ratio** (see page 8).

**TABLE 5 FINDING THE BALANCE Between Demand and Supply**

| Estimates of | 2002-2005 | 2006-2010 |
|---|---|---|
| Yearly Demand for Teachers | | |
| Student Growth | 1,420 | 1,420 |
| Attrition | 5,460 | 4,560 |
| **Total Demand** | **6,880** | **5,980** |
| Yearly Supply of Teachers | | |
| Arizona Trainees | 2,670 | 2,670 |
| In-migrants | 2,880 | 2,880 |
| Returning Inactive Certified Teachers | 1,580 | 1,380 |
| **Total Supply** | **7,130** | **6,930** |
| **Surplus Each Year** | **250** | **950** |

Source: Morrison Institute for Public Policy, 2002.

# OUT OF BALANCE: GEOGRAPHY, DEMOGRAPHY, SUBJECT MATTER

*Despite an overall surplus, teacher shortages already occur in specific regions and subject-matter areas, and these shortfalls may worsen in the near term.*

The data presented thus far in this report address demand and supply for the state as a whole. But a somewhat different picture emerges when teacher demand and supply are disaggregated.

Demand for teachers is projected to exceed available supply in Arizona's rural western regions (especially Yuma), some exurban Phoenix areas (locales beyond the suburbs that exhibit rural qualities but appear to be in the path of urban growth) and, to a lesser extent, in urban Phoenix school districts. At the same time, changing demographics will complicate the need for teachers in many locations. Population projections indicate that Arizona's school-age children will be increasingly Hispanic — a trend that may require more teachers with special language training than are available for hire. And, although media attention has focused on the need for math and science teachers, it appears that the greatest hiring challenge for schools is finding enough certified special education teachers. Even in regions where there are enough overall teachers to go around, the data show that teachers are not applying for positions generally perceived to be difficult, either because of their location or because of characteristics of the student population.

## Urban and Rural Disparity

Student growth is currently producing a great need for new teachers in Maricopa, Pima, Yuma, Mohave, Pinal, and Yavapai counties (Center for Business Research, 2001a), as shown in Figure 2. Some other counties, however, are projected to experience population declines, and could have a surplus of teachers in the future.

One indicator of how much demand for teachers may be exceeding supply is the number of teachers in a county holding emergency certificates compared to the total number of teachers employed. On a short-term basis, school districts can hire teachers with emergency certificates when they cannot find enough teachers with appropriate standard certificates.

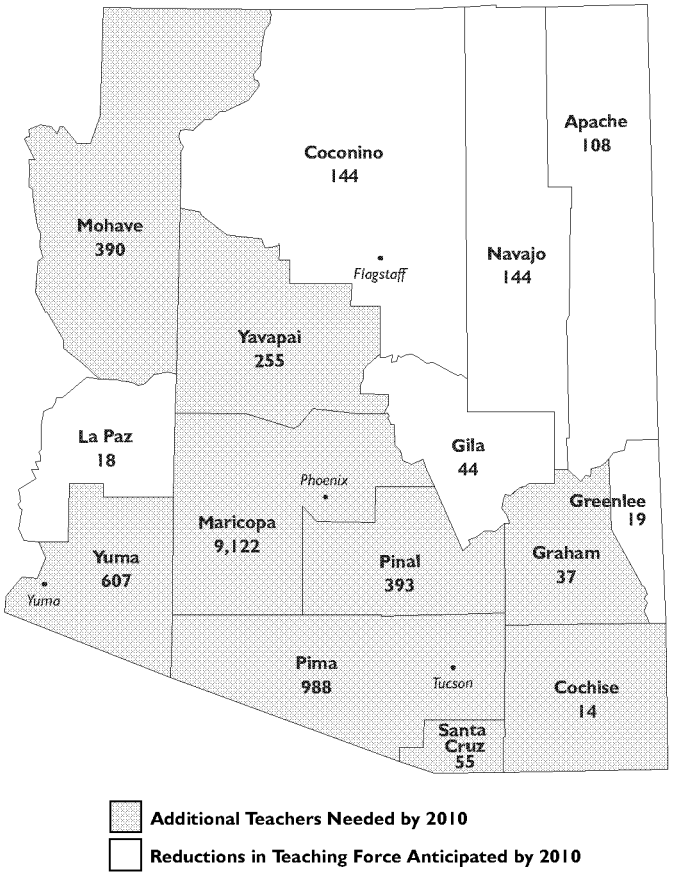
Relatively large percentages of emergency certificates have been issued in some fast-growing rural counties of the state (see Figure 3). These include Yuma, Mohave, and La Paz counties along the California border, Santa Cruz County along the Mexico border, and Pinal County, which is located in central Arizona between the state's two largest metropolitan areas. Some very slow-growing counties, however, also have relatively high proportions of emergency certificates, particularly Apache and Navajo counties in northeast Arizona.

Looking at individual school districts with more than 50 teachers, the highest percentages of emergency certificates are found in Native American school districts, fast-growing rural school districts, and exurban Phoenix school districts (see Table 6).

School districts in urban Phoenix also appear to have staffing problems. Certification data show that Murphy School District has 25 percent emergency certificates issued compared to teaching staff, Osborn has 15 percent, and Roosevelt, Creighton, and Isaac all have 11 percent or more. The actual number of emergency certificates issued in these districts is Roosevelt 77, Creighton 58, Isaac 50, Murphy 39, and Osborn 36. One

**FIGURE 2** **Some Counties Will Need Teachers, But Others Will Not**

**Difference Between Teachers Needed in Arizona Counties 2009-2010[1] and Teachers Employed in 2001-2002[2]**




Source: Morrison Institute for Public Policy, 2002.

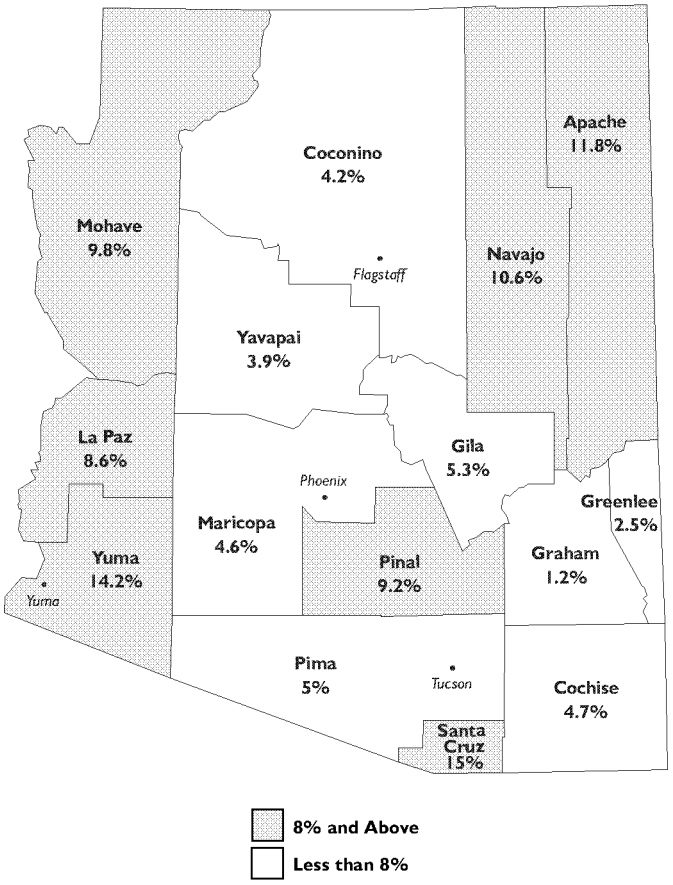
(1) Data from Center for Business Research, 2001a. (2) Data from Arizona Department of Education, 2002c and 2002f; Arizona State Board for Charter Schools, 2002.

reason given by these school districts for the tight labor market in their locales is the perception that they are located in areas of high poverty.

Interviews with representative school districts throughout the state reveal distinct differences between the outlooks of suburban and rural districts when it comes to staffing. Suburban districts tend to have more confidence that they will fill their openings with qualified Arizona teachers. Rural districts, meanwhile, tend to mention they recruit teachers from out of state to fill their ranks. In addition, they often feel that their Arizona applicants tend to be less qualified than applicants to suburban districts. Some rural districts, particularly Native American school districts, also cite their rural location and isolation as a negative factor in attracting teachers.

## FIGURE 3 High Percentages of Emergency Certificates Indicate Unmet Demand for Teachers

**Emergency Certificates Issued[1] as a Percent of Total Teachers, 2001[2]**




Source: Morrison Institute for Public Policy, 2002.

(1) Data from Arizona Department of Education, 2001b. (2) Data from Arizona Department of Education, 2002c.

Note: Emergency certificates do not apply to charter schools. They are not included in these teacher counts.

### Emergency Certification Does Not Always Mean "Underqualified"

When a school district finds a shortage of certified teachers to fill all of its classrooms, the district can request that ADE's Division of Certification issue emergency certificates for uncertified teachers. This allows applicants without standard teaching certificates to be hired temporarily. Thus, emergency certificates are often used as proxies for identifying underqualified teachers. Not all emergency certificates, however, are issued for truly underqualified people. On some occasions, schools may want to hire new college of education graduates before they have completed all regulatory requirements — they may simply be awaiting the teacher exam, fingerprint clearance, or completion of some additional coursework. Other applicants could be "nontraditional" such as Teach For America teachers or professionals from another field making a career change. An analysis of 2001 emergency certificates revealed that about 25 percent of emergency certificate holders completed all requirements necessary to receive provisional certificates the following year.

## TABLE 6 Location of Districts with a High Rate of Emergency Certificates Issued, 2001[1]

| District | Percent | Number of Emergency Certificates | County | Location |
|---|---|---|---|---|
| Piñon | 38% | 31 | Navajo | North Rural |
| Ganado | 20% | 24 | Apache | North Rural |
| Red Mesa | 15% | 9 | Apache | North Rural |
| Gadsden | 36% | 48 | Yuma | West Rural |
| Somerton | 19% | 18 | Yuma | West Rural |
| Bullhead City | 16% | 34 | Mohave | West Rural |
| Laveen | 21% | 20 | Maricopa | Exurban Phoenix |
| Higley | 18% | 10 | Maricopa | Exurban Phoenix |
| Dysart | 18% | 48 | Maricopa | Exurban Phoenix |
| Murphy | 25% | 39 | Maricopa | Urban Phoenix |
| Osborn | 15% | 36 | Maricopa | Urban Phoenix |
| Nogales | 17% | 47 | Santa Cruz | South Rural |

Source: Morrison Institute for Public Policy, 2002.

Data: Arizona Department of Education, 2001b and 2002c.
(1) Districts with more than 50 teachers and 15 percent of emergency certificates issued compared to number of teachers.

Note: Emergency certificates do not apply to charter schools. They are not included in these teacher counts.

## Demographic Shift

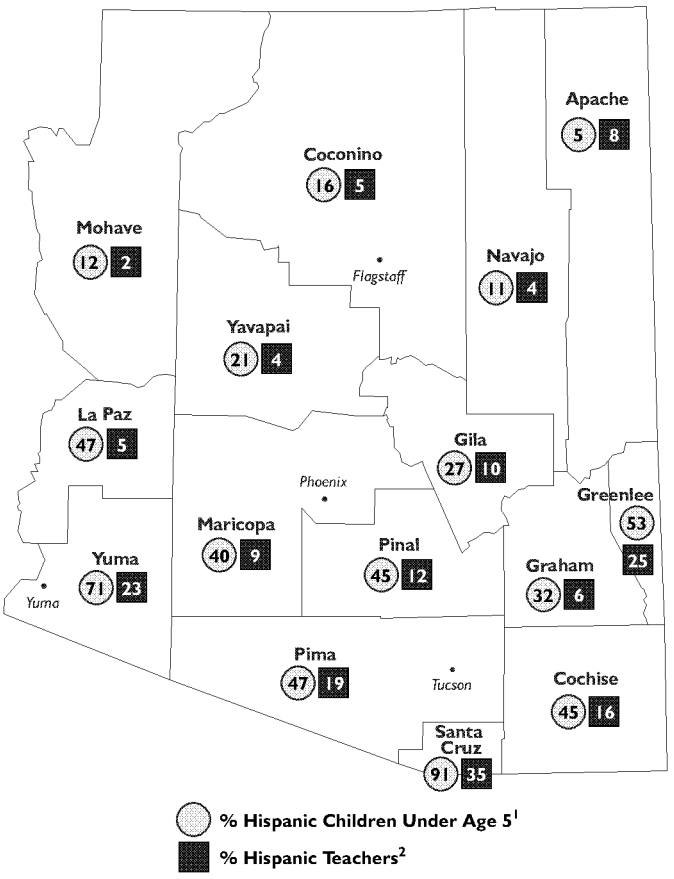
### Increase in Hispanic Students

Census data show that Hispanic children are by far the fastest-growing major segment of Arizona's school-age children. By the 2009-2010 school year, they are projected to become the majority of the state's K-3 students. In contrast, however, most of Arizona's current teachers are not Hispanic (see Figure 4).

Already, more than half of all children under age five in Yuma, Greenlee, and Santa Cruz counties are Hispanic, as are almost half in Pima, Pinal, La Paz, and Cochise counties. In Maricopa County, the Hispanic K-3 population is expected to grow to 40 percent within the next few years.

**FIGURE 4**

**Percentages of Children Under 5 Who Are Hispanic Are Higher than Percentages of Teachers Who Are Hispanic**




Source: Morrison Institute for Public Policy, 2002.

(1) Data from Center for Business Research, 2001a. (2) Data from Arizona Department of Education, 2002e.

Note: Data for charter schools were not available. They are not included in these teacher counts.

These changing demographics in Arizona's student population raise two main concerns. First is the implied need for more teachers trained to teach students with Limited English Proficiency (LEP). ADE reports that about 160,000 (22%) of students in Arizona primarily speak Spanish at home. Of those, about 136,000 (85%) are enrolled in an LEP program (Arizona Department of Education, 2000), and that number is likely to increase. Nevertheless, ADE reports that fully 43 percent (about 3,600) of current teachers with LEP students do not hold the required LEP endorsements.

This situation is not likely to be resolved in the near term. ADE's Certification Division reports that only 620 provisional endorsements for English as a Second Language (ESL) and Bilingual Education (BLE) — indications of LEP qualification — were issued in 2001. At that rate, it would require nearly six years to meet the current shortfall of LEP qualified teachers before even beginning to address new demands expected from attrition and growth of the Hispanic population (see Table 7). Moreover, the state must also comply with the *Flores vs. Arizona* (1992) ruling that found, among other things, that the state does not have enough qualified teachers to serve its non-English speaking students. Consequently, the court required Arizona to allocate additional funds in 2001 to ensure these students can overcome language barriers. Compliance with this order, however, has been complicated by passage of a recent statewide ballot initiative, Proposition 203, which now mandates that subjects be taught exclusively in English, and further requires English language immersion classes for non-English speakers.

A second concern is the mismatch between teacher and student ethnicity. Research suggests that students achieve higher test scores when their teacher is someone of the same racial or ethnic background (Dee, 2000), or someone at least familiar with students' cultural and linguistic characteristics or needs (Brown, 1994). While this finding does not mean schools must have complete parity between percentages of Hispanic teachers and percentages of Hispanic students, the situation facing Arizona is clearly far out of proportion and also unlikely to be remedied in the near term.

**TABLE 7** **Playing Catch-up with LEP Needs**

| Number of LEP Students[1] | Number of Trained LEP Teachers Needed to Meet Current Demand[1] | Number of ESL and BLE Certificates Issued (2001)[2] | Number of Years Needed to Meet Current Shortfall Only[3] |
|---|---|---|---|
| 136,000 | 3,600 | 620 | 6 |

Source: Morrison Institute for Public Policy, 2002.

Data: (1) Arizona Department of Education, 2000; (2) Arizona Department of Education, 2001b. (3) Does not include new demand due to growth or attrition.

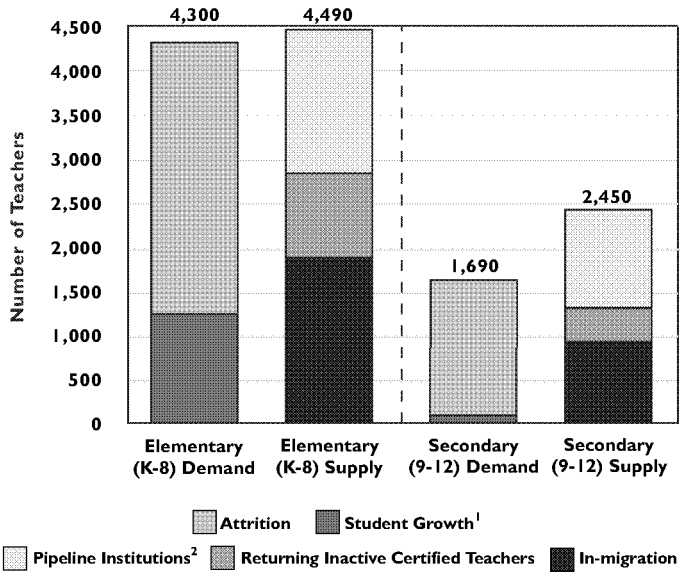
### Increases in Elementary Students

Population growth projections forecast a demographic shift toward younger students. Therefore, the majority of new teachers will be needed at the elementary level, while secondary teachers will be in less demand (see Figure 5). The labor pool for elementary school positions will have a much smaller surplus than the pool for secondary schools — approximately 190 extra elementary teachers (about 1 candidate per position) versus 760 extra high school teachers (1.5 candidates per position) by 2010.

At the elementary level, it is expected that about 4,300 new elementary teachers will be needed each year — about 1,280 to accommodate growth of the student population and about 3,020 to meet attrition. Meanwhile, about 4,490 elementary teachers will be available — approximately 1,590 will come from Arizona pipeline institutions (Morrison Institute, 2002), 1,910 from in-migration, and 990 from the return of inactive certified teachers.

At the secondary level by 2010, approximately 1,690 new hires will be needed each year — about 150 due to growth of the student population, with another 1,540 needed to meet attrition. At the same time, the supply of secondary school teachers will be an estimated 2,450 — about 1,090 will come from pipeline institutions, 970 from in-migration, and 390 from returning inactive certified teachers.

**FIGURE 5** **Yearly Demand and Supply of Elementary and Secondary School Teachers by 2010**




Source: Morrison Institute for Public Policy, 2002.

(1) Center for Business Research, 2001a. (2) Morrison Institute for Public Policy, 2002.

Note: Charter school proportions were calculated based on estimates by the Arizona State Board for Charter Schools.

## Shortfalls in Specific Subjects

Subject-matter specialties, particularly special education, appear to be the most difficult teaching slots to staff. A recent survey of Arizona school districts (ASU-East, 2001) shows that special education ranked number one in the percent of teachers with emergency certificates (see Table 8). Follow up interviews in 2002 by Morrison Institute researchers corroborated this finding. School districts reported that special education demand was higher than others due to its high student growth rate, high teacher attrition rate from "burnout," and a relatively small number of qualified applicants for positions.

A shortfall of certified special education teachers is anticipated through 2010. Currently, special education comprises almost 11 percent of the student population (including charter schools). Projections for special education indicate the need for about 910 new teachers per year until 2010. An estimated 200 annually will accommodate new growth, while about 710 annually will replace those lost to attrition from the profession or into general education (Smith & Tyler, 2001). Meanwhile, Arizona's pipeline institutions currently produce only about 260 new special education teacher trainees per year — meeting, at best, 29 percent of demand. In-migration should produce about 350 new teachers, while returning inactive certified teachers can be expected to supply about 170, leaving an estimated shortfall of 130 certified special education teachers.

Several other areas also show high proportions of emergency certified teachers, according to the 2001 ASU-East survey. Among these are music, ESL/BLE, science, math, art, and English. Interviews conducted with school districts in 2002 supported the finding that ESL/BLE ranked as one of the top staffing problems. On the other hand, these districts also indicated that the staffing situation for math and science was improving and not as difficult as for other subject areas.

Some care should be taken in interpreting these data because of the intricacies of subject-matter certification and endorsement. Music teachers, for example, may be over represented on emergency certification because they are required to be certified for each level they teach — which means that someone trained for elementary orchestra, but assigned to teach high school orchestra, would have to obtain an emergency certificate while completing coursework for the new certification. Junior high math and science teachers, meanwhile, may be under represented because they are not required to have the same type of subject-matter endorsement as teachers at the high school level. Thus, none would need an emergency certificate for these particular subjects.

**TABLE 8 Percent of Teaching Positions Filled by Someone with an Emergency Certification, 2000-2001**

| Class | Elementary | Secondary |
|---|---|---|
| Special Education | 10% | 9% |
| Music | 5% | 7% |
| ESL | 1% | 6% |
| BLE | 4% | |
| Science | | 6% |
| Math | | 5% |
| Art | 3% | 5% |
| English | | 5% |
| Vocational | 4% | |
| Social Studies | | 3% |
| P.E. | 2% | 2% |

Source: Morrison Institute for Public Policy, 2002.

Data: Arizona State University-East, 2001. The sample represents 84 school districts and almost 13,000 teachers (about 7,600 elementary and 5,100 secondary).

The first section of this report established that, while the demand and supply of teachers is a complicated and imprecise issue, there appears to be a balance in the overall number of teachers and classrooms in Arizona. The second section, however, revealed hidden shortfalls in a number of geographic and subject-matter areas — and that some of these shortfalls are likely to worsen in the near term. In addition, this section has presented forecasts that elementary schools will face a much tighter labor market than high schools.

# TIPPING THE BALANCE: INACTIVE CERTIFIED TEACHERS IN ARIZONA

*Managing attrition and encouraging the return of inactive certified teachers will be crucial to ensure a sufficient teacher pool.*

Inactive certified teachers who return to the classroom represent the smallest component of teacher supply, but they may prove critical to alleviating shortfalls. A new statewide survey of Arizona inactive certified teachers provides some insight (Morrison Institute, 2002). While many teachers leave the profession for personal reasons such as raising a family or retirement, others leave because of unsatisfactory aspects of the classroom environment or school system. Even so, as much as one-third of this pool may "seriously consider" teaching again, especially if pay were increased or class size reduced.

Until now, inactive certified teachers have not been carefully tracked or surveyed in Arizona. In the spring of 2002, O'Neil Associates, Inc., under the direction of Morrison Institute, conducted a random sample survey of Arizona inactive certified teachers to determine why they left the profession or never entered it, and also to test the efficacy of proposals to recruit these teachers back into the classroom. Responses by the 804 interviewees are within ±3.5 percent of figures likely obtained (with a 95 percent level of confidence) had every inactive certified teacher in Arizona been interviewed. (Appendices D and E provide details on survey methodology and results.)

## Potential Labor Pool

By field-testing ADE's Teacher Certification Division database, this study estimates that Arizona has 11,000 inactive certified teachers. Of 804 respondents from this universe, 35 percent indicated they would "seriously" consider becoming employed or reemployed as a public school teacher. Thus, as many as 3,850 people could be seriously interested in returning to the teaching profession. Not all, however, will actually make it into the classroom, and not all will return in a given year.

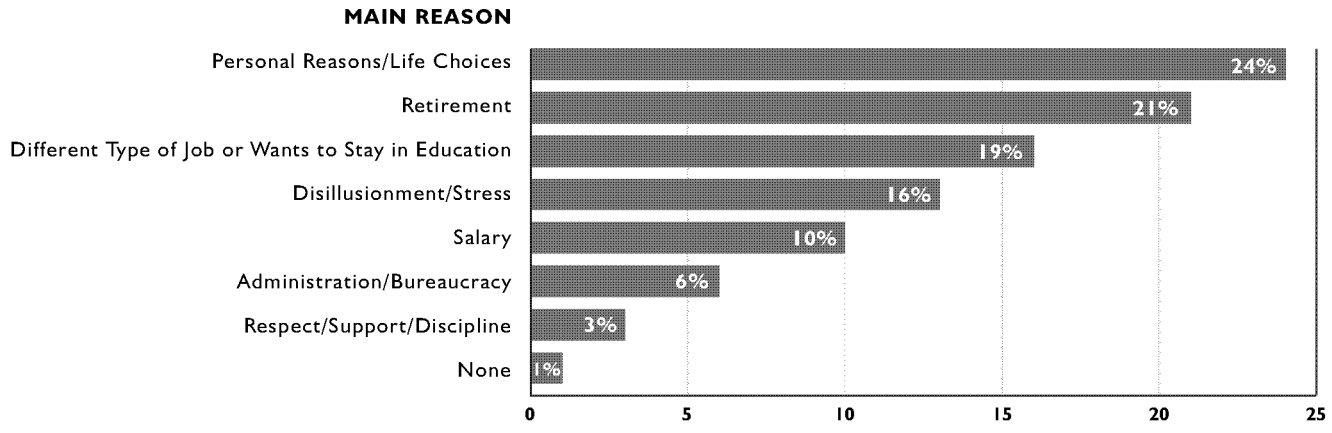
## Why Teachers Leave (or Never Enter) the Profession

Survey respondents were asked to supply their main reason for leaving or not entering the profession. Close to half said they left the profession either for personal reasons, such as raising a family (24%), or for retirement (21%). These individuals may not be strongly influenced by changes in school district policies. Nevertheless, a portion of these teachers are likely to return when their children start school or if retirement "doesn't work out."A significant number of other respondents, however, left for reasons that may be preventable — reasons such as disillusionment and stress (16%), low salary (10%), frustration with administration and bureaucracy (6%), and lack of respect or support (3%) (see Figure 6). Stress, administrative burden, and lack of respect and support are considered components of overall "classroom environment." Thus, about one quarter of Arizona's inactive certified teachers might not have left the profession had their work environment been more acceptable.

A closer look at these data shows:

- Of the 24 percent of teachers who said they left the profession for personal reasons, most were pregnant or taking care of their children.
- Of the 21 percent who retired, almost half were under the age of 60.
- Only 10 percent of teachers said that low pay was the main reason they left teaching or never started.
- Almost 20 percent of respondents are not lost to the profession. They either took a different job such as administration or they wanted to stay in the profession (e.g. applying for teaching positions or taking classes to further their education career.)

**FIGURE 6** **Main Reasons for Leaving or Not Entering the Teaching Profession (N=804)**




Source: Morrison Institute for Public Policy/O'Neil Associates, Inc., 2002.

## Inactive Certified Teachers Who Might Teach (Again)

Two survey questions provided data on what policies or factors might motivate inactive certified teachers to either start or return to teaching. Survey respondents were given a list of potential policies and other ideas and asked to indicate how likely each proposal would be to motivate them to teach. In a follow-up open-ended question, respondents were also asked to name one key factor that would most likely lead them to return to the profession.

### Policy Proposals

Survey respondents gave favorable responses to several proposals (see Figure 7). Over 70 percent of respondents said increased pay would "very likely" make them reconsider teaching. This appears contradictory to the previously mentioned finding that only a small percentage of these inactive teachers said low pay was their main reason for leaving the profession, which indicates that compensation is a complicated issue.

The next most favored proposals concerned classroom environment — reducing class size (66%), reducing paperwork (56%), and making schools safer (54%). A recently released national *Schools and Staffing Survey* corroborates the paperwork issue. Arizona ranked second highest for the percentage of teachers who said that routine duties and paperwork interfere with their teaching — 78 percent in Arizona compared to 71 percent nationally (U.S. Department of Education, 2002).

The next most popular proposal on the survey of inactive certified teachers was providing tuition reimbursement (53%). Teachers make more money as they gain formal education, yet such courses can be costly.

### Respondents' One Key Factor

In response to the open-ended question regarding the one key factor that would motivate inactive certified teachers to return to the profession, the most frequent answer was increased pay (29%), followed by personal/life choices (15%), and factors related to public support and respect (12%). Other open-ended responses included reduced class size (8%), improved classroom environment (8%), and increased administrative support (6%). On the other hand, 10 percent said that nothing would bring them back (see Table 9).

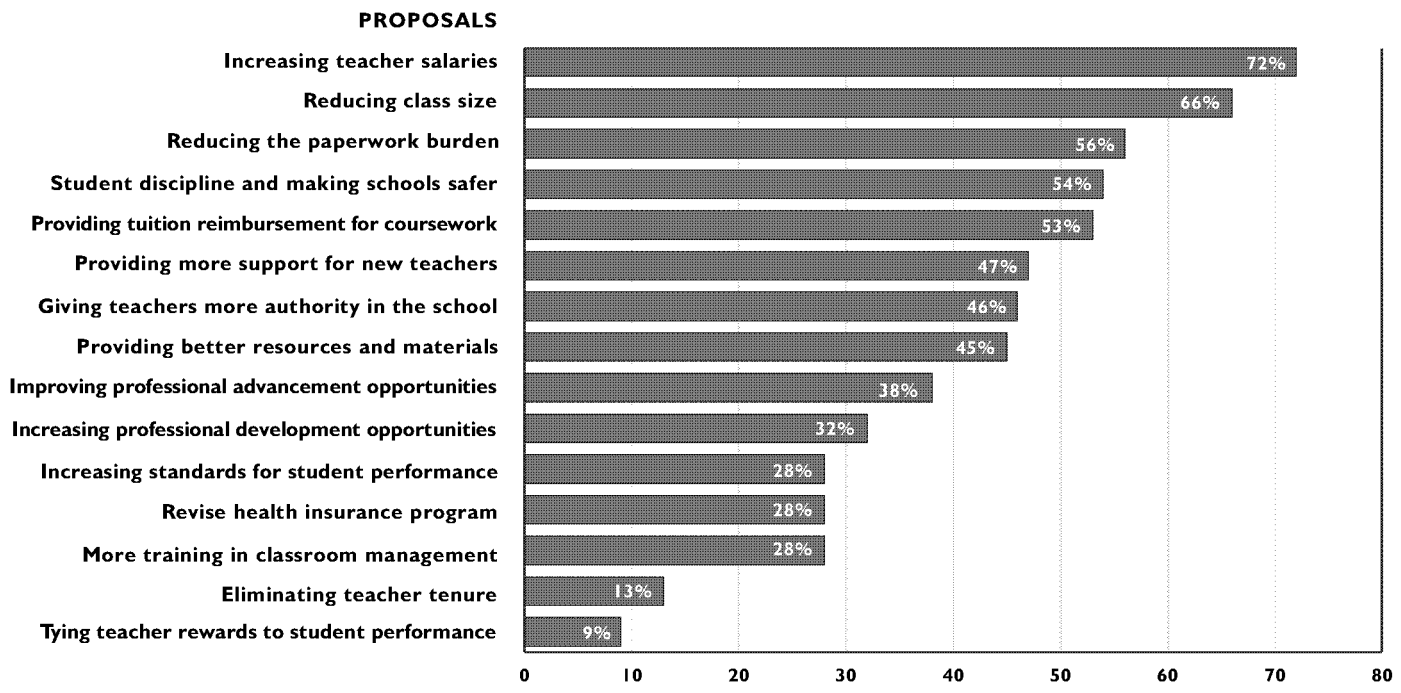
**TABLE 9** **The One Factor that Would Make Inactive Teachers Enter or Re-enter the Profession**

| | |
|---|---|
| Pay | 29% |
| Personal/Life Choices | 15% |
| Public Support/Respect | 12% |
| Nothing | 10% |

Source: Morrison Institute for Public Policy, 2002.

Data: O'Neil Associates, Inc., 2002.

**FIGURE 7** **Proposals that Would "Very Likely" Make Teachers Consider Teaching (Again) N=804**




Source: O'Neil Associates, Inc., 2002.

Importantly, a substantial number of teachers said they might be interested in teaching where they are most needed — in challenging situations. When respondents were asked if they would consider working in a difficult school with hard-to-educate students if they were paid more for this duty, almost 40 percent said "yes," while about 45 percent said "no."

## Hispanic Inactive Certified Teachers

Due to rapid growth in the percentage of Hispanic students expected to attend Arizona schools in coming years, districts will be looking for additional LEP trained and Hispanic teachers. Analysis of inactive certified teachers surveyed who identified themselves as Hispanic gives an indication of what led to their departure and what might help retain more in the future. Disillusionment and stress (23%) was the leading reason for leaving, followed by taking a different job or wanting to stay in the profession (21%), and personal or life choices (17%). (Detailed survey results are listed in Appendix E.)

The leading incentives that Hispanic inactive certified teachers said would attract them back were salary (75%), reduced class size (72%), better resources (72%), and decreased paperwork (69%). These response rates were higher than for non-Hispanic respondents. In addition, 68 percent of Hispanic respondents said they would be interested in returning to tougher schools for higher pay, compared to only 39 percent of non-Hispanic respondents. The number of Hispanic respondents to this survey was low (see Appendix D) because Hispanics are underrepresented in the teaching pool. However, since the actual number of inactive certified teachers who are Hispanic is unknown, these responses may be reliable.

## Relatively Inexperienced Inactive Certified Teachers

One-third of new teachers leave the profession within their first three years of teaching (Ingersoll, 2001). As seen in Table 10, these teachers give different reasons for leaving the teaching profession than teachers with a little more experience. Inactive teachers with fewer than three years of experience most often cited salary (28%), personal or life choices (24%), and taking a different job or wanting to stay in the profession (21%) as their top reasons for leaving, while teachers with three-to-five years of experience cited personal or life choices most often (35%), with fewer citing salary (17%) or a different job or wanting to stay in the profession (15%). The two groups generally agreed on the top three proposals most likely to bring them back: increased salary, smaller class size, and tuition reimbursement.

## Inactive Certified Teachers in Rural Locations

Rural school districts face special challenges in attracting teachers. Among these are generally lower salaries and fewer amenities in many locations. To take a closer look at responses of inactive rural teachers, survey respondents were categorized by the county they lived in as either urban (Maricopa County and Pima County) or rural (all other counties.) Data from this analysis show that inactive teachers who currently live in rural areas left teaching primarily to retire (24%). (This does not necessarily mean that they taught in rural areas, but simply that they live there now.) Other top reasons for leaving include taking a different job or wanting to stay in the profession (21%), personal or life choices (18%), and disillusionment and stress (17%) as shown in Table 10. The top incentives that could entice them back into the teaching workforce include increased pay (73%), reduced class size (70%), decreased paperwork (59%), and improved discipline and safety (59%).

**TABLE 10** **Inactive Certified Teacher Subgroups Top Reasons for Leaving and Policies that Could Bring Them Back**

| | Less Than 3 Years Experience | 3-5 Years Experience | Rural Residents | Special Education and ESL/BLE Endorsements |
|---|---|---|---|---|
| **Reasons for Leaving** | Salary (28%) | Personal/Life Choices (35%) | Retirement (24%) | Personal/Life Choices (23%) |
| | Personal/Life Choices (24%) | Salary (17%) | Different Job/Want to Stay in Profession (21%) | Different Job/Want to Stay in Profession (21%) |
| | Different Job/Want to Stay in Profession (21%) | Different Job/Want to Stay in Profession (15%) | Personal/Life Choices (18%) | Disillusionment/Stress (20%) |
| | | | Disillusionment/Stress (17%) | Retirement (18%) |
| **Policies to Bring Back** | Increased Salary (69%) | Increased Salary (73%) | Increased Salary (73%) | Increased Salary (76%) |
| | Reduced Class Size (66%) | Reduced Class Size (71%) | Reduced Class Size (70%) | Reduced Class Size (66%) |
| | Tuition Reimbursement (60%) | Tuition Reimbursement (52%) | Decreased Paperwork (59%) | Decreased Paperwork (64%) |
| | | | Improved Discipline and Safety (59%) | |

Source: Morrison Institute for Public Policy, 2002.

Data: O'Neil Associates, Inc., 2002.

## Inactive Certified Subject-Matter Area Teachers

A number of subject-matter areas, particularly special education and LEP programs, appear to have a shortage of certified teachers. Analysis of survey responses from inactive certified teachers with certifications and endorsements in these fields reveals that they generally left teaching for the same reasons as other teachers — personal or life choices (23%), taking a different job or wanting to stay in the profession (21%), disillusionment and stress (20%), or retirement (18%) (see Table 10, page 19).

The recruitment incentives of most interest to them also mirrored those for the whole sample — increased salaries (76%) and reduced class size (66%). However, decreased paperwork (64%) was somewhat higher for specialty teachers than for all respondents (56%) — not surprising, since these teaching specialties typically require extra paperwork.

## Arizona's Labor Market and Teachers

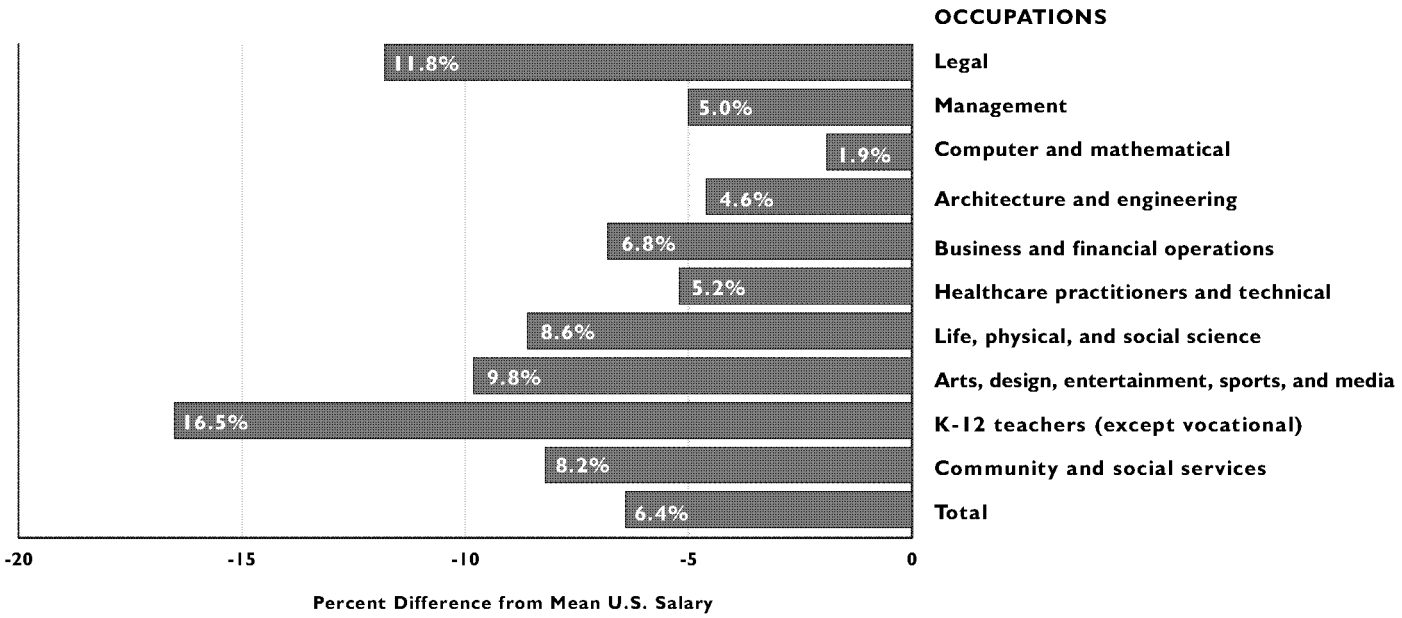
Given the constant public discussion of teacher pay, a few facts about Arizona's job market are worth noting.

First, Arizona teacher salaries are below the national average. In 2001-02, Arizona's average teacher salary was $39,973 — ranking 26th in the nation — while the national average was $44,499 (National Education Association, 2002). This is an upward trend from 2000-01 when Arizona was ranked 33rd among all states. The improvement may be due in part to salary increases from a recent state ballot initiative, Proposition 301.

In the past Arizona teacher's salaries have not compared well to the U.S. average (see Figure 8). In fact, the state has not compared well to the U.S. average in any field except perhaps computer and mathematical occupations. Teachers' salaries, however, have been the least competitive.

So, when inactive teachers say that higher salaries would bring them back, they may have in mind either of two measures: salaries on par with the nation as a whole, or salaries on par with similar occupations. Historically, Arizona has done poorly in both respects. The pay issue, however, is complex — while relatively few survey respondents reported it as their main reason for leaving, a vast majority said an increase in pay would highly influence their decision to return to the classroom. It is unclear how recent raises from Proposition 301 may afffect these results and further research is needed.

**FIGURE 8** **Arizona Salaries Lagged Behind the U.S. in 2000**




Note: The federal government has strict disclosure regulations to prevent data on a particular company from being released or otherwise ascertained. The regulations result in considerable data being withheld for all but the most populous areas (Arizona and Maricopa County).

Source: Morrison Institute for Public Policy/Center for Business Research.

# POLICY ISSUES: INCREASING THE SUPPLY OF TEACHERS

*Policy changes are needed to increase and monitor Arizona's supply of teachers, especially in specific areas.*

Arizona's teacher supply is in delicate balance with the demand for new teachers. Overall, only about 1.2 applicants per new teaching position will be available each year by 2010 — with shortfalls likely in specific locations and in certain subject-matter areas. Therefore, policymakers should take steps now to ensure an adequate supply in the future. This study provides a basis for policy action in the following areas: production and recruitment, compensation, changes in the classroom environment, and data tracking.

## Production and Recruitment

With only about 1.2 applicants per vacant position, some school districts simply will not have much choice in whom they hire. A larger applicant pool would give them greater opportunity to hire quality teachers. While this study only addressed the quantity, not the quality, of teachers, simply hiring enough "warm bodies" does not adequately serve the needs of Arizona students or taxpayers.

One way to enlarge the teacher pool is to increase the production and recruitment of teachers. Policy options to accomplish this include:

- **Increase production of teacher graduates at Arizona training institutions.** Arizona's teacher training institutions need to ratchet up their production of teacher graduates, especially in selected areas. The findings from this study suggest that all pipeline institutions should plan to increase their capacity, either now or in the very near future. Such teacher training institutes should also pursue nontraditional options for entry into the profession.
- **Strengthen *state-level* efforts at out-of-state recruiting.** Currently each school district tends to rely on its own resources to recruit teachers both within Arizona and out-of-state. Although the state provides assistance in the form of a website where districts can post jobs and candidates can search and apply for them (www.arizonaeducationjobs.com), ADE should intensify recruitment by advertising in out-of-state recruiting fairs and taking other actions aimed at attracting as many quality out-of-state candidates as possible.
- **Remove and/or streamline certification requirements.** Allowing districts to hire professionals and subject-matter experts without Arizona certification would clearly increase the supply of teachers. Arizona already allows this option for its charter schools and should consider extending the same option to all public schools. Certificate flexibility could also reduce the paperwork requirements of securing emergency certification and enlarge the pool of teaching candidates. While there is much debate about this topic, it remains an option. Driving this option may be changes to the Federal Elementary and Secondary Education Act ("No Child Left Behind"), which requires high quality teachers in all classrooms in the next five years. Thus, the process that teachers go through to be certified in Arizona needs to be critically examined and streamlined.
- **Create incentives to motivate inactive certified teachers to return to the classroom.** Many teachers who become inactive might simply need to "recharge their batteries." They would be more likely to reenter the profession if they were able to take time off as part of a leave or sabbatical program that guarantees their job and pay scale upon return, rather than if they were to resign and then reapply for employment at what would likely be lower pay. Similarly, teachers who leave the profession to raise a family may find it easier to return to work if their position, or one similar to it, has been held for them.
- **Target production and recruitment in critical areas.** The need for special education teachers and the imbalance between Hispanic students and LEP-trained teachers poses a particular challenge to Arizona's future. The good news is that survey research shows special education and LEP-trained teachers may be willing to return to teaching at a higher rate than other inactive certified teachers. But simply recruiting these teachers back into the profession will not be sufficient to meet anticipated demand. School districts might bolster the workforce in critical areas if they were to "sponsor" college students who choose these specialties, and then promise a job when they graduate. The state also could provide scholarships and tuition reimbursement programs to college students preparing for a teaching career in a high need area.

## Compensation

Pay is certainly an important factor in recruiting teacher candidates into schools and retaining them. Occupational data show that teaching is one of the most poorly paid professions in the state. Policy options that could affect this situation include:

- **Offer tuition reimbursement or similar programs.** Whether sponsored by school districts or the state, tuition reimbursement and loan deferment benefits are less expensive than pay increases but can, over the long run, increase a teacher's earning potential. Teachers reportedly find this appealing.

- **Consider differentiated or "combat" pay.** According to survey responses, inactive teachers in subject-matter areas where teachers are in short supply (such as special education and LEP programs) would return to harder classrooms if they were given more pay. Targeting higher pay to specific teacher qualifications, school demographics, or subject areas needs to be examined as a way to enhance the supply of teachers. At the same time, the disparity between salaries in rural and suburban locations also needs to be examined. Many rural locations report that a standardized pay scale across the state could help alleviate "district hopping" of teachers as they gain experience.
- **Fund non-student days.** In Arizona, teachers typically are paid to work two days before the school year starts and one day after it ends. This does not allow adequate time to address the demands of the job. Some additional paid "preparation days" could improve the quality of life for teachers and help retain them in the profession.

## Classroom Environment

Increasing pay and reducing class size are relatively expensive recruitment and retention strategies. Some less costly measures for improving the classroom environment also could be effective at recruiting inactive teachers and retaining current teachers. These measures include:

- **Reduce paperwork burden.** ADE and school districts should examine teachers' concerns about excessive paperwork and consider streamlining data collection. Both this study's survey responses and national information indicate an unusually high paperwork burden is felt by the state's teachers.
- **Improve discipline and safety.** The pressure to please parents (or keep from getting sued) means that teachers may find it difficult to discipline children. Teachers want attention paid to this subject. Policies that emphasize the teacher's authority — such as establishing written contracts in which parents, students, and teachers all agree on expectations for acceptable student behavior — can set the tone for an improved classroom environment.

## Data Tracking

Collecting and reporting data on each of the components of teacher demand and supply is vital to managing teacher workforce issues in Arizona. But this process should be designed to create less paperwork demand on schools and districts. Key to the effectiveness of this process is that each entity provide data to a central location through an easy-to-use interface. Among the data to be assembled:

- **Establish a dynamic database and institute annual reporting on teacher demand and supply.** The current availability of data on teacher demand and supply in the state is seriously inadequate, and much of the data itself is flawed or incomplete. In part, this is because such data collection has not been pursued comprehensively, but only as necessary to satisfy funding or financial requirements — particularly for the federal government. Arizona, however, needs solid data on the demographics of teachers and their training history. Furthermore, this data must be comparable across different school districts with different hiring practices. In short, ADE data systems should be redesigned with information technology upgrades that make it simpler for districts to access and feed a modern, centralized "data warehouse." The department should then use this storehouse of data to produce an annual report on the status of teacher demand and supply.

Among the types of data that should go into this new teacher demand and supply warehouse are the following:

  - Sources of teachers — whether they are new trainees from pipeline institutions, in-migrants from out-of-state, or returning inactive teachers. This information could be extracted from job applications.
  - Teacher attrition — why a teacher is leaving and where the person is going (to another district, to another state, out of the profession, or into retirement).
  - Certification information — the number of certificates tied to classroom teachers, the number for in-state residents versus in-migrants, and the number of discrete individuals represented (many teachers have multiple certifications). This data can be gathered by ADE's Certification Division through a process of coding information on certificate requests; then it can be linked to employee records. Demographic information could also be collected through a revamped certification process.
  - Pipeline institution data — current enrollment of education majors, current enrollment in specialty areas such as special education and LEP, and expected graduation dates for education majors. This information would allow for a more targeted recruitment effort, especially in areas where there is greatest need.

- **Improve data collection and distribution for student population trends and special needs.** Two factors largely drive the demand for new teachers: rapid growth of student enrollment, and increased demand for special services (e.g., special education, LEP). School district information on these drivers, however, is not generally passed to Arizona pipeline institutions — the main supplier of teachers. Such information would help pipeline institutions produce the types of teachers most in demand, and it would also help new teacher trainees target their best opportunities for employment — currently in fast-growing rural areas, or in special education and LEP positions.

## Summary

Quantifying the demand and supply of teachers in Arizona is a complex task. Not only is the labor market for teachers influenced by many disparate factors, but the data sources are incomplete, non-standardized, and difficult to access. Using original research and the best available data at this time, Morrison Institute concluded that there is no overall teacher shortage in Arizona. Nevertheless, several critical — and in some cases worsening — shortfalls are occurring in specific regions of the state and in some subject-matter areas. These will require policy action.

Even without an overall teacher shortage, Arizona's education labor market in education remains especially tight, particularly at the elementary school level. This situation will likely persist in the near future. If the labor market becomes too tight, it will have profound implications not only for the quantity of teachers available for Arizona classrooms, but also for the quality of those teachers. While this study has focused only on issues of quantity, ensuring that Arizona has enough **quality** teachers is a far more important consideration.

**TABLE 11** **Policy Issues — Summary of Recommendations**

| | Responsibility | | | |
|---|---|---|---|---|
| **Recommendation** | **Pipeline Institutions** | **School District** | **ADE** | **Legislature** |
| **Recruitment** | | | | |
| Increase production of teacher graduates | • | | | • |
| Strengthen out-of-state recruiting | | • | • | |
| Remove/streamline certification requirements | | | • | • |
| Create incentives to motivate return to classroom | | • | | • |
| Target recruitment in critical areas | • | • | • | |
| **Compensation** | | | | |
| Offer tuition reimbursement | | • | | • |
| Consider offering differentiated or "combat" pay | | • | | • |
| Fund non-student days | | • | | |
| **Classroom Environment** | | | | |
| Reduce paperwork burden | | • | • | • |
| Improve discipline and safety | | • | | |
| **Data Tracking** | | | | |
| Establish database & report on teacher demand & supply | • | • | • | • |
| Improve data collection/distribution of info on students | • | • | • | |

Source: Morrison Institute for Public Policy, 2002.

# SOURCES AND APPENDICES

# SOURCES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# APPENDIX A

## Potential Components Not Used in This Study

There are several components of demand and supply which were considered for this study, but were not quantifiable or were addressed through other means. However, understanding the demand and supply of teachers requires an awareness of these potential components.

### Demand

- Loss of students to enrollment shrinkage from private schools, dropouts, etc.

  Student enrollment projections were derived from the anticipated school-aged population, with no distinction for whether or not these children were in regular public schools or charter schools. However, 4.28% was subtracted to account for private school students and 2% for home-schooled students — the proportion of students served in these venues for 1999 and 2001, respectively. If the proportion of students in private schools increases, these schools will need teachers to accommodate. So, while the need for teachers at public schools may decrease, these teachers still will be needed in Arizona. An increase in the proportion of home-schooled children will reduce the need for teachers in Arizona overall. Accounting for dropouts is more problematic, as there is little agreement on the actual drop out rate.

### Supply

- Professionals from other disciplines

  This study defined supply of teachers as those certified by ADE since all schools, except charters, must only hire certified teachers. In order for professionals from other disciplines to be considered part of supply they would have to be certified. Thus, they would be counted in the supply from the pipeline institutions if they used that method to receive the credentials to become certified. Or, they may be teaching under an emergency certificate. In that case they would be counted as "underqualified" and the expectation is that they are working towards getting their certification.

### Both Demand and Supply

- Side effects of other state, local, and federal policies and programs and changes to them

  There are many policies that can effect supply and demand, including class size, hiring incentives, budget issues, etc. Changes in these policies can affect the flow of new teachers into teaching, the flow of in-migrants into the state, and the attrition out of teaching. Quantifying these possibilities requires many assumptions that would create bias in the calculations.

## Measures Used and Their Alternatives

Finding the best data to measure teacher demand and supply required much trial and error. However, in the future there may be better alternatives available — some of which are listed below.

### Demand

- New positions created due to student growth
  - Measure used: Population projections based on 2000 U.S. Census, minus home school and private school students. Calculations could have left in private school students to determine how many teachers are needed in the entire state. However, there is no data on the supply of private school teachers, or the current number of private school teachers. This would have left the equation incomplete. ADE student enrollment data and teacher counts provided historical and current data for each school district and charter schools.
  - Alternatives: Local population projections based on new housing and other local data. Few districts are able to project more than a year out at this time; private school data.
- Current positions vacated due to attrition from...
  - Retirement
    - Measure used: Age of teachers, assuming retirement at age 64 (average age of retired teachers); age of teachers, assuming retirement at age 55.
    - Alternatives: Retirement projections from ASRS — currently unavailable; retirement projections from school districts based on age of staff — currently unavailable.
  - Leaving the profession before retirement
    - Measure used: National attrition data from NCES' *Schools and Staffing Survey*.
    - Alternatives: Local attrition data based on ADE employment database or local district records and/or exit interviews. Data is currently flawed or unavailable.
  - Leaving the state (out-migration)
    - Measure used: Population projections from 2000 U.S. Census.
    - Alternatives: Exit interviews from school district — currently unavailable.

### Supply

- New trainees from college pipeline
  - Measure used: Current enrollment data from pipeline institutions.

- Alternatives: Enrollment projections from pipeline institutions — currently unavailable. Also, ADE's certification database does not capture this information.

- In-migration of certified teachers
  - Measure used: 2000 U.S. Census data.
  - Alternatives: Although the best potential method, ADE's certification database does not explicitly capture this information. A second alternative is teachers as a proportion of the workforce applied to in-migrants. This calculation reveals a small surplus would remain after 2005 though before then there would be a very slight deficit. K-12 teachers are 2.8 percent of the Arizona workforce (Center for Business Research, 2002). Applied to 60,700 employed in-migrants — 56 percent of 108,000 in-migrants — about 1,700 teachers entered the state in 2002 (Economic Information Systems, 2000). This does not account for population growth.
- Inactive certified teachers returning to the profession
  - Measure used: NCES data.
  - Alternative: Tracking through ADE's certification database and school district employee reports as well as recruitment information from school districts. Currently, this data is unavailable.

# APPENDIX B

## Data Sources

Data sources for this analysis included the following:

- Teacher counts and student counts from ADE's Research and Policy Division and School Finance Office and the Arizona State Board for Charter Schools.
- Population data and projections from the U.S. Census Bureau and the Center for Business Research at ASU.
- Salary and occupational projections from the Arizona Department of Economic Security (DES).
- District staffing information from a survey conducted by ASU-East College of Education in Spring 2001.
- Two new surveys fielded by Morrison institute — one of pipeline institutions in Arizona and one of inactive certified teachers (conducted by O'Neil Associates, Inc.).
- Interviews of a sample of school district personnel to determine staffing needs. The sample of 19 school districts was selected to represent each region of the state and to ensure inclusion of those in urban, suburban, exurban, rural, and Native American communities. About 225,000 students (25% of total students) and 16,000 teachers (33% of total teachers) were represented.
- Teacher certification rates from ADE's Certification Division database.

Although all teaching certificates issued in Arizona are supposed to be recorded in the Certification Division database, it was ultimately used only in an analysis of English as a Second Language, Bilingual Education, special education, and emergency certificates and as the source of respondents for a survey of inactive certified teachers. Data regarding other types of certificates were not recorded consistently or at the level of detail necessary to contribute to this study because the current purpose of the database is primarily to record the names and contact information of people who are issued certificates.

# APPENDIX C

## TABLE C-1 2009-2010 Enrollment and Teacher Projections

| | Projected Student Enrollment | Projected Student Enrollment Minus Home School and Private | Total Teachers Needed | | Projected Student Enrollment | Projected Student Enrollment Minus Home School and Private | Total Teachers Needed |
|---|---|---|---|---|---|---|---|
| **Arizona** | | | | **Maricopa County** | | | |
| Elementary (5-13) | 846,026 | 792,896 | 44,544 | Elementary (5-13) | 546,623 | 512,295 | 28,781 |
| Secondary (14-17) | 352,963 | 330,797 | 18,584 | Secondary (14-17) | 216,685 | 203,077 | 11,409 |
| Total School Age | 1,198,989 | 1,123,692 | 63,129 | Total School Age | 763,307 | 715,372 | 40,189 |
| **Apache County** | | | | **Mohave County** | | | |
| Elementary (5-13) | 10,294 | 9,647 | 542 | Elementary (5-13) | 21,743 | 20,378 | 1,145 |
| Secondary (14-17) | 5,011 | 4,696 | 264 | Secondary (14-17) | 11,180 | 10,478 | 589 |
| Total School Age | 15,305 | 14,344 | 806 | Total School Age | 32,923 | 30,855 | 1,733 |
| **Cochise County** | | | | **Navajo County** | | | |
| Elementary (5-13) | 16,287 | 15,264 | 858 | Elementary (5-13) | 16,507 | 15,470 | 869 |
| Secondary (14-17) | 7,596 | 7,119 | 400 | Secondary (14-17) | 7,861 | 7,367 | 414 |
| Total School Age | 23,884 | 22,384 | 1,258 | Total School Age | 24,367 | 22,837 | 1,283 |
| **Coconino County** | | | | **Pima County** | | | |
| Elementary (5-13) | 16,596 | 15,554 | 874 | Elementary (5-13) | 117,341 | 109,972 | 6,178 |
| Secondary (14-17) | 7,304 | 6,845 | 385 | Secondary (14-17) | 50,675 | 47,493 | 2,668 |
| Total School Age | 23,900 | 22,399 | 1,258 | Total School Age | 168,017 | 157,465 | 8,846 |
| **Gila County** | | | | **Pinal County** | | | |
| Elementary (5-13) | 6,745 | 6,322 | 355 | Elementary (5-13) | 26,702 | 25,025 | 1,406 |
| Secondary (14-17) | 3,214 | 3,012 | 169 | Secondary (14-17) | 11,582 | 10,855 | 610 |
| Total School Age | 9,959 | 9,334 | 524 | Total School Age | 38,284 | 35,880 | 2,016 |
| **Graham County** | | | | **Santa Cruz County** | | | |
| Elementary (5-13) | 5,416 | 5,076 | 285 | Elementary (5-13) | 7,565 | 7,090 | 398 |
| Secondary (14-17) | 2,532 | 2,373 | 133 | Secondary (14-17) | 3,629 | 3,401 | 191 |
| Total School Age | 7,948 | 7,449 | 418 | Total School Age | 11,195 | 10,492 | 589 |
| **Greenlee County** | | | | **Yavapai County** | | | |
| Elementary (5-13) | 1,271 | 1,191 | 67 | Elementary (5-13) | 22,286 | 20,887 | 1,173 |
| Secondary (14-17) | 642 | 602 | 34 | Secondary (14-17) | 10,574 | 9,910 | 557 |
| Total School Age | 1,914 | 1,793 | 101 | Total School Age | 32,861 | 30,797 | 1,730 |
| **La Paz County** | | | | **Yuma County** | | | |
| Elementary (5-13) | 1,999 | 1,873 | 105 | Elementary (5-13) | 28,650 | 26,851 | 1,508 |
| Secondary (14-17) | 1,036 | 971 | 55 | Secondary (14-17) | 13,441 | 12,597 | 708 |
| Total School Age | 3,034 | 2,844 | 160 | Total School Age | 42,092 | 39,448 | 2,216 |

Source: Morrison Institute for Public Policy, 2002.

Data: Projected enrollment set equal to the population projection generated by the Center for Business Research at Arizona State University. Teachers needed defined as one teacher per 17.8 students. Private school enrollment was calculated as 4.28% of the student population based on NCES data (Digest of Education Statistics, 2001 Table 63). The number of home-schooled children in the state was provided by Arizona Families for Home Education.

Totals may not add due to rounding.

# APPENDIX D

## Arizona Inactive Certified Teacher Survey Methodology

Morrison Institute contracted with O'Neil Associates, Inc. to conduct a statewide survey of persons certified to teach in Arizona who are not currently teaching in the classroom. The focus of the study was to ascertain motivations for leaving the teaching profession, to identify inactive teachers' primary areas of dissatisfaction, to test proposals to recruit teachers, and to measure teachers' general attitudes toward their trained profession.

The Arizona Department of Education supplied several databases which they believed contained the names of individuals certified to teach in Arizona, but who were not currently teaching. An initial field test was conducted both to ascertain what percent of the listed phone numbers were still valid, and to test the survey questions. Between March 18, 2002 and April 12, 2002, the actual survey was conducted.

In total, 1,487 individuals were contacted for initial screening, to verify that they were certified to teach and that they were not currently teaching. Of these, 804 individuals met these criteria and completed the full interview. Using them as the statewide sample, there is a 95% chance that the findings from this study are within plus or minus 3.5% of the findings we would have obtained if every inactive certified teacher in Arizona had been interviewed. The other 683 individuals contacted were still actively teaching in the classroom, and thus not included in the sample.

This study broke the sample down into several subgroups. The sample size (N) of these groups is shown on Table D-1.

**TABLE D-1** **Sample Size for Selected Subgroups in Survey of Inactive Certified Teachers**

| Group | N |
|---|---|
| Full Sample | 804 |
| Hispanic | 53 |
| Less than 3 yrs experience | 110 |
| 3 to 5 yrs experience | 93 |
| 6 to 10 yrs experience | 123 |
| 11 to 20 yrs experience | 117 |
| Over 20 yrs experience | 214 |
| Maricopa County | 524 |
| Pima County | 132 |
| Rural (Other Counties) | 144 |
| Specialty Subject Matter | 178 |
| Retired, under age 60 | 88 |
| Retired, age 60+ | 109 |
| Employed outside of education field | 148 |

# APPENDIX E

## Current Activity of Inactive Certified Teachers

Of the statewide sample of certified teachers, who are not currently teaching fulltime:

**25% are retired, including**

- 11% who retired early (they are younger than 60 years old)
- 14% who are retired, but are age 60 years or older

**24% are still working within the education profession, but not as a classroom teacher (e.g., school or district administrator, university)**

**19% are working outside the education profession, including**

- 11% working within a private company
- 4% who are self-employed
- 2% working within a governmental entity
- 1% within another occupation or working without pay

**15% are not working because they are caring for family**

**11% are working as a substitute teacher**

**3% are unemployed**

**2% not working because they are a student**

**1% not working because they are disabled**

**TABLE E-1** **Survey Results: Retirees, Private Sector, and Hispanic (% indicating)**

| | All Respondents | Early Retirees | Employed Outside of Education | Hispanic | Non-Hispanic |
|---|---|---|---|---|---|
| **Main Reasons for Leaving** | | | | | |
| Personal/Life Choices | 24 | 15 | 12 | 17 | 24 |
| Retired | 21 | 53 | 6 | 13 | 21 |
| Different Job/Want to Stay in Profession | 19 | 1 | 15 | 21 | 19 |
| Disillusioned/Stressed | 16 | 16 | 24 | 23 | 15 |
| Salary | 10 | 3 | 28 | 10 | 11 |
| Administration/Bureaucracy | 6 | 9 | 8 | 13 | 6 |
| Lack of Respect | 3 | 2 | 7 | 2 | 4 |
| No Concerns | 1 | 0 | 0 | 0 | 1 |
| **Main Areas of Dissatisfaction** | | | | | |
| Administrative/Political | 31 | 37 | 29 | 33 | 31 |
| No Real Concerns | 22 | 14 | 18 | 12 | 23 |
| Job Difficulty/Discipline | 20 | 28 | 19 | 16 | 20 |
| Low Salary | 18 | 14 | 22 | 33 | 17 |
| Lack of Respect/Support | 7 | 6 | 9 | 2 | 7 |
| Other/Don't Know | 2 | 1 | 3 | 4 | 2 |
| **Key Factor for Possible Recruitment Back to Teaching Profession** | | | | | |
| Increased Salaries | 29 | 17 | 38 | 44 | 28 |
| Improved Classroom Environment | 16 | 16 | 18 | 20 | 16 |
| Modifications to Personal or Life Choices | 15 | 13 | 5 | 6 | 16 |
| More Administrative Support/Less Paperwork | 12 | 15 | 10 | 4 | 13 |
| Other Factors | 12 | 18 | 14 | 13 | 12 |
| Nothing | 9 | 18 | 10 | 6 | 10 |
| Don't Know | 4 | 0 | 1 | 4 | 4 |
| Enhanced Student Standards | 2 | 2 | 3 | 4 | 2 |

Source: Morrison Institute for Public Policy, 2002.

## TABLE E-2 Survey Results: Specialization and Location (% indicating)

| | Selected Specialized Group[1] | Maricopa County | Pima County | Balance of State |
|---|---|---|---|---|
| **Main Reasons for Leaving** | | | | |
| Personal/Life Choices | 23 | 26 | 22 | 18 |
| Retired | 18 | 20 | 20 | 24 |
| Different Job/Want to Stay in Profession | 21 | 19 | 17 | 21 |
| Disillusioned/Stressed | 20 | 14 | 19 | 17 |
| Salary | 9 | 11 | 9 | 9 |
| Administration/Bureaucracy | 8 | 5 | 8 | 8 |
| Lack of Respect | 2 | 4 | 4 | 2 |
| No Concerns | 0 | 0 | 1 | 1 |
| **Main Areas of Dissatisfaction** | | | | |
| Administrative/Political | 38 | 29 | 38 | 33 |
| No Real Concern | 16 | 23 | 18 | 21 |
| Job Difficulty/Discipline | 14 | 18 | 20 | 22 |
| Low Salary | 23 | 21 | 16 | 13 |
| Lack of Respect/Support | 6 | 7 | 5 | 9 |
| Other/Don't Know | 3 | 1 | 4 | 2 |
| **Key Factor for Possible Recruitment Back to Teaching Profession** | | | | |
| Increased Salaries | 32 | 20 | 27 | 28 |
| Improved Classroom Environment | 18 | 15 | 22 | 17 |
| Modifications to Personal or Life Choices | 11 | 17 | 11 | 13 |
| More Administrative Support/Less Paperwork | 14 | 13 | 12 | 11 |
| Other Factors | 15 | 12 | 12 | 13 |
| Nothing | 9 | 10 | 9 | 9 |
| Don't Know | 1 | 3 | 4 | 6 |
| Enhanced Student Standards | 1 | 2 | 3 | 2 |

Source: Morrison Institute for Public Policy, 2002.

(1) Special education, ESL, and BLE endorsements were combined in this survey analysis in order to create a sample large enough to be statistically viable.

## TABLE E-3 Survey Results: Experience (% indicating)

| | Less Than 3 Years | 3 to 5 Years | 6 to 10 Years | 11 to 20 Years | Over 20 Years |
|---|---|---|---|---|---|
| **Main Reasons for Leaving** | | | | | |
| Personal/Life Choices | 24 | 35 | 46 | 21 | 9 |
| Retired | 2 | 0 | 4 | 20 | 59 |
| Different Job/Want to Stay in Profession | 21 | 15 | 22 | 19 | 7 |
| Disillusioned/Stressed | 16 | 13 | 13 | 24 | 12 |
| Salary | 28 | 17 | 6 | 9 | 3 |
| Administration/Bureaucracy | 3 | 12 | 6 | 5 | 7 |
| Lack of Respect | 6 | 8 | 3 | 3 | 1 |
| No Concerns | 0 | 0 | 0 | 0 | 1 |
| **Main Areas of Dissatisfaction** | | | | | |
| Administrative/Political | 27 | 33 | 23 | 29 | 45 |
| No Real Concerns | 20 | 15 | 22 | 21 | 15 |
| Job Difficulty/Discipline | 23 | 24 | 24 | 18 | 16 |
| Low Salary | 21 | 17 | 25 | 20 | 16 |
| Lack of Respect/Support | 8 | 8 | 5 | 9 | 6 |
| Other/Don't Know | 1 | 3 | 1 | 5 | 1 |
| **Key Factor for Possible Recruitment Back to Teaching Profession** | | | | | |
| Increased Salaries | 33 | 25 | 41 | 34 | 21 |
| Improved Classroom Environment | 21 | 22 | 12 | 16 | 16 |
| Modifications to Personal or Life Choices | 9 | 21 | 15 | 19 | 13 |
| More Administrative Support/Less Paperwork | 14 | 11 | 13 | 8 | 15 |
| Other Factors | 11 | 8 | 9 | 10 | 15 |
| Nothing | 4 | 4 | 4 | 12 | 17 |
| Don't Know | 6 | 3 | 2 | 1 | 3 |
| Enhanced Student Standards | 3 | 7 | 3 | 0 | 0 |

Source: Morrison Institute for Public Policy, 2002.

## TABLE E-4 Feelings About Becoming a Teacher Again (% indicating)

| | Seriously Consider | Would Consider Teaching and Other Options as Well | Could Never Imagine Being a Teacher Again |
|---|---|---|---|
| All Respondents | 35 | 44 | 21 |
| Early Retires (age <60) | 25 | 38 | 38 |
| Retired, age 60+ | 37 | 27 | 36 |
| Employed Outside of Education | 19 | 54 | 26 |
| Hispanic | 51 | 36 | 13 |
| Non-Hispanic | 34 | 44 | 22 |
| Maricopa County | 35 | 45 | 20 |
| Pima County | 30 | 43 | 27 |
| Other Counties | 43 | 39 | 18 |

Source: Morrison Institute for Public Policy, 2002.

## TABLE E-5 Proposals "Very Likely" to Cause Inactive Teachers to Re-Enter the Teaching Profession (% indicating)

| | All Respondents | Early Retirees | Employed Outside of Education | Hispanic | Selected Specialized Group[1] | Maricopa County | Pima County | Balance of State |
|---|---|---|---|---|---|---|---|---|
| Increased salaries | 72 | 59 | 69 | 75 | 76 | 73 | 66 | 73 |
| Reduced class size | 66 | 52 | 61 | 72 | 66 | 64 | 69 | 70 |
| Decreased paperwork | 56 | 57 | 46 | 69 | 64 | 57 | 52 | 59 |
| Improved discipline/safety | 54 | 51 | 50 | 67 | 53 | 52 | 58 | 59 |
| Tuition reimbursement | 53 | 35 | 48 | 62 | 55 | 54 | 50 | 55 |
| More support for new teachers | 47 | 28 | 42 | 55 | 49 | 45 | 50 | 54 |
| More teacher authority | 46 | 42 | 43 | 48 | 40 | 44 | 46 | 51 |
| Better resources | 45 | 30 | 46 | 72 | 46 | 43 | 51 | 48 |
| Opportunities for advancement | 38 | 19 | 36 | 48 | 39 | 38 | 40 | 38 |
| More professional development | 32 | 19 | 31 | 30 | 39 | 30 | 35 | 36 |
| Increased student standards | 28 | 26 | 25 | 43 | 20 | 28 | 24 | 33 |
| Revised health insurance | 28 | 33 | 18 | 39 | 33 | 26 | 31 | 34 |
| Better classroom management training | 28 | 18 | 21 | 40 | 26 | 28 | 28 | 27 |
| Eliminating tenure | 13 | 11 | 17 | 11 | 13 | 12 | 11 | 19 |
| Tying teacher rewards to student performance | 9 | 6 | 15 | 10 | 5 | 10 | 6 | 6 |

Source: Morrison Institute for Public Policy, 2002.

(1) Combined responses from respondents with special education, ESL, and BLE endorsements.

The authors would like to thank the following people for their support of this study,
through assistance collecting data, providing general information, and offering feedback.

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**Nora Gutierrez,** Phoenix Union High School
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**Jan Thompson,** Arizona Department of Education
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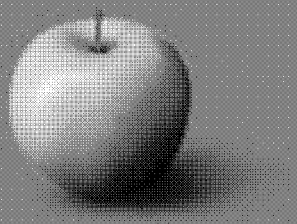
Cover Photography ©2003 by Todd McQueen



# MORRISON INSTITUTE FOR PUBLIC POLICY

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ASU ARIZONA STATE UNIVERSITY

asu news [now] September 30, 2009



# Grant expands innovative teacher preparation program

An Arizona State University program that immerses future teachers in school settings to maximize their readiness for successful careers as educators has been awarded a $33.8 million federal grant to expand across metropolitan Phoenix and the state of Arizona, spanning rural American Indian communities and the Tucson area.

(b)(6)

(b)(6)

...ative American communities to earn teacher certification, like Cranie graduates (from left) Jackie Ibarra, Andrea Yazzie and Camilla Tsosie.

ASU's Professional Development School (PDS) program, developed by the College of Teacher Education and Leadership (CTEL), gives students three times the amount of hands-on, practical classroom experience as traditional teacher education programs. In rural communities, the program enables local residents to earn a university degree and Arizona teacher certification without having to relocate to an urban area of the state.

The five-year grant from the U.S. Department of Education Teacher Quality Partnership Grant Program will establish "PDS NEXT," a program involving 15 urban and rural partner school districts in Arizona. Simultaneously, the grant makes possible a number of enhancements to the existing PDS program to produce graduates who are even more well-prepared for success in the classroom, while expanding PDS to implement comprehensive school reform and full-range professional development including a two-year induction program for new teachers.

"These new facets of PDS are designed to produce highly skilled new teachers who understand the content they are teaching and how best to teach it, and to foster measureable gains in effective school functioning, teacher retention, teaching effectiveness and student achievement," says Scott Ridley, assistant dean of CTEL and principal investigator for the PDS NEXT grant. Ridley has guided the PDS program since it began in 1999 with one school, Longview Elementary, in central Phoenix's Osborn Elementary School District.

"As a part of its effort to help solve the great challenges facing humanity, ASU has taken on the responsibility of improving public education," says ASU President Michael M. Crow. "This grant will enable us to make great strides in preparing outstanding teachers. It is our commitment to measure our success in educating teachers by the success our graduates have in educating their students."

To date, PDS has produced hundreds of elementary and junior high school teachers. Through the NEXT grant, the program will expand to include students wishing to teach at the high school level. CTEL will work in partnership with ASU's College of Liberal Arts and Sciences to provide high-quality content area instruction to future high school teachers

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as well as those planning to teach younger pupils.

Liberal Arts and Sciences faculty members collaborated with CTEL leadership to create a pilot for a discipline-based Master of Arts in Teaching, says Laura Turchi, clinical professor of English education and a co-principal investigator for the PDS NEXT grant. The project will train students in pedagogies designed to develop literacy in English, history, and languages.

"Our faculty will lead a series of consortia linking secondary schools, community colleges, and ASU," Turchi says. "Each consortium will develop and support high-quality freshman and sophomore courses in reading, writing, critical inquiry, mathematics, and technologies at community colleges and the university. These courses will be available statewide through distance learning and provide models of rigorous and accessible curriculum for future teachers."

New partner school districts participating through PDS NEXT are Mesa Public Schools; the Glendale, Roosevelt, and Phoenix Elementary School Districts; Sunnyside Unified School District in Tucson; the Window Rock, Ganado, and Kayenta districts in the Navajo Nation; University Public Schools; and the Phoenix Union High School District. Existing PDS partners including the Osborn, Chinle, Douglas, Indian Oasis-Baboquivari, and Gadsden districts also will participate in NEXT.

PDS targets high-need schools and communities, aiming to improve both the preparation of future teachers and the achievement of students. Mesa Public Schools (MPS), the state's largest school district, plans to involve four of its elementary schools in the initiative, each serving low-income families.

"The principals at Adams, Lincoln, Guerrero and Whitman schools requested to participate because of the proposal's focus on individual student growth, shared leadership structure and site-specific professional development opportunities," says Michael B. Cowen, MPS superintendent of schools.

"We have been investigating ways to support teachers at lower-income schools through professional development, and the opportunity to partner with ASU's PDS NEXT proposal couldn't have come at a better time."

Receipt of the grant will enable Ridley and his colleagues to incorporate TAP: The System for Teacher and Student Advancement into the PDS curriculum. TAP is an initiative of the National Institute for Excellence in Teaching.

"We are committed to reinventing the definition of teacher education at a major research university," says Mari Koerner, CTEL's dean. "Without abandoning the role of theory, CTEL is radically reforming its teacher education programs around TAP, which represents a unified model of clinical excellence.

"We also have learned that an investment in our partner school districts is an investment in our own teacher education enterprise," Koerner says. "Through genuine partnerships with 15 high-need urban and rural school districts, we will work to simultaneously reform struggling K-12 schools and our district-based teacher education programs."

An additional partner in the NEXT project is the Rodel Foundation of Arizona, which will provide training to student teachers and mentor teachers that specifically addresses the challenges of teaching in high-poverty schools and focuses on research-based strategies for increasing student achievement. The PDS NEXT partnership also includes the ASU Vice President's Office for Educational Partnerships, ASU's original home for the TAP program within the university.

The award to CTEL is the largest among 28 Teacher Quality Partnership grants across the country announced by U.S. Secretary of Education Arne Duncan.

"The Obama Administration is committed to giving teachers the support they need to succeed in the classroom," Duncan says. "The Teacher Quality Partnership grants will improve student academic achievement by strengthening teacher preparation, training and effectiveness and help school districts attract potential educators from a wide range of professional backgrounds into the teaching profession."

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Copy of State Collaboration Agreement on Longitudinal Data Systems

# State Collaboration: Longitudinal Data Systems, Data Visualization, Research and Development

## Agreement for Execution - Effective Date: November 2, 2009

The terms on these two pages outline the initial agreement for a collaborative effort to co-locate state longitudinal growth data sets for the purpose of creating common data visualizations that build upon the Colorado Growth Model.

1. ***Agreement to Participate***. Each Chief State School Officer signs on to the collaborative research and development effort and agrees to the participation of the Chief's designee, chief information officer, and state assessment director or director of research and evaluation.

2. ***Common Longitudinal Growth Measure***. Each state agrees to calculate growth percentiles in the same manner using R (programming language) to allow common cross-state comparisons and data visualization development related to normative and criterion-referenced growth.

3. ***Common Display Platform***. Each state agrees to use the Colorado Growth Model Version 1.0 or 1.5 display layer as an initial common visualization platform.

4. ***State Branding***. Each state may rebrand the display layer (e.g., "The Indiana Growth Model") and will provide mutually agreed upon attribution to Colorado and the National Center for the Improvement of Educational Assessment.

5. ***Common Development Environment***. To the extent pra ticable, each state agrees to load its longitudinal data set into a common, standardized data torage environme .t with appropriate security. This storage environment may be a cloud-based, virtual environment. The purpose is to permi common cross-state enhancement of the data visualization tools by the application developers. The application developers for Versions 1.5 and 2.0 will be the Colorado Department of Education, the National Center for the Improvement of Educational Assessment, and Universal Mind.

6. ***Enhancements to the Display Layer.*** Each state agrees to collaborate in the development of a common Version 2.0 of the Growth Model Display Layer. Such modifications will include, but not be limited to, postsecondary metrics, multi-year visualization and animation, inclusion of teacher identifiers, multiple axis selection, enhanced mapping functionality. Each state may fund the development of different enhancements of the display layer. For example, a state may fund development of displays incorporating unique teacher identifiers and interim assessment data. Enhancement priorities will be established through consensus among the participating states.

7. ***Modifications Shared***. Each state agrees to collaborate in, and contribute know-how and financial resources to, the development of modifications and enhancements, which will be shared freely among each participating state, subject to the Creative Commons Attribution-Non Commercial-Share Alike 3.0 Public License (
   ).

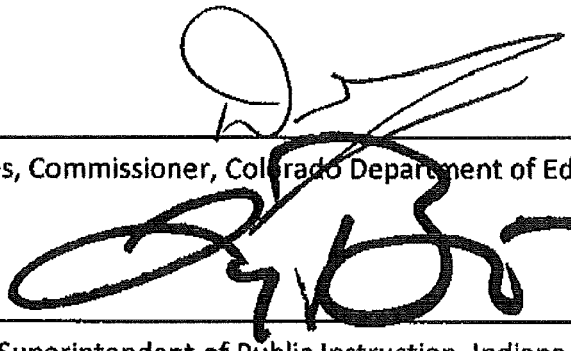
## State Collaboration: Longitudinal Data Systems, Data Visualization, Research and Development

8. ***Communications and Publicity***. Each state will collaborate on communications and publicity related to the collaborative effort, including an initial press release announcing the agreement.

9. ***Race to the Top and SLDS***. Pending each state's determination of the success and viability of the effort, each state agrees to include language in its Statewide Longitudinal Data Systems (SLDS) Grant and Race to the Top Proposal referencing the collaborative effort as part of the invitational priority related to enhancements of longitudinal data systems and include a budget item to support the collaborative.

10. ***Collaboration with CCSSO's LEARN Effort***. Pending each state's determination of the viability of the proposed CCSSO effort, each state agrees to associate this collaborative effort with the LEARN effort. In doing so, each state agrees to request that CCSSO make funding from the State Education Data Center available to maintain and enhance the initial collaboration, including funding for a common, standardized storage environment.

The undersigned parties agree to the terms outlined above.



Signature _____

Dwight D. Jones, Commissioner, Colorado Department of Education

Signature _____

Tony Bennett, Superintendent of Public Instruction, Indiana Department of Education

Signature

Tom Horne, Superintendent, Arizona Department of Education

House Engrossed Senate Bill

State of Arizona
Senate
Forty-ninth Legislature
Second Regular Session
2010

# SENATE BILL 1040

AN ACT

AMENDING SECTION 15-203, ARIZONA REVISED STATUTES; AMENDING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 5; AMENDING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY SECTION 2 OF THIS ACT; REPEALING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 6; REPEALING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 7; AMENDING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 8; AMENDING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY SECTION 6 OF THIS ACT; REPEALING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 9; REPEALING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 10; RELATING TO EDUCATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

State of Arizona
Senate
Forty-ninth Legislature
Second Regular Session
2010

# SENATE BILL 1040

AN ACT

AMENDING SECTION 15-203, ARIZONA REVISED STATUTES; AMENDING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 5; AMENDING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY SECTION 2 OF THIS ACT; REPEALING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 6; REPEALING SECTION 15-536, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 7; AMENDING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 8; AMENDING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY SECTION 6 OF THIS ACT; REPEALING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 9; REPEALING SECTION 15-538.01, ARIZONA REVISED STATUTES, AS AMENDED BY LAWS 2010, CHAPTER 98, SECTION 10; RELATING TO EDUCATION.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 15-203, Arizona Revised Statutes, is amended to read:

15-203. Powers and duties

A. The state board of education shall:

1. Exercise general supervision over and regulate the conduct of the public school system and adopt any rules and policies it deems necessary to accomplish this purpose.

2. Keep a record of its proceedings.

3. Make rules for its own government.

4. Determine the policy and work undertaken by it.

5. Appoint its employees, on the recommendation of the superintendent of public instruction.

6. Prescribe the duties of its employees if not prescribed by statute.

7. Delegate to the superintendent of public instruction the execution of board policies and rules.

8. Recommend to the legislature changes or additions to the statutes pertaining to schools.

9. Prepare, publish and distribute reports concerning the educational welfare of this state.

10. Prepare a budget for expenditures necessary for proper maintenance of the board and accomplishment of its purposes and present the budget to the legislature.

11. Aid in the enforcement of laws relating to schools.

12. Prescribe a minimum course of study in the common schools, minimum competency requirements for the promotion of pupils from the third grade and minimum course of study and competency requirements for the promotion of pupils from the eighth grade. The state board of education shall prepare a fiscal impact statement of any proposed changes to the minimum course of study or competency requirements and, on completion, shall send a copy to the director of the joint legislative budget committee and the executive director of the school facilities board. The state board of education shall not adopt any changes in the minimum course of study or competency requirements in effect on July 1, 1998 that will have a fiscal impact on school capital costs.

13. Prescribe minimum course of study and competency requirements for the graduation of pupils from high school. The state board of education shall prepare a fiscal impact statement of any proposed changes to the minimum course of study or competency requirements and, on completion, shall send a copy to the director of the joint legislative budget committee and the executive director of the school facilities board. The state board of education shall not adopt any changes in the minimum course of study or competency requirements in effect on July 1, 1998 that will have a fiscal impact on school capital costs.

14. Supervise and control the certification of persons engaged in instructional work directly as any classroom, laboratory or other teacher or indirectly as a supervisory teacher, speech therapist, principal or superintendent in a school district, including school district preschool programs, or any other educational institution below the community college, college or university level, and prescribe rules for certification, including rules for certification of teachers who have teaching experience and who are trained in other states, which are not unnecessarily restrictive and are substantially similar to the rules prescribed for the certification of teachers trained in this state. The rules shall require applicants for all certificates for common school instruction to complete a minimum of forty-five classroom hours or three college level credit hours, or the equivalent, of training in research based systematic phonics instruction from a public or private provider. The rules shall not require a teacher to obtain a master's degree or to take any additional graduate courses as a condition of certification or recertification. The rules shall allow a general equivalency diploma to be substituted for a high school diploma in the certification of emergency substitute teachers. The rules shall allow but shall not require the superintendent of a school district to obtain certification from the state board of education.

15. Adopt a list of approved tests for determining special education assistance to gifted pupils as defined in and as provided in chapter 7, article 4.1 of this title. The adopted tests shall provide separate scores for quantitative reasoning, verbal reasoning and nonverbal reasoning and shall be capable of providing reliable and valid scores at the highest ranges of the score distribution.

16. Adopt rules governing the methods for the administration of all proficiency examinations.

17. Adopt proficiency examinations for its use. The state board of education shall determine the passing score for the proficiency examination.

18. Include within its budget the cost of contracting for the purchase, distribution and scoring of the examinations as provided in paragraphs 16 and 17 of this subsection.

19. Supervise and control the qualifications of professional nonteaching school personnel and prescribe standards relating to qualifications. The standards shall not require the business manager of a school district to obtain certification from the state board of education.

20. Impose such disciplinary action, including the issuance of a letter of censure, suspension, suspension with conditions or revocation of a certificate, upon a finding of immoral or unprofessional conduct.

21. Establish an assessment, data gathering and reporting system for pupil performance as prescribed in chapter 7, article 3 of this title.

22. Adopt a rule to promote braille literacy pursuant to section 15-214.

23. Adopt rules prescribing procedures for the investigation by the department of education of every written complaint alleging that a certificated person has engaged in immoral conduct.

24. For purposes of federal law, serve as the state board for vocational and technological education and meet at least four times each year solely to execute the powers and duties of the state board for vocational and technological education.

25. Develop and maintain a handbook for use in the schools of this state that provides guidance for the teaching of moral, civic and ethical education. The handbook shall promote existing curriculum frameworks and shall encourage school districts to recognize moral, civic and ethical values within instructional and programmatic educational development programs for the general purpose of instilling character and ethical principles in pupils in kindergarten programs and grades one through twelve.

26. Require pupils to recite the following passage from the declaration of independence for pupils in grades four through six at the commencement of the first class of the day in the schools, except that a pupil shall not be required to participate if the pupil or the pupil's parent or guardian objects:

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness. That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed. . . .

27. Adopt rules that provide for teacher certification reciprocity. The rules shall provide for a one year reciprocal teaching certificate with minimum requirements including valid teacher certification from a state with substantially similar criminal history or teacher fingerprinting requirements and proof of the submission of an application for a fingerprint clearance card pursuant to title 41, chapter 12, article 3.1.

28. Adopt rules that provide for the presentation of an honorary high school diploma to a person who has never obtained a high school diploma and who meets both of the following requirements:

(a) Currently resides in this state.

(b) Provides documented evidence from the Arizona department of veterans' services that the person enlisted in the armed forces of the United States and served in World War I, World War II, the Korean conflict or the Vietnam conflict.

29. Cooperate with the Arizona-Mexico commission in the governor's office and with researchers at universities in this state to collect data and conduct projects in the United States and Mexico on issues that are within the scope of the duties of the department of education and that relate to quality of life, trade and economic development in this state in a manner

that will help the Arizona-Mexico commission to assess and enhance the economic competitiveness of this state and of the Arizona-Mexico region.

30. Adopt rules to define and provide guidance to schools as to the activities that would constitute immoral or unprofessional conduct of certificated persons.

31. Adopt guidelines to encourage pupils in grades nine, ten, eleven and twelve to volunteer for twenty hours of community service before graduation from high school. A school district that complies with the guidelines adopted pursuant to this paragraph is not liable for damages resulting from a pupil's participation in community service unless the school district is found to have demonstrated wanton or reckless disregard for the safety of the pupil and other participants in community service. For the purposes of this paragraph, "community service" may include service learning. The guidelines shall include the following:

(a) A list of the general categories in which community service may be performed.

(b) A description of the methods by which community service will be monitored.

(c) A consideration of risk assessment for community service projects.

(d) Orientation and notification procedures of community service opportunities for pupils entering grade nine, including the development of a notification form. The notification form shall be signed by the pupil and the pupil's parent or guardian, except that a pupil shall not be required to participate in community service if the parent or guardian notifies the principal of the pupil's school in writing that the parent or guardian does not wish the pupil to participate in community service.

(e) Procedures for a pupil in grade nine to prepare a written proposal that outlines the type of community service that the pupil would like to perform and the goals that the pupil hopes to achieve as a result of community service. The pupil's written proposal shall be reviewed by a faculty advisor, a guidance counselor or any other school employee who is designated as the community service program coordinator for that school. The pupil may alter the written proposal at any time before performing community service.

(f) Procedures for a faculty advisor, a guidance counselor or any other school employee who is designated as the community service program coordinator to evaluate and certify the completion of community service performed by pupils.

32. To facilitate the transfer of military personnel and their dependents to and from the public schools of this state, pursue, in cooperation with the Arizona board of regents, reciprocity agreements with other states concerning the transfer credits for military personnel and their dependents. A reciprocity agreement entered into pursuant to this paragraph shall:

(a) Address procedures for each of the following:
(i) The transfer of student records.
(ii) Awarding credit for completed course work.
(iii) Permitting a student to satisfy the graduation requirements prescribed in section 15-701.01 through the successful performance on comparable exit-level assessment instruments administered in another state.
(b) Include appropriate criteria developed by the state board of education and the Arizona board of regents.

33. Adopt guidelines that school district governing boards shall use in identifying pupils who are eligible for gifted programs and in providing gifted education programs and services. The state board of education shall adopt any other guidelines and rules that it deems necessary in order to carry out the purposes of chapter 7, article 4.1 of this title.

34. For each of the alternative textbook formats of human-voiced audio, large-print and braille, designate alternative media producers to adapt existing standard print textbooks or to provide specialized textbooks, or both, for pupils with disabilities in this state. Each alternative media producer shall be capable of producing alternative textbooks in all relevant subjects in at least one of the alternative textbook formats. The board shall post the designated list of alternative media producers on its website.

35. Adopt a list of approved professional development training providers for use by school districts as provided in section 15-107, subsection J. The professional development training providers shall meet the training curriculum requirements determined by the state board of education in at least the areas of school finance, governance, employment, staffing, inventory and human resources, internal controls and procurement.

36. Adopt rules to prohibit a person who violates the notification requirements prescribed in section 15-183, subsection C, paragraph 7 or section 15-550, subsection C from certification pursuant to this title until the person is no longer charged or is acquitted of any offenses listed in section 41-1758.03, subsection B. The board shall also adopt rules to prohibit a person who violates the notification requirements, certification surrender requirements or fingerprint clearance card surrender requirements prescribed in section 15-183, subsection C, paragraph 8 or section 15-550, subsection D from certification pursuant to this title for at least ten years after the date of the violation.

37. Adopt rules for the alternative certification of teachers of nontraditional foreign languages that allow for the passing of a nationally accredited test to substitute for the education coursework required for certification.

38. ON OR BEFORE DECEMBER 15, 2011, ADOPT AND MAINTAIN A MODEL FRAMEWORK FOR A TEACHER AND PRINCIPAL EVALUATION INSTRUMENT THAT INCLUDES QUANTITATIVE DATA ON STUDENT ACADEMIC PROGRESS THAT ACCOUNTS FOR BETWEEN THIRTY-THREE PER CENT AND FIFTY PER CENT OF THE EVALUATION OUTCOMES AND BEST PRACTICES FOR PROFESSIONAL DEVELOPMENT AND EVALUATOR TRAINING. SCHOOL

DISTRICTS AND CHARTER SCHOOLS SHALL USE AN INSTRUMENT THAT MEETS THE DATA REQUIREMENTS ESTABLISHED BY THE STATE BOARD OF EDUCATION TO ANNUALLY EVALUATE INDIVIDUAL TEACHERS AND PRINCIPALS BEGINNING IN SCHOOL YEAR 2012-2013.

B. The state board of education may:

1. Contract.

2. Sue and be sued.

3. Distribute and score the tests prescribed in chapter 7, article 3 of this title.

4. Provide for an advisory committee to conduct hearings and screenings to determine whether grounds exist to impose disciplinary action against a certificated person, whether grounds exist to reinstate a revoked or surrendered certificate and whether grounds exist to approve or deny an initial application for certification or a request for renewal of a certificate. The board may delegate its responsibility to conduct hearings and screenings to its advisory committee. Hearings shall be conducted pursuant to title 41, chapter 6, article 6.

5. Proceed with the disposal of any complaint requesting disciplinary action or with any disciplinary action against a person holding a certificate as prescribed in subsection A, paragraph 14 of this section after the suspension or expiration of the certificate or surrender of the certificate by the holder.

6. Assess costs and reasonable attorney fees against a person who files a frivolous complaint or who files a complaint in bad faith. Costs assessed pursuant to this paragraph shall not exceed the expenses incurred by the state board in the investigation of the complaint.

Sec. 2. Section 15-536, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 5, is amended to read:

15-536. Offer of contract to certificated teacher who has not been employed more than three consecutive school years; acceptance; notice to teacher of intention not to reemploy

A. Subject to ~~the provisions of~~ sections 15-539, 15-540, 15-541, 15-544 and 15-549, the governing board shall~~, between March 15 and May 15~~ offer a teaching contract for the next ensuing school year to each certificated teacher who has not been employed by the school district for more than the major portion of three consecutive school years and who is under a contract of employment with the school district for the current school year, unless~~, on or before April 15,~~ the governing board, a member of the board acting on behalf of the board or the superintendent of the school district gives notice to the teacher of the board's intention not to offer a teaching contract~~,~~ OR unless such teacher has been dismissed pursuant to section 15-538, 15-539, 15-541 or 15-544. The teacher's acceptance of the contract for the ensuing year must be indicated within thirty days from the date of the written contract or the offer is revoked. ~~Receipt under this subsection will be deemed to have occurred when the written contract is~~

~~personally delivered, placed in the teacher's school provided mailbox, including electronic mail, or two days after being placed in a United States postal service mail box.~~ The teacher accepts the contract by signing the contract and returning it to the governing board or by making a written instrument which accepts the terms of the contract and delivering it to the governing board. If the written instrument includes terms in addition to the terms of the contract offered by the board, the teacher fails to accept the contract.

B. Notice of the board's intention not to reemploy the teacher shall be by delivering it personally to the teacher or by sending it by registered or certified mail ~~bearing a postmark of on or before April 15, directed~~ to the teacher at ~~his~~ THE TEACHER'S place of residence as recorded in the school district records. The notice shall incorporate a statement of reasons for not reemploying the teacher. If the reasons are charges of inadequacy of classroom performance as defined by the governing board pursuant to section 15-539, subsection D, the board~~,~~ or its authorized representative, ~~shall,~~ at least ninety days prior to such notice, SHALL give the teacher written preliminary notice of ~~his~~ inadequacy, specifying the nature of the inadequacy with such particularity as to furnish the teacher an opportunity to correct ~~his~~ THE inadequacies and overcome the grounds for such charge. The governing board may delegate to employees of the governing board the general authority to issue preliminary notices of inadequacy of classroom performance to teachers pursuant to this subsection without the need for prior approval of each notice by the governing board. In all cases in which an employee of the governing board issues a preliminary notice of inadequacy of classroom performance without prior approval by the governing board, the employee shall report its issuance to the governing board within five school days. The written notice of intention not to reemploy shall include a copy of any evaluation pertinent to the charges made and filed with the board.

C. Nothing in this section shall be construed ~~so as~~ to provide a certificated teacher who has not been employed by the school district for more than the major portion of three consecutive school years and who has received notice of the board's intention not to offer a teaching contract with the right to a hearing pursuant to ~~the provisions of~~ section 15-539, subsection G.

Sec. 3. Section 15-536, Arizona Revised Statutes, as amended by section 2 of this act, is amended to read:

15-536. Offer of contract to certificated teacher who has not been employed more than three consecutive school years; acceptance; notice to teacher of intention not to reemploy

A. Subject to sections 15-539, 15-540, 15-541, 15-544 and 15-549, the governing board shall offer a teaching contract for the next ensuing school year to each certificated teacher who has not been employed by the school district for more than the major portion of three consecutive school years

and who is under a contract of employment with the school district for the current school year, unless the governing board, a member of the board acting on behalf of the board or the superintendent of the school district gives notice to the teacher of the board's intention not to offer a teaching contract or unless such teacher has been dismissed pursuant to section 15-538, 15-539, 15-541 or 15-544. The teacher's acceptance of the contract for the ensuing year must be indicated within ~~thirty~~ FIFTEEN BUSINESS days from the date of the TEACHER'S RECEIPT OF THE written contract or the offer is revoked. RECEIPT UNDER THIS SUBSECTION WILL BE DEEMED TO HAVE OCCURRED WHEN THE WRITTEN CONTRACT IS PERSONALLY DELIVERED, PLACED IN THE TEACHER'S SCHOOL PROVIDED MAILBOX, INCLUDING ELECTRONIC MAIL, OR TWO DAYS AFTER BEING PLACED IN A UNITED STATES POSTAL SERVICE MAIL BOX. The teacher accepts the contract by signing the contract and returning it to the governing board or by making a written instrument which accepts the terms of the contract and delivering it to the governing board. If the written instrument includes terms in addition to the terms of the contract offered by the board, the teacher fails to accept the contract.

B. Notice of the board's intention not to reemploy the teacher shall be by delivering it personally to the teacher or by sending it by registered or certified mail to the teacher at the teacher's place of residence as recorded in the school district records. The notice shall incorporate a statement of reasons for not reemploying the teacher. If the reasons are charges of inadequacy of classroom performance as defined by the governing board pursuant to section 15-539, subsection D, the board or its authorized representative, at least ninety days prior to such notice, shall give the teacher written preliminary notice of inadequacy, specifying the nature of the inadequacy with such particularity as to furnish the teacher an opportunity to correct the inadequacies and overcome the grounds for such charge. The governing board may delegate to employees of the governing board the general authority to issue preliminary notices of inadequacy of classroom performance to teachers pursuant to this subsection without the need for prior approval of each notice by the governing board. In all cases in which an employee of the governing board issues a preliminary notice of inadequacy of classroom performance without prior approval by the governing board, the employee shall report its issuance to the governing board within five school days. The written notice of intention not to reemploy shall include a copy of any evaluation pertinent to the charges made and filed with the board.

C. Nothing in this section shall be construed to provide a certificated teacher who has not been employed by the school district for more than the major portion of three consecutive school years and who has received notice of the board's intention not to offer a teaching contract with the right to a hearing pursuant to section 15-539, subsection G.

Sec. 4. Repeal

Section 15-536, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 6, is repealed.

Sec. 5. Repeal

Section 15-536, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 7, is repealed.

Sec. 6. Section 15-538.01, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 8, is amended to read:

15-538.01. Offer of contract to certificated teacher employed more than three consecutive school years

A. Subject to ~~the provisions of~~ sections 15-539, 15-540, 15-541, 15-544 and 15-549, the governing board shall~~, between March 15 and May 15,~~ offer to each certificated teacher who has been employed by the school district for more than the major portion of three consecutive school years and who is under contract of employment with the school district for the current year a contract renewal for the next ensuing school year unless ~~on or before May 15~~ the governing board, a member of the board acting on behalf of the board or the superintendent of the school district gives notice to the teacher of the board's intent not to offer a contract and to dismiss the teacher as provided in section 15-539.

B. The teacher's acceptance of the contract must be indicated within ~~fifteen business~~ THIRTY days from the date of the ~~teacher's receipt of the~~ written contract or the offer of a contract is revoked. ~~Receipt under this subsection will be deemed to have occurred when the written contract is personally delivered, placed in the teacher's school provided mailbox, including electronic mail, or two days after being placed in a United States postal service mail box.~~ The teacher accepts the contract by signing the contract and returning it to the governing board or by making a written instrument which accepts the terms of the contract and delivering it to the governing board. If the written instrument includes terms in addition to the terms of the contract offered by the board, the teacher fails to accept the contract.

~~C. If dismissal proceedings in reference to the teacher cannot be completed by May 15 through no fault of the governing board or the superintendent, or if the incidents relied on in whole or in part occurred after May 15, dismissal proceedings may continue or be initiated.~~

Sec. 7. Section 15-538.01, Arizona Revised Statutes, as amended by section 6 of this act, is amended to read:

15-538.01. Offer of contract to certificated teacher employed more than three consecutive school years

A. Subject to sections 15-539, 15-540, 15-541, 15-544 and 15-549, the governing board shall offer to each certificated teacher who has been employed by the school district for more than the major portion of three consecutive school years and who is under contract of employment with the school district for the current year a contract renewal for the next ensuing school year unless the governing board, a member of the board acting on behalf of the board or the superintendent of the school district gives notice

to the teacher of the board's intent not to offer a contract and to dismiss the teacher as provided in section 15-539.

B. The teacher's acceptance of the contract must be indicated within ~~thirty~~ FIFTEEN BUSINESS days from the date of the TEACHER'S RECEIPT OF THE written contract or the offer of a contract is revoked. RECEIPT UNDER THIS SUBSECTION WILL BE DEEMED TO HAVE OCCURRED WHEN THE WRITTEN CONTRACT IS PERSONALLY DELIVERED, PLACED IN THE TEACHER'S SCHOOL PROVIDED MAILBOX, INCLUDING ELECTRONIC MAIL, OR TWO DAYS AFTER BEING PLACED IN A UNITED STATES POSTAL SERVICE MAIL BOX. The teacher accepts the contract by signing the contract and returning it to the governing board or by making a written instrument which accepts the terms of the contract and delivering it to the governing board. If the written instrument includes terms in addition to the terms of the contract offered by the board, the teacher fails to accept the contract.

Sec. 8. Repeal

Section 15-538.01, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 9, is repealed.

Sec. 9. Repeal

Section 15-538.01, Arizona Revised Statutes, as amended by Laws 2010, chapter 98, section 10, is repealed.

Sec. 10. Retroactivity

A. Section 15-536, Arizona Revised Statutes, as amended by section 2 of this act, applies retroactively to November 24, 2009.

B. Section 15-538.01, Arizona Revised Statutes, as amended by section 6 of this act, applies retroactively to November 24, 2009.

C. Sections 4 and 8 of this act are effective retroactively to November 24, 2009.

Passed the House April 27, 2010,

by the following vote: 53 Ayes,

4 Nays, 3 Not Voting

Speaker of the House

(b)(6)

Chief Clerk of the House

Passed the Senate January 25, 2010,

by the following vote: 28 Ayes,

0 Nays, 2 Not Voting

President of the Senate

Secretary of the Senate

EXECUTIVE DEPARTMENT OF ARIZONA
OFFICE OF GOVERNOR
This Bill was received by the Governor this

_____ day of _____, 20____,

at _____ o'clock _____ M.

Secretary to the Governor

Approved this _____ day of

_____, 20____,

at _____ o'clock _____ M.

Governor of Arizona

EXECUTIVE DEPARTMENT OF ARIZONA
OFFICE OF SECRETARY OF STATE

This Bill was received by the Secretary of State

this _____ day of _____, 20____,

at _____ o'clock _____ M.

Secretary of State

**S.B. 1040**

SENATE CONCURS IN HOUSE
AMENDMENTS AND FINAL PASSAGE

Passed the Senate April 28, 20 10

by the following vote: 30 Ayes,

0 Nays, 0 Not Voting

President of the Senate

Secretary of the Senate

EXECUTIVE DEPARTMENT OF ARIZONA
OFFICE OF GOVERNOR

This Bill received by the Governor this

29 day of April, 20 10

at 9:40 o'clock A. M.

Secretary to the Governor

Approved this _____ day of

_____

at _____ o'clock _____ M.

_____
Governor of Arizona

EXECUTIVE DEPARTMENT OF ARIZONA
OFFICE OF SECRETARY OF STATE

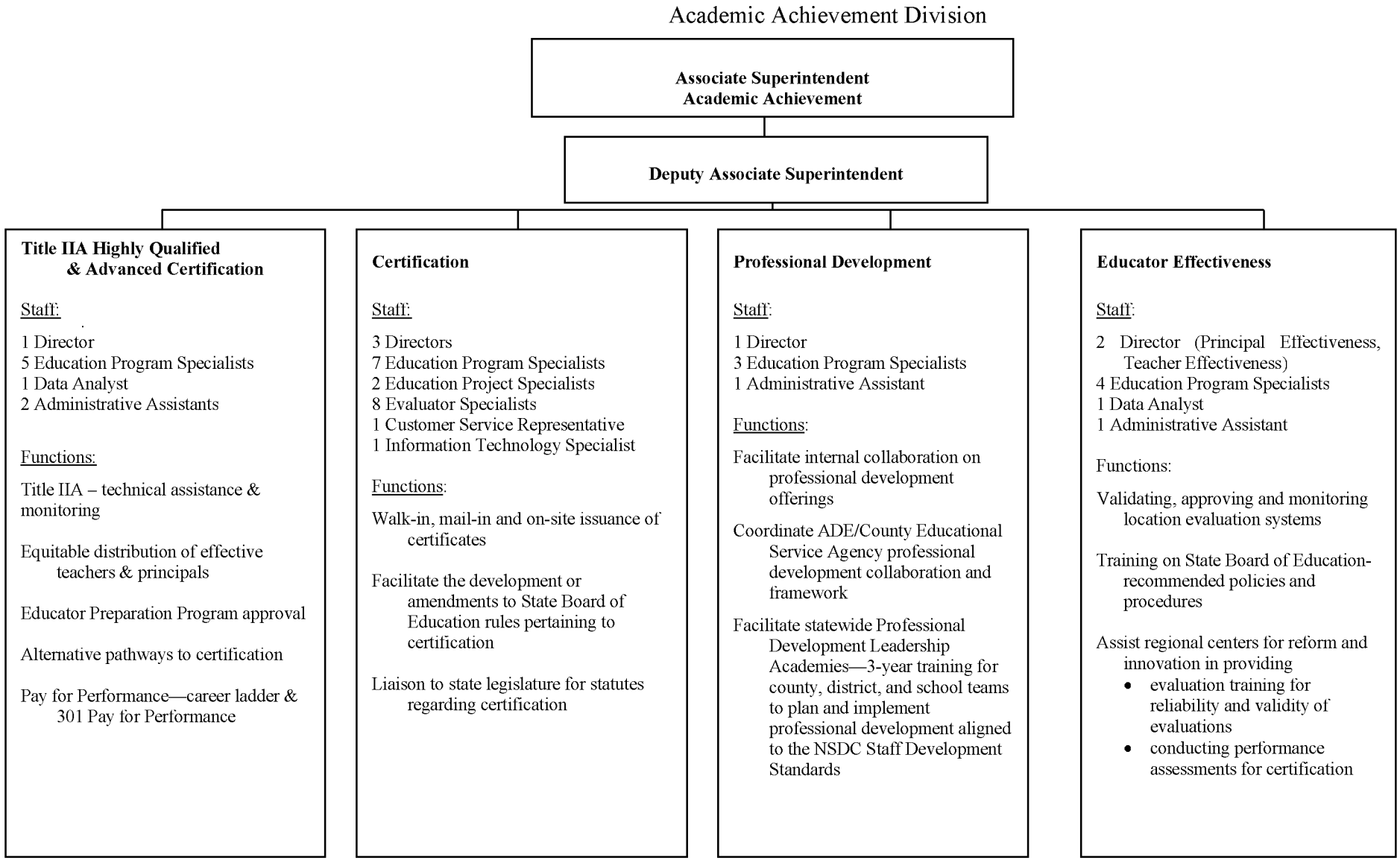
This Bill received by the Secretary of State

this _____ day of _____, 20_____

at _____ o'clock _____ M.

_____
Secretary of State

## Appendix (D)(2)-3 - Educator Effectiveness Unit



# Rodel Foundation of Arizona

## 2009 Rodel Exemplary Teacher Initiative Evaluation
## Executive Summary

Prepared by:
Dr. Robert K. Atkinson
Arizona State University, Tempe Campus

This summary reports the findings from on-going evaluation of Rodel's Exemplary Teacher Initiative. Multiple data collection methods and sources were used to address a set of seven research questions. These included: (a) analysis of current and archived achievement data; (b) classroom observations of RPST Graduates and a comparison group of comparable (in terms of years teaching and, if possible, grade level) teachers; (c) survey administered to RPST Graduates and a comparison group of comparable (in terms of years teaching and, if possible, grade level) teachers; (d) survey administered to principals of schools that currently employ RPST Graduates; (e) annual employment verification survey for RPST Graduates; and (f) interviews with Rodel staff.

Findings to date include:

1st. An analysis of the 2008 AIMS data indicates that the mathematics, reading, and writing pass rates for students in classrooms (grades 3 through 8) taught by RPST Graduates are significantly higher than the statewide pass rates for Arizona students in the same and similar schools as measured by their free and reduced lunch rates.

2nd. An analysis of the 2009 AIMS data indicates that the mathematics, reading, and writing pass rates for students in classrooms (grades 3 through 8) taught by RPST Graduates are significantly higher than the statewide pass rates for Arizona students in the same and similar schools as measured by their free and reduced lunch rates.

3rd. Principals reported very positive perceptions of RPST Graduates. When asked to judge their effectiveness relative to their non-RPST counterparts, they rated RPST Graduates as "more effective" 60% or more of the time across a set of attributes typically associated with successful teachers.

4th. RPST Graduates were observed displaying the characteristics of an effective teacher more often than their non-RPST peers.

a. For lesson planning, the RPST Graduates were more frequently observed (a) pacing their lessons appropriately to match the developmental levels/needs of the students and for the purposes of the lesson, (b) structuring the lesson to take into account prior knowledge of students, (c) clearly articulating the goal/purpose of the lesson (e.g., what students should gain/learn from lesson), and (d) modifying

the lesson as needed based on questioning or other student assessments more often than their comparison peers.

b. In terms of instructional strategies, the RPST Graduates were significantly more likely than the non-RPST teachers to (a) align instructional strategies with best practice, (b) to assess for understanding and re-teach if necessary, (c) connect lesson content to students' lives/experiences; (d) differentiate instruction for multiple learners; (e) explain the significance/importance of the lesson to the students (connections to other materials/life-long learning); (f) provide meaningful activities/experiences, and (g) value diversity, multiple perspectives, and individual strengths.
c. In terms of maintaining high expectations, the RPST Graduates were significantly more likely than the non-RPST teachers to (a) express enthusiasm for student learning, (b) model/demonstrate expectations, (c) provide clear expectations, and (d) maintain a classroom environment where students express enthusiasm for learning.

5th. Rodel staff report that the most critical and challenging components of the initiative include: (a) mentor teacher (RET) selection, (b) mentor teacher retainment, (c) RPST selection, (d) faculty supervisor involvement, and (e) the seminars.

6th. According to an anonymous teacher survey, RPST Graduates and the non-RPST comparison teachers differed significantly on a number of indicators of job satisfaction.

a. RPST Graduates were significantly less likely to indicate that level of student misbehavior in their schools interfered with their teaching.
b. RPST Graduates were significantly less likely to indicate that they planned to pursue a change of careers.
c. RPST Graduates reported a significantly higher level of effort to coordinate the content of their courses with that of other teachers.
d. RPST Graduates were also significantly less likely to agree than their peers with the suggestion that their colleagues shared their beliefs and values about what the central mission of their school should be.
e. The RPST Graduates were significantly less likely to agree that their school's principal (a) talks to them frequently about their instructional practices, or (b) effectively communicates to the staff the kind of school he/she wants.

7th. According to the responses collected to date on the Annual Employment Verification survey, 96% of the RPST Graduates that have completed their three-year commitment continue teaching in high-need schools in contrast to the national average of 50%.


# The State of Teacher Preparation Programs in Arizona

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## Year Two Results from the Teacher Preparation Research and Evaluation Project (T-PREP)

By:

Joshua H. Barnett, Audrey Amrein-Beardsley, & Mari Koerner

Arizona State University

September 1, 2009

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## Preface

### About the Authors

**Joshua H. Barnett** is the Director of the T-PREP and Assistant Professor at Arizona State University. His areas of research interest include educational policy, teacher quality, school finance, school discipline and safety, and research methods. He earned his Ph.D. in Public Policy from the University of Arkansas.

**Audrey Amrein-Beardsley** is an Assistant Professor at Arizona State University, College of Teacher Education and Leadership and also serves as the Co-Principal Investigator of T-PREP. Her areas of research interest include educational policy, research methods, teacher quality and tests and assessments. She received her Ph.D. in Educational Policy from Arizona State University.

**Mari Koerner** is the Dean and Professor of the College of Teacher Education, and Leadership at Arizona State University, Director of University Teacher Preparation and Principal Investigator of T-PREP. Her areas of research are teacher education focusing on issues of diversity and clinical experiences. She received her Ph.D. in Curriculum and Instruction from the University of Illinois at Chicago.

### Acknowledgements

We would like to thank Shondra Schaeffer, Amanda Burke, Carole Greenes, Daniel Kain, Debra Raeder, Donald Houde, Elaine Surbeck, George Hynd, Heidi Blair, Ida Malian, James Middleton, Jan Amator, Kathryn Hildebrand, Mark Nichols, Patricia Schneider, Patty Hardy, Ron Marx, Sally Hurwitz, Sam DiGangi, Sarah Hudelson, Sybil Francis, Thomas Fetsco, and Walter Doyle for their contributions to this project.

We also appreciate the generous support for the project from the Arizona Community Foundation and the Arizona State University President's Special Initiative Fund.

## Executive Summary

Do teachers matter? This question was posed by Director of the Institute of Education Sciences Grover J. Whitehurst at the 2002 *White House Conference on Preparing Tomorrow's Teachers*. Director Whitehurst compared the evidence on the importance of teachers from the 1966 landmark Coleman study to the ongoing value-added debates. He concluded that teachers do, in fact, matter, but that the variation in teacher quality needs to be greatly reduced.

The Teacher Preparation Research and Evaluation Project (T-PREP) responds directly to the charge by Director Whitehurst by working to ensure every student in the state of Arizona is taught by a highly qualified teacher. This lofty goal will be accomplished through the active involvement of researchers, practitioners, and policymakers. The development of this project has taken numerous hours of conversation and consideration, and the fruits of these labors are beginning to mature.

T-PREP began as an outgrowth of the teacher development council at Arizona State University, which included all colleges of education led by Dr. Gene Garcia, Dr. Jim Middleton, and a partnership with Teachers for a New Era (TNE). The principles of TNE served as a foundation for developing T-PREP.

During the first year, project leaders made three significant accomplishments. First, in the spring and fall 2007, a network of collaborators was identified to participate in T-PREP. This collaboration included representatives from the three colleges of education at Arizona State University; the college of education at Northern Arizona University; the college of education at the University of Arizona; the Arizona Department of Education; the Arizona Community Foundation; the Arizona State University President's Office; and the Arizona Governor's P-20 Council. The second accomplishment occurred during the fall 2007 and spring 2008, when a theoretical framework – the Seven Wonders of the Work – was developed. The result of this framework led to the third accomplishment – the development and administration of the pilot exit survey at Arizona State University in the spring of 2008.

With the foundation cemented in the first year, the second year provided more insight and expansion through four key accomplishments. First, the three existing divisions of education (two colleges and one school) at Arizona State University were consolidated into one college, which allowed for an economy of scale in using resources, providing consistent coursework and experiences, and reaching all students and potential employers with a unified message. Second, the project was expanded to include an entry survey, pilot an electronic institutional recommendation, and design a "milestones" project where all information related to students graduating from the colleges of education are housed in an online location rather than hardcopies. Third, a concept map was created (pg. 23) for evaluating the college(s) of education and addressed the details of the data collection, analysis, and dissemination of such evaluations. Fourth, in its second year, T-PREP began receiving national recognition through the publication of articles, national conference papers, and attending national working groups (e.g. Academy for Educational Development).

While these large-scale accomplishments directly advance the goal of transforming colleges of education holistically, this project has also provided a wealth of information to improve the day-to-day operations and formative decisions within the colleges of education.

This information stems from the growing amount of insight solicited from student exit surveys – nearly 1,800 graduating pre-service teachers have been surveyed since spring 2008. With this ever-increasing sample, some consistent results are emerging that highlight some of the strengths and weaknesses of teacher preparation programs, including:

1. Overall, students consistently report being well prepared for the teaching field.
    a. Responses indicate that students graduating with their initial teacher certification from Arizona State University, Northern Arizona University, and the University of Arizona believe their programs prepare them well for the teaching field; they believe their faculty are experts in the field of education and are committed to teacher preparation; and they believe their programs are of high quality.
    b. Responses indicate that programs are preparing students in connection to the Five Core Propositions of the National Board for Professional Teaching Standards.
2. 98% of students report being confident in their ability to use technology in the classroom (44% completely confident; 37% very confident; 17% somewhat confident).
3. Over 90 percent of all respondents indicated that they anticipate teaching for more than five years.
4. Respondents expressed strong desires regarding their future employment, including:
    a. A stronger desire for good benefits than a high salary.
    b. To work in a school near their home.
    c. To work in a public school.
5. Students also provided valuable information to improve their education. Specifically, students request a stronger connection between their coursework and internships – connecting their training to practice; consistency among information providers (e.g. instructors, advisors, field experience); and more subject area expertise.

Colleges of education in Arizona are already responding to these requests from students and utilizing this information by aligning programs internally and communicating with field experience placements; streamlining the coursework, advising, and field experience requirements and reporting; and considering how the colleges of arts and sciences may provide more content courses for pre-service teachers.

This project continues to be a flagship in teacher preparation reform, and year three will further highlight the significant progress made towards understanding the needs of students and responding to those needs to improve the education, practice, and confidence of teachers in Arizona, which will ultimately benefit the students and state of Arizona.

*For more information about T-PREP, please visit http://tprep.asu.edu or contact Joshua Barnett at (602) 543-6344 or jhbarnett@asu.edu.*

**The State of Teacher Preparation Programs in Arizona: Year Two Results from the Teacher Preparation Research and Evaluation Project (T-PREP)**

As a reminder, four significant accomplishments were completed during the first year of the project - creating a network, creating a theoretical framework, developing and administering a pilot exit survey, and selecting a Director. The second year (2008-09) of the Teacher Preparation Research and Evaluation Project (T-PREP) was challenging and rewarding, as further actions were taken to understand and evaluate teacher preparation at the Arizona Board of Regents (ABOR) universities, including Arizona State University (ASU), Northern Arizona University (NAU), and the University of Arizona (UA).

In year two of this project, we accomplished, witnessed, and helped facilitate four important goals toward reshaping teacher preparation in Arizona. First, Arizona State University leaders reorganized the previous three divisions of education – College of Education and Teacher Leadership, Mary Lou Fulton College of Education, and the School of Educational Innovation and Teacher Preparation - into a single college with common leadership, common goals, and common courses and practices. This transition was paramount to moving T-PREP forward, and the information provided by T-PREP contributed to this transition.

Second, a thorough debriefing meeting was held with the deans from ASU, NAU, and the UA. At this spring meeting, a conceptual map (Figure 1 – pg 23) was established to help explain the goals and process of accomplishing the goals of T-PREP, the data collection, analysis, and dissemination of T-PREP products was determined, and the project was expanded to involve more than attitudinal data.

Third, the first administration of the entry survey was piloted at Arizona State University in the spring 2009 to incoming students. The entry survey provides a needed tool to understand and compare the perceptions of students entering and exiting the ABOR colleges of education, which will be used to improve instruction and opportunities for students.

Fourth, T-PREP is serving as a model for other states, colleges, and researchers to determine the impact of their teacher education programs. In 2008-09, three academic journal articles were submitted using the framework and analysis of the project, four professional conference presentations were delivered, another five conference papers were submitted for professional conferences in 2009-2010, and the Dean of the college of education at ASU and T-PREP Director attended Academy for Educational Development meeting in Washington, DC. T-PREP was included in the proceedings from this meeting and publicized to colleges and universities across the nation.

Beyond these accomplishments, T-PREP also contributed to two large-scale projects with collaborators from the Arizona Department of Education, including: the development of the electronic institutional recommendation – a multi-year project being piloted with ASU, and the development of the "milestones" project at ASU, where information for all graduates from ASU's colleges of education after 2003 were loaded onto electronic databases rather than existing in paper copy only. These two projects will facilitate a much more reliable and streamlined approach to reporting information about graduates.

All of these accomplishments were done through the extraordinary collaboration created through the first year of the project, which includes the colleges of education in the three state universities, the Arizona Department of Education; the Arizona Community Foundation; the Arizona State University Presidential Initiatives; and the Arizona Governor's P-20 Council.

The remainder of this report provides a description of the history and development of T-PREP, the results to date of this project, and the future steps anticipated for year three. The report consists of seven sections.

1. Section I provides the rationale for T-PREP, including a brief history of teacher education, an overview of the challenge of reforming current teacher education, and a description of the efforts to reform.
2. Section II expands on the existing literature and offers the theoretical framework for T-PREP.
3. Section III describes the status of the project, including a timeline of activities and meetings.
4. Section IV explains the development and results of the exit survey administered in spring 2008, fall 2008, and spring 2009.
5. Section V presents the plan for the third year of T-PREP.
6. Appendix A is the exit survey.[1]
7. Appendix B is the results of the exit survey by survey item.

## Section I: Rationale and Framework for Studying Teacher Preparation

The state of the nation's public school system is one of the top domestic concerns of the American public (Yinger, 1999). Since the release of *A Nation at Risk* (U.S. Department of Education, 1983) and more recently the enactment of No Child Left Behind (2002), states, schools, administrators, teachers, and students are being held responsible for nearly everything they do using standardized test scores, in almost complete isolation of other indicators of educational quality. And composite test scores are being publicly posted, ranked, and communicated via state report cards to coerce, entice and even scare schools into meeting higher standards of learning.

In 1998 at around the same time and in-line with the government's standards-based accountability initiatives, the Higher Education Act (HEA) was reauthorized. New Title II provisions were devised to help states revise teacher certification processes, advance alternate entry paths to becoming a teacher, and hold teacher preparation programs accountable for the teachers they graduate. Programs in higher education were to be held responsible for their impact on student learning via ranking mechanisms and state report cards, much like in the NCLB legislation, using graduates' teacher licensure test scores and the standardized test scores of their graduates' public school students (Cochran-Smith, 2001, 2004, 2005; Cochran-Smith & Fries, 2001; Darling-Hammond, 2006a, 2006b; Hamel & Merz, 2005). These standards and stronger

[1] The results of the entry survey, which follow closely with the exit survey, are withheld from this report since the entry survey was only piloted at time of publication.

accountability policies, in addition to other federal policies based on "rigorous scientific research" and "evidence" (Cochran-Smith, 2004), are forcing teacher preparation programs to hold themselves accountable for the quality of the teachers they prepare, who in turn impact student learning and achievement within America's public schools.

## The Current State of Teacher Education

America has over 1,200 schools of education which graduate approximately seven percent of all students with Bachelor's and 29 percent of all students with Master's degrees (Rubenstein, 2007). Yet while some insist that teacher training has everything to do with teacher quality (Darling-Hammond, 2006a,b; Darling-Hammond & Sykes, 2003; Shulman, 1988; Wilson, Floden, & Ferrini-Mundy, 2002) others argue the opposite (Harris & Sass, 2007) or that "very little is known about if and how teacher education affects practice" (Good, McCaslin, Tsang, Zhang, Wiley, Rabidue, Bozack, & Hester, 2006, p. 411). This perceived, and potentially real, lack of high-quality research is contributing to the alleged uselessness of teacher education, is adding to the sense of urgency to determine what it is teacher preparation programs are doing, and is helping to perpetuate the ever-present faith in state and federal policymakers to solve the "problems" within education, in this case teacher education (Levine, 2008; Selingo, 2008).

Yet predominantly there are policymakers who continue to question whether teacher education is legitimate and necessary, or a broken down bureaucratic system in need of major repair. They question whether teaching is as easy as it looks or in actuality requires formal professional training, specifically in pedagogy, and question whether experience in the classroom matters more. They also question whether traditional teacher preparation programs actually educate high quality teachers who promote student learning in America's public schools (Cochran-Smith, 2001; Cochran-Smith & Fries, 2001; Darling-Hammond, 2006a,b; Darling-Hammond & Sykes, 2003; Good et al.2006; Hamel & Merz, 2005; Harris & Sass, 2007; Hoffman, Roller, Maloch, Sailors, Duffy, & Beretvas, 2005; Kennedy & Bush, 1976; Noell, 2006; Rubenstein, 2007; Russell & Wineburg, 2007; Saracho & Spodek, 2007; Schalock, Schalock, & Myton, 1998; Wenglinsky, 2002; Wilson et al., 2002; Wineburg, 2006; Yinger, 1999; Yinger, Daniel, & Lawton, 2007; Yinger & Hendricks-Lee, 2000).

Because of the public role education plays in a democracy and because as a public enterprise, education is not held to market forces subject to rewards and punishments, standards, nor the quality controls inherent in other professions (Ball, 2008; Cochran-Smith, 2005, 2001; Cochran-Smith & Fries, 2001; Hamel & Merz, 2005; Yinger & Hendricks-Lee, 2000), gauging the effects of nearly everything measurable is becoming the norm across education programs and processes (Cochran-Smith, 2005, 2004, 2001). Now it is time for teacher preparation programs to engage, follow suit, and hold themselves accountable for that which they do – prepare quality teachers – particularly if traditional colleges of education are to save themselves from potential elimination or replacement by alternative teacher preparation paths (Harris & Sass, 2007). It is time to help legitimize the field, in some ways to save it.

Members of teacher preparation programs need to remember that as members of public institutions they should be held accountable, and should hold themselves accountable for that which they do. They should also help to collectively frame the ways in which this occurs. A

democratic approach built on a culture of evidence is preferable (Wineburg, 2006), as collaboration among multiple groups of stakeholders will produce better results than isolated efforts localized at the programmatic level. In other words, addressing the need to hold themselves accountable and doing so proactively, instead of allowing others to hold them accountable, will enhance the probability that the models devised and used to conduct this research are appropriate and useful for summative and formative purposes, and ultimately the legitimization and advancement of the field.

### *Easier Said than Done*

It has been approximately 40 years since Coleman and his colleagues (1966) posited that schools and teachers have little to do with what students learn in school. Just recently, approximately 40 years since, the educational research community has finally come to consensus that teachers do in fact cause increases, and probably the most significant increases, in student learning and achievement of all education variables (Berry, Fuller & Reeves, 2007; Boyd, Grossman, Lankford, Loeb, Michelli, & Wyckoff, 2006; Cochran-Smith, 2005, 2004; Darling-Hammond & Sykes, 2003; Wenglinsky, 2002; Yinger & Hendricks-Lee, 2000).

$$Y_{Teacher} \rightarrow Z_{Student1}, Z_{Student2}, Z_{Student3}, \ldots$$

Examining the influence of an additional variable in this trajectory - the teacher preparation program - teacher preparation personnel are now to investigate how well their programs prepare teachers and how well their graduates promote student learning and achievement in America's public schools.

$$X_{TeacherPrepProgram} \rightarrow Y_{Teacher} \rightarrow Z_{Student1}, Z_{Student2}, Z_{Student3}, \ldots$$

There are at present three units of analysis to link empirically and causally, although likely impossible (Cochran-Smith, 2004), without much of an idea about how to do so or how much of a teacher's impact on student learning can be attributed back to the teacher preparation unit. Understanding the relationship between teacher preparation and student achievement is fraught with difficulty, and although some states are making progress, very little research has been done to help satisfactorily explore this relationship. Very few models exist from which reliable and valid methods of inquiry can be culled to conduct these investigations (Boyd et al., 2006; Darling-Hammond, 2006a; Hamel & Merz, 2005; Harris & Sass, 2007; Kennedy & Bush, 1976; Russell & Wineburg, 2007; Saracho & Spodek, 2007; Schalock et al., 1998; Starkman, Bellis, & Olsen, 1979; Wenglinsky, 2002; Yinger & Hendricks-Lee, 2000).

This is largely due to three main issues which complicate and contaminate empirical investigations following this model. First, the model is inappropriately one-dimensional. More than 50% of college graduates attend more than one institution of higher education before receiving a bachelor's degree (Ewell, Schild, & Paulson, 2003), and approximately 60% of teacher preparation occurs in general liberal arts and other academic departments, outside of teacher preparation colleges. There are many more variables that contribute to teachers' knowledge by the time they graduate than just the teacher preparation program. When evaluating teacher preparation programs, universities and colleges of liberal arts and sciences must be willing to hold themselves partly accountable for the preparation of teacher graduates (Anrig,

1986; Anrig, Goertz, & Clark, 1986; Darling-Hammond & Sykes, 2003) and work with colleges of education to improve overall program quality, specifically in instruction in content (Wilson et al., 2002; Yinger & Hendricks-Lee, 2000).

Second, the model is overly simplistic given the non-randomness of the teacher candidate population. The types of students who enter certain types of teacher preparation programs and the personality characteristics they bring with them present another challenge. Self-selection, a traditional measurement threat to validity, occurs when groups of people at the focus of empirical research are distinctly different from the group(s) to whom they are compared. If teacher candidates who enroll in a traditional teacher preparation program are arguably different than teacher candidates who enroll in an alternative program, and both groups are compared once they become teachers, one group might have a distinct and unfair advantage over the other. This may occur not because they are better teachers or were better prepared by either preparation program, but because of the personal characteristics they brought with them to the profession. What cannot be overlooked, controlled for, or dismissed from these investigations are teachers' enduring qualities – whether they are caring, dedicated, motivated, persevere, sensitive, respectful, etc., as these characteristics are positively related to teacher effectiveness (Boyd et al., 2006; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2007; Carroll, 1963; D'Apollonia & Abrami, 1997; Feldman, 1976, 1998; Harris & Sass, 2007; Marsch, 1982; Shulman, 1988; Starkman et al., 1979; Wenglinsky, 2002).

This issue is complicated further by the non-random distribution of teachers into schools after graduation. The type of teacher preparation program from which a student graduates is highly correlated with the type and location of the school in which the teacher enters the profession (Good et al., 2006; Harris & Sass, 2007; Rivkin, 2007; Wineburg, 2006), especially given the geographic proximity of the program to surrounding school districts and the types of schools in which student teachers are placed. This presents another challenge. If a certain teacher preparation program is located in a relatively affluent area, and if graduates from this program become teachers in its surrounding schools, they will have a distinct and unfair advantage over graduates from the same or other programs who teach elsewhere, possibly in high-needs schools. Because of the non-random distribution of teachers, teachers who choose to teach in lower needs schools are sometimes falsely given credit for having more success with their students than teachers in higher needs schools, simply because of the type of students resident in the schools in which they took teaching positions. Without randomly distributing teachers across districts and schools, comparison groups will never be adequately equivalent or similar enough, as assumed in this model, to warrant valid assertions about teacher preparation program quality (Boyd et al., 2006; Good et al., 2006).

This issue is complicated again by the non-random placement of students into classrooms. Sometimes the "best" teachers are more likely to have some of the brightest students in their classes because of students who self-select into these classes, parents who assertively request certain teachers for their children, and other local or ability-tracking placement procedures. On the flip side, sometimes the best teachers are assigned some of the most difficult-to-teach students because school personnel believe that high quality teachers will have the greatest impact on the students who need them most (Clotfelter, Ladd, & Vigdor, 2007; Rivkin, 2007). Students' "innate" abilities bias even the most basic examinations in which researchers attempt to link

teachers with student learning (Harris & Sass, 2007; Rivkin, 2007). Without randomly assigning students to classes, teachers' classes will never be adequately equivalent, again as assumed in this model.

It is complicated once again by what teachers learn "on the job" post graduation. If researchers are to measure the impact of a teacher preparation program using student achievement, and graduates have received professional development and enrichment opportunities since graduation, researchers must deliberate whether it is even feasible to disentangle the impact that professional development versus teacher preparation has on teacher quality and their students' learning over time. Graduates' opportunities to learn on the job, and the extent to which graduates take advantage of such opportunities, introduces yet another source of construct irrelevant variance (CIV) into, what seemed to be, the so theoretically simple model presented earlier (Good et al., 2006; Harris & Sass, 2007; Rivkin, 2007; Starkman et al., 1979; Wenglinsky, 2002; Yinger et al., 2007).

Other sources of CIV must also be considered. These include whether teacher effectiveness can be appropriately assessed if teachers (a) teach in multi-grade classrooms, (b) team teach with another more or less effective teacher, (c) teach smaller classes as negatively correlated with student achievement (Clotfelter et al., 2007), and (d) have access to different types of resources or technologies. For students, whether they (e) switch schools or teacher(s) mid-year and/or (f) take more than one class in a certain subject area simultaneously or within the same school year, particularly prevalent in high school, must also be taken into consideration. Within this model it is very important to test and determine whether the sophisticated statistical controls local researchers might use to eliminate or minimize self-selection threats and CIV are adequate enough to make valid inferences about teacher and teacher preparation quality.

Third, this model is problematic because it is built almost entirely based on students' standardized test scores as indicators of teacher's program quality. Students' standardized test scores, usually aggregated at the classroom, school, district, and state levels, are being used as the main and too often only measure of student learning and achievement. This practice contradicts what every professional organization in educational and psychological measurement recommends (AERA, APA, NCME, 1999).

Standardized test scores are based on a narrow, over-simplified definition of what makes an effective teacher (Berliner, 1976; Boyd et al., 2006; Cochran-Smith, 2005, 2004, 2001; Good et al., 2006; Hamel & Merz, 2005; Kern, Sherman, & Conte, 2004; Noell, 2006; Rivkin, 2007; Rubenstein, 2007; Russell & Wineburg, 2007; Stake, 1967; Wineburg, 2006). Additional points of contention include whether a 40-50 item multiple-choice test can capture the breadth and depth of information included within state standards; whether tests on which students may select correct answers from those provided can accurately assess students' abilities to think critically or solve contextual problems; whether measures of student achievement should privilege test performance in math, reading and writing; whether teachers who teach non-tested grades (usually PreKindergarten through grade 2 and grades 11 and 12) should be exempt from being held accountable for their students' learning; whether tests can accurately measure educational effectiveness after test technicians manipulate test items and remove those that too many students answer correctly, even if the items were taught well; whether constructivist teachers

who teach critical thinking and problem solving should be penalized for not teaching multiple-choice types of facts and knowledge; and, most importantly, whether indeed test scores embody much more than students' demographic and environmental backgrounds. Standardized tests are also highly susceptible to score-boosting practices educators and administrators sometimes use to artificially increase scores, most recently under high-stakes testing pressures.

There are some who ignore these challenges, however. Predominantly econometricians and "value-added" proponents continue to promote and advance their "more sophisticated" models and too often minimize the problems and issues with conducting the research presented herein (Boyd et al., 2007; Russell & Wineburg, 2007). Their models are based on "heroic" sets of assumptions that do not adequately address the aforementioned threats to validity, sources of CIV, or all of the other complexities inherent in quasi-experimental studies such as this. Even the "most sophisticated" model will never hold up if valid inferences are to be made in the ways theorized. And never will this research be done without these "heroic" sets of assumptions unless random sets of college students are forced to become teachers, teacher graduates are randomly assigned to randomly selected schools, and students are randomly assigned to classrooms within these schools.

The most dominant econometric model is being advanced through New York's Teacher Pathways Project which involves 75 teacher preparation programs at 20 major teacher education institutions. Econometricians are beginning to identify effective traditional and alternative teacher preparation practices by their graduates' students' levels of achievement. They are also using survey research methods to conduct more descriptive investigations (Boyd et al., 2007).

The most dominant value-added model is being advanced by Battelle for Kids, the non-profit backing William L. Sanders' Education Value Added Assessment System (EVAAS). They are now funding the Teachers Connecting Achievement & Progress (T-CAP) initiative (Berry et al., 2007) in which Sanders and his SAS colleagues are beginning to examine how teacher preparation programs support the development of quality teachers, as defined by gains in their students' achievement over time. Yet this system has additional issues worth mentioning briefly, especially when results are used to make high-stakes decisions: (1) It measures teacher effectiveness by error or deviation from mean trends (Boyd et al., 2006; Rivkin, 2007; Medina, 2008); (2) It oversimplifies significant issues pertaining to missing data; (3) Only teachers whose class sizes are above an arbitrary number are included in analyses - this limitation alone excludes special education teachers from being included in such investigations; (4) The residual effects one teacher might have on the next are not adequately contained; (5) It is based on the assumption that students regardless of IQ or levels of social capital learn at identical rates over time; and (6) It is the only model which does not control for student background variables. It does so implicitly through an over reliance on covariates (Amrein-Beardsley, 2008; Rivkin, 2007; Russell & Wineburg, 2007).

### *Yet Progress is Being Made*

Several states are showing progress and making advances towards examining these relationships, some in more ways than others. Regardless, this important work has commenced. Louisiana was the first state to begin linking student learning to teacher preparation programs through its

Louisiana' Teacher Quality Initiative and is widely perceived as the most advanced state with the most advanced, albeit traditional model thus far - a value added model which permits the ranking of teacher preparation programs using graduates' students' test scores (Berry et al., 2007; Cochran-Smith, 2005; Hamel & Merz, 2005; Noell, 2006; Russell & Wineburg, 2007; Wineburg, 2006).

California State Universities' Center for Teacher Quality (CTQ) which has been endorsed and funded by the Carnegie Corporation of New York built a Mosaic to help them examine the impact of all 23 University system's teacher graduates on their students learning and achievement. Value-added models using standardized test scores are being supplemented with alternate measures of student learning across core and non-core subjects. Surveys administered to graduates and their employers are being used as well as teaching performance assessments (Center for Teacher Quality, 2007; Russell & Wineburg, 2007).

Within the same state, Stanford and 29 other California universities are working on a Performance Assessment for California Teachers (PACT) project. They are using survey and interview research methods to assess what candidates feel they have learned in their programs and are assessing student learning using pre and posttests, work samples, employer surveys, clinical observations, and a validated teacher performance assessment largely modeled after the National Board for Professional Teaching Standards (NBPTS) Core Teaching Propositions (Darling-Hammond, 2006a; Rubenstein, 2007).

Ohio's Teacher Quality Partnership (TQP) involves all 50 colleges and universities within the state and is using Sanders' value added methodology and other qualitative methods to determine the impact of its teacher preparation programs on student learning and achievement (Berry et al., 2007; Cochran-Smith, 2005; Russell & Wineburg, 2007; Yinger et al., 2007).

In Virginia, through its Virginia Improves Teaching and Learning (VITAL) program, the state has linked its teachers to their students. They are examining data provided by universities and collected via surveys sampling prospective, current, and graduated teachers, their employers, and school partners across colleges of education to examine the effectiveness of their teacher preparation programs (Berry et al., 2007; Russell & Wineburg, 2007).

Western Oregon University has been measuring its graduates' students' learning since the late 1980s and has been recognized as a leading institution on the topic (Cochran-Smith, 2001). The University of California Los Angeles (UCLA) and the University of Chicago, Illinois are tracking and evaluating the effectiveness of their graduates who teach in high-needs schools (Cochran-Smith, 2005). Thirty universities in Texas have joined efforts and developed the Center for Research, Evaluation, and Advancement of Teacher Education (CREATE) to systematically evaluate program quality, effectiveness, and impact (Russell & Wineburg, 2007).

In South Carolina these efforts will commence in the 2008-2009 year, most importantly to evaluate how well graduates are prepared to teach in high-needs schools and content areas in high demand (South Carolina General Assembly, 2007). In Arizona as well, efforts have commenced through the three public state universities' Teacher Preparation Research and Evaluation Project (T-PREP). University personnel and multiple sets of educational leaders and

stakeholders are beginning to develop an assessment model by which the effectiveness of the state's preparation programs can be meaningfully assessed, most likely through cohort, longitudinal analyses.

The Elementary Education program at Alverno College in Wisconsin is one of four colleges that has been recognized by the U.S. Department of Education for its standards-based efforts to professionalize their teacher preparation program and its performance-based assessments to measure program quality. Other preparation programs recognized include East Carolina's Middle School Mathematics program in North Carolina, Fordham University's Initial Teacher Education Elementary Program in New York, and Samford University's Elementary Education Program in Alabama (IES, 2003; see also Dean, Lauer, & Urquhart, 2005). Central Michigan University has also been acknowledged with the American Association of State Colleges and Universities (AASCU) Christa McAuliffe Excellence in Teacher Education Award, granted for its Michigan Schools in the Middle program in which college personnel effectively demonstrated the impact their graduates had on their grade 7 and 8 students' learning in high-needs schools (Wineburg, 2006).

Following this trend of state reforms, several universities have partnered with private initiatives, including the Teachers for a New Era (TNE)[2], a project developed by the Carnegie Corporation of New York, the Annenberg Foundation, and the Ford Foundation. This initiative is working with thirty institutions, including Boston College, Florida A&M University, Michigan State University, Stanford University, and the University of Virginia.

All of these initiatives and projects are aimed at reforming the traditional teacher training method. The expectation is that these reforms will greatly improve the way the next generation of teachers are prepared. However, before reforms can be properly envisioned, a thorough understanding of the existing system is needed. The next section discusses the various traditional and non-traditional methods used by the majority of the three million teachers currently teaching in America's schools.

## Traditional Methods and Measures

The methods these states, and other states not mentioned, are using are worth noting as their successes and failures can help other states learn how best to approach this research. In terms of traditional methods, teacher preparation units are all using similar, measures and instruments to evaluate program effectiveness at multiple levels before candidates enter programs, during candidacy, and after graduates teach in the field for a certain numbers of years.

Incoming data collected include candidate demographics, particularly to assess whether colleges are recruiting and retaining underrepresented teacher candidates; candidates' high school GPAs, SAT/ACT scores and/or community college GPAs; higher education credits and grades earned in content and other areas; and scores from program pre-licensure tests and writing assessments.

[2] Teachers for a New Era have provided foundational assistance with the development of the T-PREP. TNE (http://www.teachersforanewera.org/) is committed to improving the education for K-12 students by ensuring the preparation of teachers across the nation.

Within program data include continuation ratios defined by candidates who enter and ultimately graduate from preparation programs; early exit interviews to determine why teachers leave programs prematurely if they choose to do so; courses taken and grades earned; portfolio entries including fieldwork activities (Hamel & Merz, 2005); and other pre-student teaching field experience information, as positively related to teacher quality once in the profession (Hoffman et al., 2005; Rubenstein, 2007; Wilson et al., 2002).

Student teaching data most often collected include field or clinical experience data, again important as related to teacher quality once in the field; portfolio entries in which teachers document their impact on student learning and growth in achievement during student teaching (Hamel & Merz, 2005); supervisor and candidate observational records; exit interviews once candidates complete student teaching; and graduation ratios.

After pre-service teachers graduate, data most often collected include teacher licensure test pass rates and scores; state certification data including "highly qualified" distinctions awarded (Anrig, 1986; Clotfelter et al., 2007; Schalock & Myton, 1988; Shulman, 1988; Wenglinsky, 2002; Wilson et al., 2002); data to determine whether, how many, and why individuals who graduated from teacher preparation programs did or did not enter teaching as a profession (Alastuey, Justic, Weeks, & Hardy, 2005); job interview, type, and frequency information; and professional entry information (school type, student demographics, salaries, school location) particularly as it is more necessary now than ever to track program graduates into the field.

Novice teacher data accumulated include data collected one to three years before teachers receive tenure; mentoring, induction, and professional development records (frequency and type), supervisor/administrator observations of teachers teaching (see, for example Stake, 1967); and recommendations for continued employment. Similar data are also collected post tenure, usually up until five years of teaching in the field. It seems the increased benefits of teacher training usually wear off after five years of teaching (Darling-Hammond, 2000), and gathering teacher graduate data from one to three years and once again after five years in the field is in line with the general trends (Russell & Wineburg, 2007; Thompson & Smith, 2005; Wineburg, 2006; Yinger et al., 2007).

Important to note is that as part of the national Data Quality Campaign, state policymakers are beginning to develop, improve, and increase access to educational data and longitudinal data systems. This is being done to help teacher preparation programs better track the trajectories their graduates take in the field and access these data more easily for research purposes (Data Quality Campaign, 2006; see also Berry et al., 2007; Guidera, 2006; Russell & Wineburg, 2007). Although some argue that the extent to which progress is being made on this end is tentative, particularly due to a general lack of collaboration between higher education agencies and departments of education responsible for warehousing these data (Ewell & Boeke, 2007).

In short, it makes more sense in theory, particularly to policy makers and other public officials (Cochran-Smith, 2005), to evaluate the impact that teacher preparation programs have on the learning and achievement of their graduates' students using traditional measures of inquiry including standardized tests (see for example Medina, 2008). But to conduct these examinations

correctly and to conduct them in valid ways, examinations must also include more diverse and complex methods of inquiry and evaluation given the very complicated, socially imbedded, not easily understood, dynamic nature of schooling and the schooling of teachers.

## Non-Traditional Methods and Measures

Traditional quantitative methods must be mixed with multiple qualitative methods to capture holistic answers to these complex questions (Boyd et al., 2006; Cochran-Smith, 2005; Darling-Hammond, 2006a; Denner, Salzman, & Harris, 2002; Hamel & Merz, 2005; Russell & Wineburg, 2007; Stake, 1967; Starkman et al., 1979; Wilson et al., 2002; Yinger et al., 2007; Yinger & Hendricks-Lee, 2000). To conduct such investigations evaluative models should be situated, context-rich, process oriented, highly descriptive, and based on fewer, in-depth, intensive examinations.

For teachers, useful data seem to be teacher portfolios in which teachers document their impact on student learning and growth in achievement (Hamel & Merz, 2005); teacher efficacy studies which are correlated with student achievement (Darling-Hammond, 2006a); teacher case study analyses in which teachers respond to hypothetical yet potentially real situations and scenarios within richly described contexts (Darling-Hammond, 2006a; Denner, Miller, Newsome, & Birdson, 2002; Stake, 1967); teacher performance assessments requiring demonstrations of content knowledge and effective pedagogy (Darling-Hammond, 2006a; Denner, Norman, Salzman, & Pankratz, 2003; Goldrick, 2002; Good et al., 2006; Rubenstein, 2007; Russell & Wineburg, 2007); classroom observations of practice (Stake, 1967); video portfolios; lesson plan analyses; teacher reflection and perception surveys, although methodologically limited in different ways (Darling-Hammond, 2006a; see also Ma & Rada, 2005); and teacher interviews/focus groups (Stake, 1967).

In addition, supervisor/administrator satisfaction surveys, opinionnaires, and observational data are being collected as well as peer-review data. One additional important question to ask is whether school administrators take into consideration where a teacher was prepared when making hiring decisions and the extent to which they would be willing to hire other graduates from the same programs.

More idiosyncratic data being collected include indicators of whether teachers use technology; appropriate methods to educate ELL, special needs, minority, and low-income students; complete field-based activities or teach in high-needs schools (Thompson & Smith, 2005); are activists (Cochran-Smith, 2001; Darling-Hammond, 2000); lead innovations and reforms; serve in leadership roles, serve the profession; serve as mentors in their local schools or beyond; belong to professional organizations; use research to make instructional decisions; involve students in democratic classrooms; value inquiry-based, constructivist, student-centered classrooms; involve parents; and use assessment data in formative ways.

## Standards-Based Conceptual Frameworks

Increasingly, teacher preparation programs are also using various sets of state and national

teaching standards to help them clarify and make explicit their goals, create consonance and a clear vision, and drive everything they do from curriculum and instruction through research and evaluation (Banker, Carter, Evans, & Troupe, 2000; Cochran-Smith, 2001; Cochran-Smith & Fries, 2001; Darling-Hammond, 2006a,b; Goldrick, 2002; Kern et al., 2004; Russell & Wineburg, 2007; Stake, 1967; Yinger, 1999; Yinger & Hendricks-Lee, 2000).

At the national level, those most widely used are the Interstate New Teacher Assessment and Support Consortium (INTASC) guidelines for entering/novice teachers, the National Council for the Accreditation of Teacher Education (NCATE) standards for general teachers and their professional preparation units, and the National Board for Professional Teaching Standards (NBPTS) for expert or highly-accomplished teachers. According to Yinger (1999) these are known as the "three-legged stool of teacher quality" (p. 98) and have become a template for change and research on teaching. They all value content knowledge and pedagogy as equally important criteria for what teachers should know and be able to do across varied content areas. The four universities acknowledged by the U.S. Department of Education previously discussed use various combinations of these three sets of standards to shape program goals and objectives. Other programs also acknowledged externally use standards in similar ways (Dean et al., 2005; IES, 2003).

Although "standards have negative connotations for many educators who prefer to envision themselves as independent operators engaged in liberating and empowering learners… educators must clearly understand and seek to influence the organizational, social, and political contexts in which they practice" (Yinger, 1999, p. 107; see also Yinger & Hendricks-Lee, 2000). Through the work of the three aforementioned organizations, national and state standards present teacher preparation programs with a powerful tool regarding the definition and assessment of effective teaching. Standards will ultimately help advance the professionalization of the field (Yinger, 1999; Yinger & Hendricks-Lee, 2000). These standards also become the foundation for researchers and educators to investigate, debate, and refine.

As teacher educators move towards building consensus of how to best conduct this research (Cochran-Smith, 2001; Russell & Wineburg, 2007; Wineburg, 2006), they must address a set of seven global questions before the methods behind these models can be aptly determined and such investigations can commence. These include (1) conceptualizing the purposes for this research; (2) defining effective teacher preparation programs and teachers; (3) building valid evaluation models; (4) choosing appropriate methods and developing proper assessments sustaining these models; (5) resolving whether and which standards might be used to structure this research; (6) deciding who should be involved and at what levels and whether non-traditional teacher preparation personnel should be involved in this work; and (7) determining how this research can be sufficiently financed and supported. All of these considerations must be deliberated and decided upon locally and based largely on the contexts in which teacher preparation programs function. This framework provided the basis for T-PREP, and each of these steps is explored in further detail in Section II.

## Section II: Theoretical Framework for T-PREP - The Seven Wonders of the Work

First, teacher educators need to ask why it is important to be held accountable for the quality of their teacher preparation programs. Instead of resisting these ideas, teacher preparation personnel (e.g. university faculty, school-based mentors, advisors, etc.) should embrace the opportunity to work collaboratively to professionalize the field and help to define the best ways to understand the strengths and weaknesses of their teacher preparation programs for summative and formative purposes.

Second, teacher preparation program personnel and stakeholders have to define what an effective teacher preparation program looks like. What does an ideal teacher graduate look like? What are the characteristics of a good teacher? What do teacher candidates need during their professional training to become effective teachers in schools, particularly in terms of knowledge, skills, and personal disposition? And how can teacher preparation programs better prepare teacher candidates towards these ends? Once a conceptual framework is constructed, scaffolds to help erect and support the model must be derived and appropriately positioned to further conceptualize this research.

Third, teacher program personnel must decide how they should go about measuring program quality. What models, built on these assumptions, should be constructed to help teacher educators answer these questions? From what sources should program personnel collect data to evaluate the quality of its teacher graduates before, during, and after their professional training?

Fourth, what role should standardized tests play in these investigations? Should graduates' students' learning be measured using standardized tests? Should standardized test scores be used at all? How else might researchers go about measuring student learning? In the same vein, should teacher graduates' scores on licensure tests be used to measure program quality? Is content knowledge equally as important as pedagogical training (Wenglinsky, 2002; Wilson et al., 2002)? How else should teacher professional knowledge be measured?

What traditional and non-traditional methods should researchers use at the local level to evaluate program impact? When and how often should these examinations occur? How far into the field should program personnel track their graduates for research and evaluation purposes? How often should they ask graduates to participate in evaluation efforts and with what incentives? How will evaluation results be used in summative and formative ways?

And how should teacher preparation personnel evaluate graduates' preparation to teach racially, ethnically, and linguistically diverse students and students from high-poverty backgrounds? What about examining if and how well graduates integrate technology and instruction? What about teachers who are not usually evaluated in wide-scale evaluation studies who teach special education students, early childhood (Saracho & Spodek, 2007), teach the arts or in physical education programs, or teach other subject areas or in grade-levels that do not normally "count?"

Should teacher educators care about whether graduates lead innovations and reforms, exercise research-based practices in their classrooms, serve in leadership roles, are school reform activists, serve as mentors and serve the profession on a grander scale? Should these be used as

indicators of quality teacher preparation programs? Is teacher retention a reflection of the quality of preparation programs? If so, how should it be measured?

Fifth, should teacher preparation programs adopt a set of national or state standards to help frame this research and the instruments and assessments developed and deployed to conduct it? If so, which one(s) are most appropriate for local programs? At what level should these decisions be made, especially if multiple, diverse preparation programs are involved in building comprehensive models?

Sixth, who should help make these important decisions? Rather than relying only on what university faculty members have to say about this research, should they also ask others to contribute to the construction of these models? Researchers note that teacher preparation programs must broaden participation and reach out to all education stakeholders to design teacher preparation evaluation models and build them inclusively. This will help efforts to become stronger democratic players in educational policy and to collectively help legitimize the field (Hamel & Merz, 2005; Russell & Wineburg, 2007; Stake, 1967; Wineburg, 2006; Yinger, 1999; Yinger & Hendricks-Lee, 2000).

In addition, across states alternative teacher preparation programs are not being included in these discussions. If the ultimate goal is to determine what components of teacher preparation programs impact teacher quality and student learning most, should teacher educators not be willing to learn from each other to improve preparation programs across the board? Although researchers have conducted comparative studies of traditional and alternative teacher preparation programs in the past (Decker, Mayer, & Glazerman, 2004; Miller, McKenna, & McKenna, 1998; Laczko-Kerr & Berliner, 2002), not without controversy (Cochran-Smith, 2004; Darling-Hammond, 2006b; Darling-Hammond & Sykes, 2003; Shulman, 1988), not including alternative programs in such discussions might not be politically wise and perhaps short sighted, defeatist, and self-promoting (Yinger, 1999; Yinger & Hendricks-Lee, 2000). Non-traditional programs might indeed have something to offer traditional programs regarding high school programming (Good et al., 2006), recruiting teacher candidates from diverse backgrounds (Wilson et al., 2002), and teaching in the most difficult to teach schools (Boyd et al., 2006). From traditional programs non-traditional pathway educators might learn about de-truncating, contextualizing, and lowering rates of teacher candidate attrition (Darling-Hammond & Sykes, 2003; Wineburg, 2006).

Seventh, who is going to fund this research? Without substantial financial support, research on teacher preparation of this scale is not feasible. At a larger scale the Carnegie Corporation, (Darling-Hammond, 2006a; Russell & Wineburg, 2007), the Milken Family Foundation, (Goldrick, 2002), and local and private foundations, state departments, universities, and colleges of education are pitching in to help teacher preparation programs develop and at least pilot these models before bringing them to scale, which will present more substantial financial challenges in the long run.

The American Association of State College and Universities (AASCU) is committed to helping teacher preparation programs answer these questions and build frameworks to evaluate program effectiveness as these efforts will ultimately help construct a national set of guidelines to help

others conduct this research (Russell & Wineburg, 2007; Wineburg, 2006; Yinger, 1999). The AASCU recently released a policy paper in which it is argued: "It is time to develop a national framework for the collection of evidence of the effectiveness of teacher education programs…This framework must be developed collaboratively, broadly agreed upon, and implemented on a state-by-state basis" (Russell & Wineburg, 2007, p. 3). Consensus does not yet exist (Cochran-Smith, 2001; Russell & Wineburg, 2007; Wineburg, 2006), yet it is critical to the profession that its members signal to the public and policy makers that the profession has established cognitive jurisdiction (Yinger, 1999; Yinger & Hendricks-Lee, 2000).

Teacher educators need to take control of framing this work. If they do not take control of framing this work, then it will surely frame teacher preparation programs (Cochran-Smith, 2001). Educators from all levels and areas need to come together and collectively work towards building a model in democratic, inclusive ways to position these models as analytical, field standards. They need to collectively legitimize, publicly shape, and make transparent their points of view about such evaluative investigations. They need to reassess, and help others reassess, their strong behaviorist stance towards measuring educational quality. They need to see as one of their crucial roles as leaders in teacher education, leading the framing and construction of this work and affecting how policymakers think about educational research.

To establish cognitive jurisdiction, teacher educators' beliefs about the purposes of schooling, the nature of teaching and student learning, and the role teacher education programs play in the educational system should be made public. Teacher preparation personnel should acknowledge the high stakes and very public scrutiny that comes with this work. And they should be thoughtful and intellectual, using their expertise, experience in schools, and research-based evidence to challenge and change the situation and lead the way towards "the best" alternative for all teacher preparation programs involved.

## Section III: Status of T-PREP

T-PREP is operating in three separate universities; however, the spirit of this project is uniform. Through this project, the leaders aim to understand the strengths and weaknesses in Arizona's teacher preparation programs, to provide information to academics, practitioners, and policymakers regarding how such programs can be improved, ultimately, to improve educational opportunities for students across the globe.

Throughout the first year, the authors held numerous meetings to formulate questions, obtain resources, create a conceptual map, create a pilot entry survey, revise the exit survey (see Appendix A), and analyze the results of these surveys. In the previous section, a rationale for studying teacher development programs was presented. Furthermore, a framework for conducting such evaluations was articulated that emphasized the importance of local contributions. The next section expands on the previous information from year one to indicate what occurred during year two of the project.

Table 1 presents the variety of meetings held for this project, including working group meetings, steering committee meetings, and summits. Also shown are meeting dates. Not illustrated are the

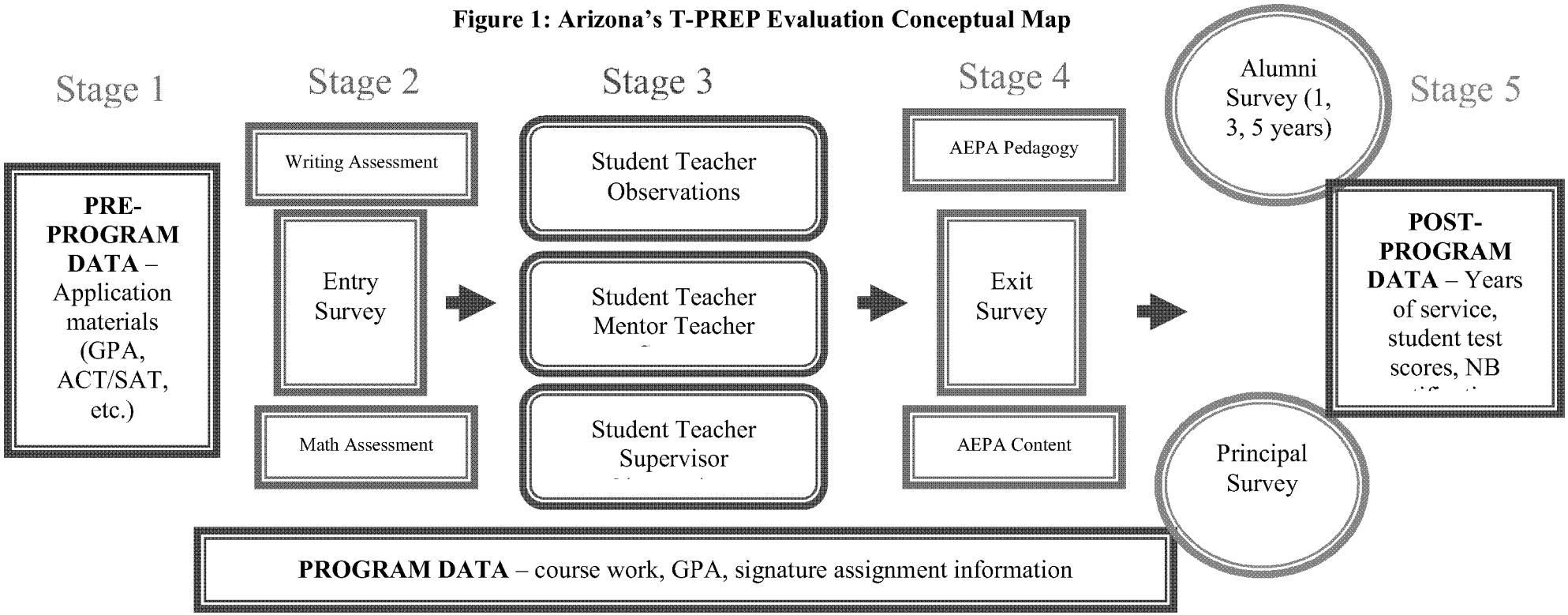
hours of phone calls, emails, and discussion that occurred behind the scenes to organize this project.

**Table 1: List of Important Meetings**

| Meeting/Event | Date |
|---|---|
| Initial meeting | April 2, 2007 |
| Retention data meeting | Sept. 7, 2007 |
| T-PREP Working Group | Nov. 19, 2007 |
| T-PREP Year 1 Summit | Jan. 18, 2008 |
| T-PREP Steering Cmte | April 7, 2008 |
| T-PREP Working Group | April 10, 2008 |
| T-PREP Working Group | April 21, 2008 |
| T-PREP Working Group | Aug. 14, 2008 |
| T-PREP Working Group | Aug. 21, 2008 |
| Arizona Community Fdtn | Aug. 25, 2008 |
| T-PREP/IDEAL | Sept. 4, 2008 |
| Governor's P-20 Council | Sept. 8, 2008 |
| T-PREP Summit | Oct. 20, 2008 |
| ASU Dean Meeting | Oct. 29, 2008 |
| ADE e-IR Meeting | Jan. 15, 2009 |
| T-PREP Exec Cmte Mtg | Jan. 28, 2009 |
| Milestones Project Mtg | Feb. 19, 2009 |
| Milestones Project Mtg | March 25, 2009 |
| T-PREP for UAE Delegation | April 30, 2009 |
| T-PREP and TAP | May 14, 2009 |
| ABOR Field Experience Mtg | May 29, 2009 |
| T-PREP at Learning Network Mtg | June 4-6, 2009 |

Figure 1 presents a step-by-step process of eventually collecting information about students entering and exiting colleges of education and finding employment in the education field. Conceptually, the holistic evaluation of teacher preparation begins with the information students bring into the college of education as indicated in their application materials and history (stage 1). Next, upon entrance into the college of education, ABOR students will take an entry survey; additionally, ASU is piloting the use of a writing and math assessment for students (stage 2). As students progress through their respective programs, their coursework grades and assignments are warehoused at ASU with Tk20 and with TaskStream at NAU and UA. As students conclude their coursework and prepare for student teaching, they complete a variety of forms and documents, which are also housed by these data management service providers (Stage 3). Next, as students graduate, they complete the exit survey and AEPA exams (Stage 4). Finally, follow-up information is collected from students as they find employment (Stage 5).

**Figure 1: Arizona's T-PREP Evaluation Conceptual Map**




1. **Pre-program data** will be collected from the application materials of the students. This information will be incorporated into a spreadsheet using the students' identification number. Discussions for this process are just beginning, and we expect to begin including this information in the spring 2010.

2. **Program data** will be collected from instruments created by the T-PREP team, colleges of education, and the professional field experience offices. The exit survey was first administered in spring 2008 and taken ABOR wide in spring 2009. The entry survey was piloted at ASU-West in the spring 2009 semester. The writing and math assessments are used at ASU currently, but the information is not yet included on the students' record. PFE observations are also not currently housed electronically, but effort is being made to have this for fall 2009.

3. **Post-program data** is collected by the Arizona Department of Education. The ADE Data Warehouse is currently scheduled to have this information by spring 2010.

## Section IV: The Exit Survey

### Background

An important step of this project was for teacher preparation programs to ensure that pre-service teachers prepared by the colleges of education in Arizona effectively provide for PK-20 students' success. The stakeholders in this project have embraced the opportunity to professionalize the education field by defining the strengths and weaknesses of their teacher preparation programs, defining what an effective teacher preparation program looks like, identifying what the characteristics of a good teacher are, and moving toward better preparing teacher graduates to help students learn. Further, stakeholders have conducted these discussions with numerous influences in mind (Greene, 2007; Teddlie & Tashakkori, 2003), including the ideas that "teachers are expected to cover everything without neglecting anything" (Ayers, 2001, p. 6) and the reality that "...there is no way to be an experienced teacher without first being a new teacher" (Ayers, p. 9). Stakeholders have also recognized the changing needs and demographics of Arizona, where:

- the state's population has grown 16% as compared to the national average of 5%;
- public school enrollment is up 18% since 1999 as compared to the national average of 4%;
- schools serve 145,000 English Language Learners, 28% of whom do not speak English as their first language;
- over 20% of children under the age of 18 have moved during the school year (Arizona Community Foundation, 2008).

As the stakeholders began to determine how to measure program quality holistically, advice was sought from outside experts, including Dr. Suzanne Wilson and Dr. Deborah Ball.

Dr. Suzanne Wilson is the Chair and Professor in the Department of Teacher Education and Director of the Center for the Scholarship of Teaching at Michigan State University. Dr. Wilson previously served as the director of the Teacher Assessment Project (with Lee Shulman), which developed prototype assessments for the National Board for Professional Teaching Standards. Dr. Wilson was brought to Arizona State University's West campus to give a public address on the topic of "Research on Accountability Processes in Teacher Education."

Dr. Deborah Ball is the Dean of the School of Education and William H. Payne Collegiate Professor of Education at the University of Michigan. Dr. Ball was brought to the University of Arizona on May 2, 2008 to give a public address on the topic of "The Work of Teaching and the Challenge for Teacher Education." T-PREP participants from all three universities were invited to this event, and participants were able to discuss issues of teacher preparation design and assessment with Dr. Ball.

**Data Sources**

Through the stakeholder meetings and discussions with experts, the exit survey was developed collaboratively with input from representatives of Arizona State University, Northern Arizona University, University of Arizona, and the Arizona Department of Education. This survey was piloted in spring 2008, revised for fall 2009, and then revised a final time in spring 2009 with input from the deans of the colleges of education at ASU, NAU, and UA.

The exit survey (see Appendix A) was developed through the collaboration of stakeholders within this project. The stakeholders aligned the survey items with standards from the Interstate New Teacher Assessment and Support Consortium (INTASC); the Five Core Propositions of the National Board for Professional Teaching Standards (NBPTS); and the Teacher Preparation Program Graduates Survey from Teacher Policy Research. These standards are also found in the Arizona state teaching standards. INTASC and NBPTS are known bases for teacher quality (Yinger, 1999) and are building blocks for change and research on teaching; therefore, the stakeholders believed these were important principles to include. These standards also emphasize and value content knowledge and pedagogy as equally important criteria for what teachers should know and be able to do across multiple content areas; in fact, the second principle of preparation for the profession is based directly on the Five Core Propositions of the NBPTS. The survey yielded both quantitative and qualitative data as sources of evidence. After careful consideration, the survey was constructed to follow three principles, including:

1. Program characteristics and quality
    a. Program coherence
    b. Program faculty
    c. Teacher confidence
2. Preparation for profession
    a. NBPTS 1 – Commitment to students and learning
    b. NBPTS 2 – Knowledge of subjects and how to teach those subjects to students
    c. NBPTS 3 – Responsibility for managing and monitoring student learning
    d. NBPTS 4 – Think systematically about my practice and learn from experience
    e. NBPTS 5 – Teacher are part of learning communities
3. Plan for the future in the education profession

The survey items were designed using a Likert scale of strongly agree; agree; neither agree nor disagree; disagree; or strongly disagree. In addition to these principles, demographic information was requested from respondents to learn more about the students within their teacher preparation programs. The exit survey was administered via email using SurveyMonkey and data analyses were completed using SPSS 15 and 16 analytic software.

## Participants

The pilot exit survey was administered in spring 2008 to graduating students in Arizona State University's College of Teacher Education and Leadership (West campus). The fall 2008 revised survey was administered to graduating students from the three colleges of education at ASU, including the College of Teacher Education and Leadership, the Mary Lou Fulton College of Education, and the School of Educational Innovation and Teacher Preparation. As these graduating students obtained their institutional recommendation, which is required for them to obtain their teaching certification from the Arizona Department of Education, they were asked to complete the exit survey.

At ASU, the spring 2008 pilot exit survey had a 52% response rate (387 of 749). The fall 2008 revised exit survey had a response rate of 59%, and the spring 2009 survey had a response rate of 87% (see Table 2). Trend figures are not available for NAU and UA, as they followed the information gathered from administrations at ASU; however, only one administration has occurred – expectations for increased involvement in subsequent administrations of the survey are in place. The spring 2009 administration at NAU resulted in the collection of 121 responses, while UA collected 194, which brings the total number of participants surveyed using the spring 2009 exit survey to 1,121.

**Table 2: ASU Respondents by Certification Type and Survey Administration**

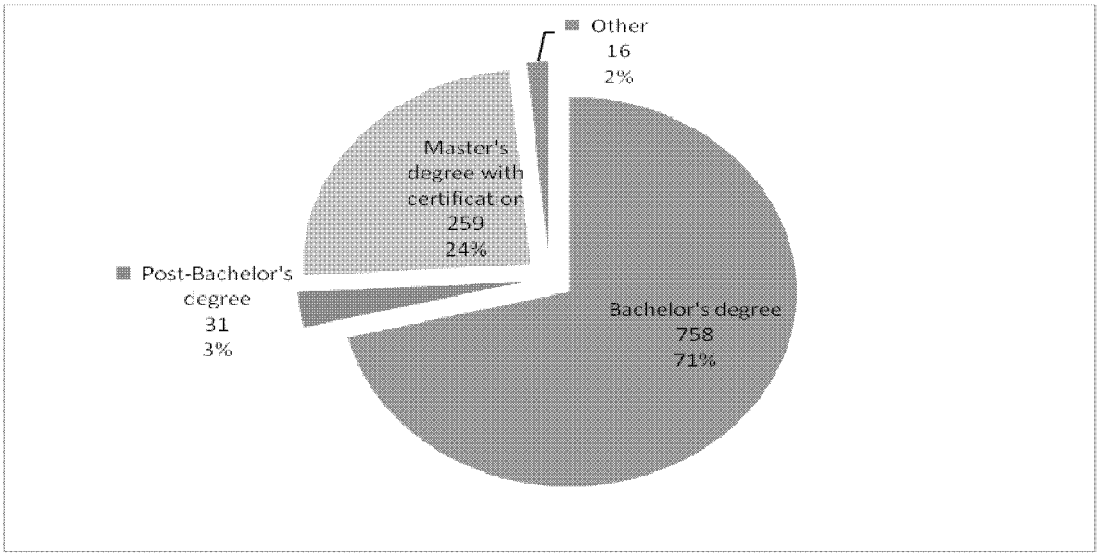
| Certification Type | Number of Respondents – Spring 2008 | Number of Respondents – Fall 2008 | Number of Respondents – Spring 2009 |
|---|---|---|---|
| Early Childhood | 25 | 36 | 65 |
| Elementary | 172 | 169 | 382 |
| Secondary | 84 | 73 | 223 |
| Special Education | 22 | 30 | 97 |
| No response | 33 | 35 | 39 |
| TOTAL Responses | 354 | 343 | 806 |
| **Survey Response rate** | **52%** | **59%** | **87%** |

In addition to obtaining spring 2009 responses from students across all three universities, the authors obtained data from different types of students within the colleges. Table 3 presents the demographic details of the respondents, while Figure 2 presents the types of degrees being earned by the respondents.

**Table 3: Spring 2009 Exit Survey Respondent Demographic Details**

| Demographics | Total | |
|---|---|---|
| | n | %[3] |
| Gender | | |
| Female | 876 | 83% |
| Male | 180 | 17% |
| Ethnicity | | |
| Hispanic | 149 | 14% |
| White | 787 | 73% |
| Other | 147 | 14% |
| English is Native Language | 988 | 94% |
| Age (by birth year) | | |
| 1986 or after | 226 | 67% |
| 1981-1985 | 80 | 24% |
| 1971-1980 | | |
| 1970 and before | 34 | 10% |
| Family's Educational Attainment[4] | | |
| Less than HS Diploma | 68 | 6% |
| HS Diploma-Some College | 378 | 36% |
| College Degree or more | 614 | 58% |

**Figure 2: Spring 2009 Exit Survey Respondents by Degree**




[3] Totals may not add up to 100% due to rounding.
[4] This question asked respondents to indicate the highest level of education attained by the most highly education parent/guardian.

Recognizing the challenges faced in piloting the survey in spring 2008 and the first fall administration in 2009, the results section focuses on the spring 2009 administration for results. Appendix B provides multiple administration information for comparison purposes. However, as future administrations are analyzed and more information is collected, these sections will be greatly expanded.

## Results from the Spring 2009 Exit Survey

The spring 2009 exit survey provided views held by future educators prepared by Arizona State University. The results are presented in two levels. First, the results of all participants are discussed by principle. Second, the results are presented by survey item (these results can be found in Appendix B).

### *Overall Exit Survey Results by Principle*

As previously discussed, the survey was created through a collaboration of representatives from the Arizona Board of Regents universities and the Arizona Department of Education. By examining other surveys and research in this area, these representatives created a survey intended to provide summative and formative information for practitioners, policymakers, and researchers.

The first result examined by the authors is the reliability of the survey, which is a measure of the relationship between the survey items by principle. The commonly used statistic to test for reliability is Cronbach's alpha. Prior administrations of the survey tested for reliability; however, with the revisions in place, continual assessment of the reliability of the survey is necessary. As shown in Table 4, the analysis of each of the principles resulted in an alpha value higher than the generally accepted 0.70 (Cronbach, 1951), which indicates that the results of this survey can be interpreted as highly reliable.

Also included in Table 4 is the overall number of responses (n), average response by principle (mean), and the variation of those responses (SD, which is the standard deviation of the values or a measure of dispersion between responses). The overall responses indicate that students graduating with their initial teacher certification from the Arizona Board of Regents' three colleges of education believe their programs prepare them well for the teaching field; they believe their faculty are experts in the field of education and are committed to teacher preparation; and their programs are of high quality.

Further, students graduating with their initial teacher certification agreed that their programs prepared them to be committed to students and learning (NBPTS1); to be knowledgeable of subjects and how to teach those subjects (NBPTS2); to be responsible for managing and monitoring student learning (NBPTS3); to think systematically about practices and to learn from experience (NBPTS4); and to be part of learning communities (NBPTS5). These results are positive indicators that students feel well prepared to enter the teaching field following their education in Arizona. However, this information is self-

reported attitudinal data, which later will be compared to responses given on the entry surveys and more objective measures.

**Table 4: Spring 2009 Exit Survey Results by Principle**

| Principles | Reliability (Cronbach's alpha) | Overall | | |
|---|---|---|---|---|
| | | N | Mean | SD |
| 1. Program Characteristics and Quality | | | | |
| a. Program coherence | α=0.89 | 1,101 | 3.84 | 0.76 |
| b. Program faculty | α=0.93 | 1,093 | 4.05 | 0.69 |
| c. Teacher confidence | α=0.78 | 1,085 | 4.03 | 0.65 |
| 2. Preparation for Profession | | | | |
| a. NBPTS1 | α=0.94 | 1,083 | 4.40 | 0.69 |
| b. NBPTS2 | α=0.93 | 1,080 | 3.85 | 0.85 |
| c. NBPTS3 | α=0.93 | 1,078 | 4.05 | 0.78 |
| d. NBPTS4 | α=0.95 | 1,064 | 4.07 | 0.78 |
| e. NBPTS5 | α=0.95 | 1,055 | 4.07 | 0.81 |
| 3. Plans for the Future of the Education Profession | NA[5] | | NA | NA |

In addition to these principles, participants were asked to rate their coursework from A to F, rate their field experience from A to F, and indicate how long they expected to teach (plans for the future of the education profession). These were individual survey items, not a series of collapsed questions similar to the other principles; therefore, they are presented individually.

To analyze these results, the authors coded the responses for coursework and field experience ratings as if they were grade point averages (GPAs). Therefore, the value found in Figure 3 and Figure 4 (below) correspond to the average value assigned to each program on a 4.0 scale. As indicated, 82% of respondents assigned a grade of B or higher to their coursework, while 87% respondents assigned a grade of B or higher to their field experience.

[5] Note that Principle 3 – Plan for the future in the education profession is not included in the table since these were single questions rather than a series of questions, which could not be synthesized to check for internal consistency. These two questions are discussed in more detail in the results by college section.

**Figure 3: Spring 2009 Exit Survey Responses to Grade for Coursework**

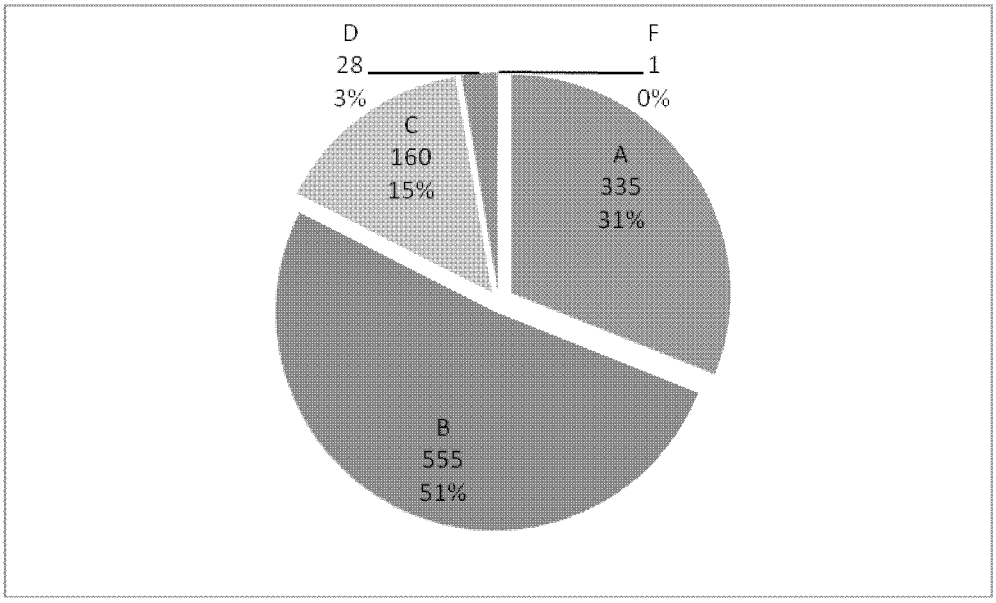
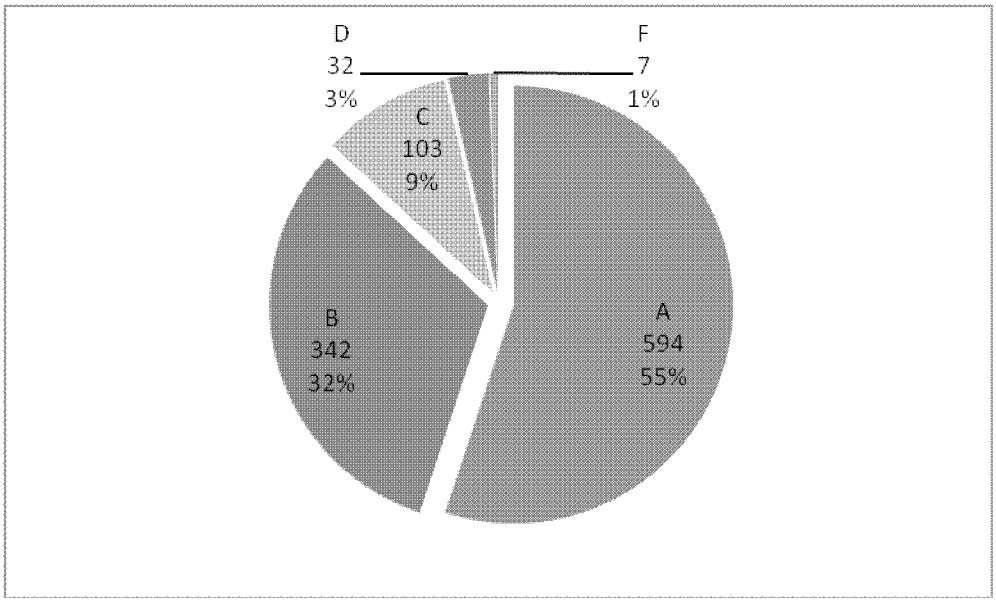
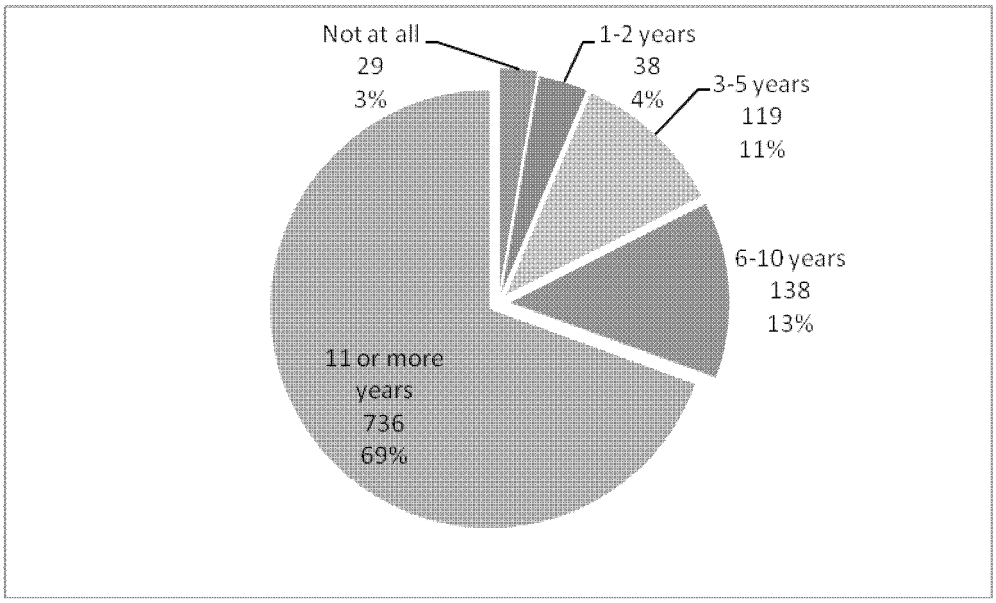



**Figure 4: Spring 2009 Exit Survey Responses to Grade for Field Experience**




With regard to the questions related to the participants' plans for the future of the education profession, some interesting results emerged (see Figure 5). First, 83% of participants indicated they anticipate teaching for more than 5 years. Of interest is also the 3% of participants who responded that they do not anticipate teaching at all. These responses will impact the design of follow-up surveys and potential interview questions used in subsequent years of this project.

**Figure 5: Spring 2009 Exit Survey Responses to "Estimated Time to be a Teacher"**




Participants were also asked to respond to their preferences for a teaching position. This survey item was used to ask "regardless of your current teaching position, please respond to questions about your preferences regarding the type of school in which you would like to teach." Table 4 presents the results to this question based on the number of respondents and the percent of respondents who indicated that the position characteristic was desirable or highly desirable.

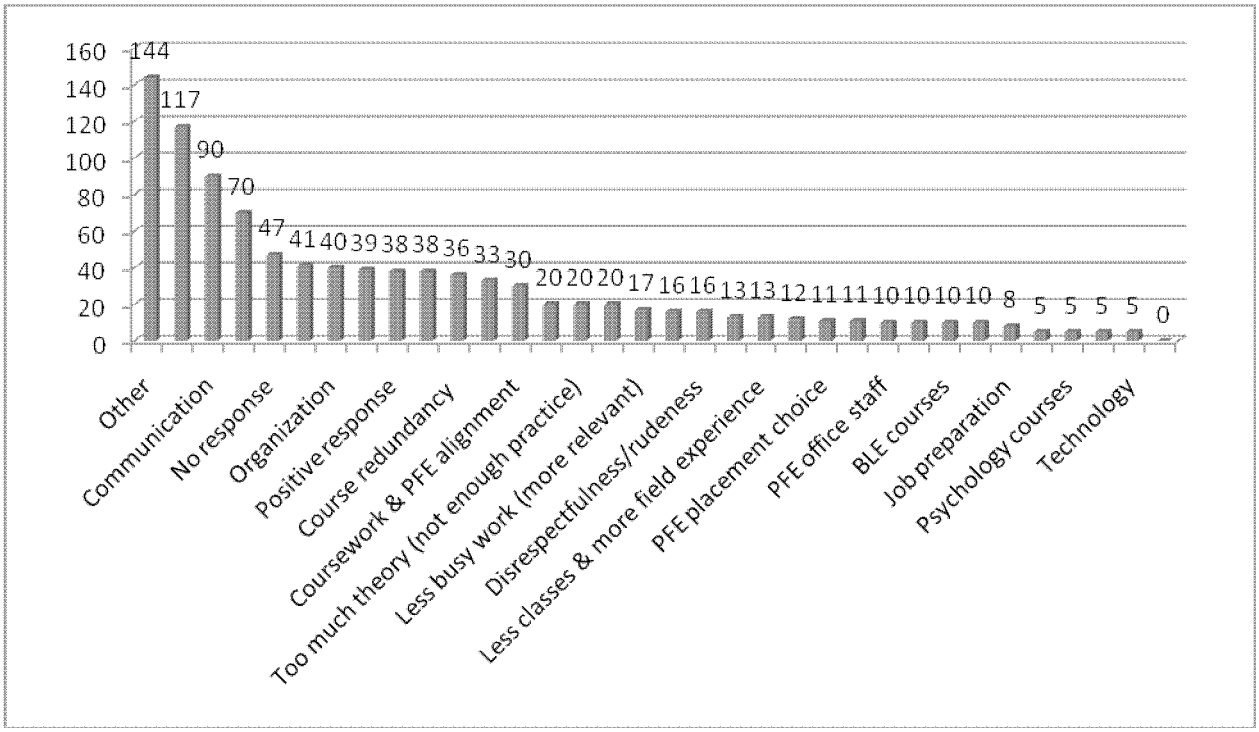
However, interesting trends did emerge from the data. First, participants indicated a stronger desire for good benefits than a high salary. Second, participants resoundingly responded that a school near their home was desirable. Third, participants did not find the urbanicity (urban, suburban, or rural) of a school as a desirable characteristic, with over 60 percent of participants indicating "no preference" on these three items. Fourth, participants indicated a high preference for public schools. Fifth, participants indicated a desire to work with high-achieving students.

**Table 5: Spring 2009 Exit Survey – Preferences for Teaching Position Results**

| Position Characteristics | Overall | |
|---|---|---|
| | N | % Desirable Preference |
| Compensation | | |
| Good benefits (i.e. insurances) | 986 | 93% |
| High Salary | 812 | 77% |
| School Characteristic | | |
| School near my home | 871 | 83% |
| School in a suburban environment | 346 | 33% |
| School in an urban environment | 315 | 30% |
| School in a rural environment | 199 | 19% |
| School Type | | |
| Public school | 682 | 65% |
| Charter school | 282 | 17% |
| Private school | 203 | 19% |
| Student Body | | |
| School with high-achieving students | 652 | 62% |
| Racially diverse school | 627 | 60% |
| School with low-income students | 509 | 48% |
| Multi-lingual school | 394 | 37% |

Following the closed-ended portion of the survey, participants were invited to provide specific recommendations based on their experiences within their programs. Approximately, 600 participants responded to this question. To organize these responses, themes were located through an inductive interpretive model following the work of Erickson (1986), Lincoln and Guba (1985), and Miles and Huberman (1994). To locate these themes, first, all comments were read to gain a sense of the type of responses from students. Second, all comments were re-read and placed into a subject category. Thirty four categories (see Figure 6) were created, including "no response" and "other." Third, all comments were read a third time to ensure consistency and accuracy in labeling, and to note whether the comments were positive or negative in nature.

**Figure 6: Spring 2009 Exit Survey Comments by Category**




Entering the second year of this project, a wealth of information is emerging as the principal investigators examine the responses from students. As an example of these results, some clear findings are surfacing from the longitudinal analyses of the exit surveys. The collaboration efforts of the colleges resulted in significant improvements in response rates. In addition to the increasing response rates, students are providing much more feedback regarding their programs which is being used to inform the practices of the participating colleges.

Of the 34 topics about which students commented, 19% were about the instructors in the programs, 14% discussed communication, and another 11% discussed student teaching. Summaries of this information will be provided to university and college of education decision-makers (e.g. university President, Provost, Deans, and Directors) to inform their actions. The overall comments from across the years indicate students speak in accord for improvements along three areas.

First, the colleges need to adjust or provide more information to students regarding individuals teaching their classes. Graduates indicated great displeasure with the number of courses taught by individuals who appeared to be uninformed about the courses. These comments pertained to courses taught by graduate assistants rather than faculty; courses taught by individuals who seemed unhappy to be teaching the course; courses taught by individuals who seemed ill-prepared to teach the course; and courses taught by individuals who appeared to no longer be familiar with current issues in education. The perspective of these students' voices can be summed up by one student's comment, "*Too*

*many of the teachers were unprepared and lacked knowledge about how to relate information to real teaching experiences*".

Second, the colleges need to improve and make consistent the information provided to students. Graduates were displeased with the level of communication between the different departments and different persons in authority. One student wrote, "*Communication! There was a lot of different information coming from various sources and much of it was incorrect or conflicting.*" Other students lamented receiving different information from advising, field experience, and their respective teachers.

Third, the colleges need to examine the procedures associated with student teaching. Graduates took issue with how their time was allotted during their student teaching, with one student saying *"student teaching involves too many hours. The current economy demands us to make money and we can't when we are working for free 40 hours a week. It has made my financial well being very difficult and stressful.*"

While not reported in this document, student responses are also examined by college, certification type, and specialization area. This view of the responses facilitates strategic feedback to be provided to each department. For example, one college administrator may ask about specific information involving the perspective of the students within the secondary English program, where students take content courses in the college of liberal arts and sciences rather than within the college of education.

As the students continue to highlight and consistently speak on issues, the responses from these students are being used to inform programmatic changes at the university, college, and department level. Specifically, following the information provided by this project, one college of education has experienced substantial restructuring among departments, including the combining, removing, and creation of courses. Additionally, the data from this project provide direct comparative feedback to improve the certification areas and the college overall, including the course offerings, timetables, advising center, field placement office, and faculty mentoring. By parsing the data by program, targeted discussions are made possible and specific reforms can be created to improve learning opportunities for students.

In designing, administering, and analyzing the exit survey, numerous lessons were learned. Additionally, valuable insight was gathered into the views of graduating students, the majority of whom are three months away from entering the professions as first-year teachers. The next section discusses these logistic lessons.

## Logistic Lessons Learned from Years One and Two

Throughout the two years of this project, the authors learned much in the way of developing, organizing, and administering a survey across a large university. Seven specific lessons warrant further discussion.

1. Align the Instruments with Nationally Accepted Standards

First, in terms of what lessons were learned about the actual exit survey, those involved in this project discovered that they developed a good, reliable and valid survey; one that stands apart from the others in that it is the first to be aligned with the NBPTS' Five Core Propositions. There were some questions that had to be changed post-pilot (e.g. those that raised flags in the reliability analysis that were written in reverse prose, inversely coded and likely confused respondents), but all in all the instrument fared well. The revised, updated version of the pilot exit survey is included in Appendix A for others' reference and/or use.

2. Avoid Fatigue and Duplication

   If such surveys are administered while other faculty and staff are administering other research/evaluation surveys, response rates across surveys decrease due to a survey surplus, which creates confusion and burn out. Teacher preparation programs conducting this research might either prohibit the administration of multiple surveys during the time graduate surveys are administered, and/or graduate surveys might be institutionalized. This more dramatic approach would require all graduates to participate in these exit surveys in order to receive, for example, their institutional recommendations (IRs), their final grades, their transcripts, and/or their diplomas.

   This point is not necessarily unique at first glance – that is, intuitively the college with a single instrument was able to produce the highest response rate. Perhaps the most telling aspect about this point and the reason to state it is that many faculty and administrators are unaware of how many surveys, papers, and "final" documents graduating teachers must produce. The lesson learned here is to locate all of these documents and attempt to streamline the process for students – reducing duplication and the time and effort required of them when graduating.

3. Keep it Simple

   Although most researchers value free-response data and feedback that is not forced into reductionistic categories, open-ended data cause drag. This occurs because the process is not as straightforward as it might seem, largely because of the size and diversity of the responding population. As researchers code data and, more specifically, attempt to code responses by teacher preparation program, then by division/department, then by major, and then by different combinations of respondents (e.g. students majoring in bilingual education have distinctly different recommendations for program improvement than elementary education majors although they all exist within the same division), this drowns the results, not to mention the researchers keeping their heads above the water analyzing these voluminous data. Although partitioning these data is not impossible, it is more burdensome than expected. The ways in which data are to be disaggregated, analyzed, and then disseminated to decision-makers is an important conversation to have, especially before researchers simply add numerous free-response items because they provide richer data, and before researchers falsely presume they can analyze these data mostly at aggregate levels.

4. Stop, Collaborate, and Listen

Those involved in this project discovered that collaboration and trust are key, especially when determining how and what data should be collected, how data should be analyzed, and how results should be disseminated. Those involved need to be willing to listen and accept constructive criticism, and when program flaws or weaknesses are revealed, program personnel and administrators should be accountable for making the needed changes. For years, teacher educators have known that students want teacher preparation coursework that is more applicable, in real-time, to the field. So why is it that this continuously emerges as a student complaint? It is likely that this problem persists because program personnel and administrators are not being held accountable for using these data in pragmatic, transformative, and evolutionary ways.

While this lesson is not unique, it is worth reiterating. In 2000 the U.S. Department of Education established the National Awards Program for Effective Teacher Preparation. It was designed to award programs proven effective on six criteria, the last of which was to honor researchers who established a culture of evidence, one that supported the use of data for the evaluation of their teacher preparation programs (IES, 2003; see also Wineburg, 2006). The programs awarded were honored because personnel defied what is too often the case; teacher educators who do not work together to conduct this research. The research community, in particular the educational research community, needs to avoid isolative efforts, which ultimately confuse and disenfranchise schools and teachers, and, most importantly, may not improve upon the student experience or levels of student achievement (Wineburg, 2006, p. 63). "Success seems to hinge on a profession's ability to clearly delineate a focus for its work" (Yinger, 1999, p. 108).

While in this project stakeholders embraced the opportunity to professionalize the field across the state, and worked towards this goal collaboratively with project leaders with whom they built trust and a transparent, research plan focused on student learning, project members still faced some complications. But who said social science research, especially large-scaled educational research, was easy? This reiterated to project leaders and participants that collaboration was even more essential than they conceived, and more time consuming, so that all involved have the opportunity to come to shared understandings and build consensus as they proceed collectively and cohesively.

5. Determine a Collective Course

In New York, the city school system embarked on such a journey, collaboratively, to evaluate the 75 different teacher preparation programs and 20 distinct teacher education institutions where the majority of their teachers are educated. Project researchers note that "a number of disparate institutions, each with different and sometimes competing interests, had to agree to support this project, including agreeing to share data" (Boyd, Grossman, Lankford, Loeb, Michelli, & Wyckoff, 2006, p. 157).

As discussed, collaboration is essential but it is also essential to share data, an imperative that needs to be discussed and deliberated at the outset of such research and evaluation efforts. This is particularly important if participating colleges of education are public entities. Negotiating how evaluative data are collected and shared is no trivial task.

Negotiations are also necessary when those involved in this research think about how the data collected might be analyzed. Analyzing what might seem as simple descriptive data (e.g. responses to an exit survey) is much more complex than what collaborators might expect, especially given the minor and major differences within and between the populations of students who are being examined. What should not be overlooked is that indeed populations of students who oftentimes seem like they might be very similar – they all want and have similar desires to become teachers, for example –are probably distinctly different and almost certainly vary systematically across programs. When evaluated, the between and across group differences need to be controlled for and contextualized before simple, causal-comparative analyses can yield valid results (see also Boyd et al., 2007). Because of the complexities inherent in educational research, (Berliner, 1976; Boyd et al., 2006; Russell & Wineburg, 2007; Starkman, Bellis, & Olsen, 1979; Wenglinsky, 2002; Wineburg, 2006) those involved must discuss what analytic methods will yield the most valid and authentic results before analyses begin.

This infers adherence to standard practices in the field including reporting instrument reliability and validity and inferential statistics including sample sizes, means, standard deviations, p values, effect sizes and confidence intervals (when possible; Zientek, Capraro, & Capraro, 2008). But this also includes discussions about whether data should be interpreted in an isolative manner or comparative analyses are warranted, especially if traditional and alternative programs are involved in such collaborations.

According to Boyd et al. (2007), a cardinal rule when conducting such large-scale evaluations is that "studies should compare practices across institutions to identify effective practice" (p. 3; see also Wineburg, 2006). To take it one step further, Hess (2001) promotes this practice as such comparisons will allow public colleges of education to be exposed to "the cleansing waters of competition" (p. 22; see also Finn, 2001; Levine, 2006). However, with comparisons come market forces making programs susceptible to competition, ranking systems and the promotion and pursuit of self interests (Stone, 2007; see also Grossman, 2008). Practices requiring collaboration for the greater good, driven by democracy, and for the promotion and pursuit of student interests are unfortunately seen as the exception (Cochran-Smith, 2005; see also Cochran-Smith, 2001; Yinger, 1999). Striking the balance between appropriate comparisons is one of the issues that will test the collaboration and trust, which is why the time invested into this area will pay dividends throughout the project. It is necessary that these conversations help to yield synergistic results that, with integrity and transparency, provide best evidence as to what it means to be prepared by a high quality teacher preparation program.

6. Constructive Criticism

In 1976 David Berliner noted that those who evaluate teacher education programs too often suffer from "ostrichism" (p. 5); a disease afflicting educators who when study results are unexpected or blemishes exposed stick their heads in the sand hoping problems will pass. Teacher educators teach students to be reflective practitioners and likewise should have no issues with being thoughtful and critical of their own teacher education programs. While it is true that many flaws can be explained away, for example when distinctly different samples of students respond in significantly dissimilar ways about program quality, it is also true that nothing will change unless after imperfections are revealed and understood in context, they do not inform change. While "teaching is, after all, a very complex set of events which cannot be easily understood" (Berliner, 1976, p. 12) and educational research is the hardest science of all (Berliner, 2002), teacher educators who research their programs need to remember that in order for programs to improve, criticality in practice and theory is imperative (see also Cochran-Smith, 2005). Otherwise the purpose for evaluating teacher education programs is lost.

7. Follow-Up

Former President of Teachers' College, Columbia University, Arthur Levine (2006) stated that "too often teacher education programs cling to an outdated, historically flawed vision of teacher education" (p. 1) removed far from practice. Haberman (2004) claims that nothing ever found from research about colleges of education has been applied to practice. Further, Haberman posits that teacher education programs are not based on data but reflect custom, tradition and the convenience of faculty.

The final lesson learned is that after study results call for change, teacher educators should actually make the required adjustments (see, for example, Grossman, 2008). Rarely do those who evaluate teacher education programs follow-up with those in charge to determine if changes were made, and, more importantly, if not – why not? While it is true that federal and state departments of education and university accreditation units like to see that teacher educators are evaluating the quality of their programs, these evaluative efforts become merely symbolic if left at that, when results are not used to inform instrumental change. Whether these evaluative efforts are merely episodic or transformative must be determined early in the process if successful efforts are to be worth the remarkable amount of time and effort disbursed.

In addition, follow-up is vital when multiple stakeholders are involved. Without the ability to be forthright regarding how results are used, particularly across collaborative units, evaluative endeavors become less transparent, layers of information are lost, and programs simply deepen their roots averting further change – that is, increased "ostrichism." Participation or compliance will do nothing for either small or large-scaled efforts unless data are used to inform decisions and program excellence (see also Berry, Fuller & Reeves, 2007). There has to be some sense of accountability within and across collaborators to ensure change occurs.

As the second year of this project concludes, the efforts of the project leaders resulted in dramatic improvements in how teacher data is collected, synthesized, and provided to decision-makers to inform their practices. And, the T-PREP team is preparing for another highly productive year in establishing a process by which a college of education can be evaluated to determine the impact on graduates' students. The next section details the plan of action for year three.

## Section V: T-PREP Year Three Plan

During year three (2009-10), the entry survey will be administered across all colleges with students beginning the junior academic year of their undergraduate program, which marks the point in coursework directly related to the teaching discipline. In addition, the exit survey will be administered to all students graduating from the initial teacher certification programs at Arizona State University, Northern Arizona University, and the University of Arizona at the end of the fall 2009 and spring 2010 semesters.

Additionally, T-PREP has partnered with the data committee at Arizona State University to explore how information warehoused in data management systems (e.g. TaskStream and Tk20) can be exported into databases and analyzed alongside information reported by students on the entry and exit surveys. Further, T-PREP is working closely with the professional field experience offices and advisors to obtain access to internship and student teaching data. Finally, T-PREP has partnered with the Arizona Department of Education to facilitate the transition to the electronic institutional recommendation process, which will provide key information in locating and tracking students once they leave the universities.

In an effort to locate students after leaving universities, T-PREP also maintains its partnership with IDEAL – an integrated, one-stop, web-based environment that provides direct, continuous, access to an assortment of resources and applications, including a learning management system, data collection and visualization tools, and curriculum and content materials.

### IDEAL

Integrated Data to Enhance Arizona's Learning (IDEAL) is a partnership of the Arizona Department of Education (ADE) and the Arizona State University Applied Learning Technologies Institute. The IDEAL Learning Platform represents a dynamic, innovative approach to enhancing and supporting education through technology. An extension of ASU's learning environment to Arizona's P-12 classrooms, IDEAL provides students and educators a continuous learning experience. Through a personalized IDEAL userid, that remains with students and teachers virtually forever, Arizona's educators access curriculum resources, assessment instruments, collaborative tools, as well as professional development opportunities, university courses, and district and state provided workshops and training.

Through the collaboration of T-PREP and IDEAL, students and faculty of ASU pre-service teacher preparation programs are provided direct and continuous access to the resources in-use in Arizona's classrooms. Behind the scenes, IDEAL serves as a platform for 'data integration' – a means of collecting and assessing ongoing data reflecting the experience and performance of educators – allowing institutional evaluation that can help refine professional development offerings. As pre-service teachers transition to their own classrooms, they continue to use their IDEAL userid – which provides them access to the tools and resources they have become accustomed to during their preparation program, along with resources directly related to their district, school, and classroom.

The collaboration of T-PREP and IDEAL is natural. IDEAL was created by the Arizona Department of Education to gather and house data, and T-PREP was designed to examine a specific portion of that data as related to teacher preparation programs.

In the fall 2009, access to the IDEAL T-PREP resources will also be extended to the teacher preparation programs at the University of Arizona and Northern Arizona University and Community College partner institutions through an account federation process—enabling easy, single sign-on to IDEAL from within their home institution's online environment.

## Closing Remarks

With the lessons learned from year one and two and the ambitious goals for year three, T-PREP is working to improve teacher preparation in Arizona and meeting the goals established for this project. Based on the responses from the exit survey, students graduating from Arizona's Board of Regent's colleges of education appear to be well prepared for the challenges of the teaching field. Future administrations of the exit survey will confirm or contradict these findings, which will ultimately allow for the continued improvement of the teacher preparation programs in Arizona and across the globe.

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## Appendix A: T-PREP Exit Survey

The Teacher Preparation Research and Evaluation Project (T-PREP) is an initiative of Arizona State University, Northern Arizona University and the University of Arizona. T-PREP is organized to evaluate the quality of the teacher preparation programs offered by the state's three Regents' universities.

**Objective of this Survey**
The purpose of this exit survey[6] is to obtain your input regarding your satisfaction with your teacher preparation program and your ability to function effectively as a future teacher. Your input will be used to improve the quality of the teacher preparation programs in Arizona's three state universities.

This exit survey is administered to all students who are 18 years or older, graduating from teacher preparation programs at Arizona State University, Northern Arizona University, and University of Arizona.

**Why should you participate in this project?**
Through your participation, you will have the opportunity to shape the future of your alma mater's teacher preparation program. Your input is of the utmost value as your college of education continues to enhance and modify its teacher preparation program to more closely meet the needs of PK-12 pupils, their families, and the teaching profession in Arizona.

**How long will the survey take?**
This survey should take approximately 15 minutes of your time.

**Are there any risks in participating?**
No. Your participation is voluntary. If there is a question you do not wish to answer, simply skip it. We hope you will answer as many questions as possible. Your responses will be completely confidential. Results will be reported only in summary form in reports, presentations, or publications, including online at http://tprep.asu.edu.

**Questions?**
If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

If you have any questions concerning this research study, please contact Dr. Joshua Barnett, Director of the Teacher Preparation Research and Evaluation Project (T-PREP) at tprep@asu.edu or (602) 543-6344.

[6] Questions were adapted from the Teacher Preparation Program Graduates survey from Teacher Policy Research, http://www.teacherpolicyresearch.org/ and the Five Core Propositions of the National Board for Professional Teaching Standards (http://www.nbpts.org/).

## Section A: Program Characteristics and Quality

In this section, please respond to questions about your general experiences in your program, both in classes and in your field experiences.

### A1. Program Quality

1. As a student, how would you grade the quality of the classes in your teacher preparation program? (Select one)
   A B C D F

2. As a student, how would you grade the quality of the field experiences in your teacher preparation program? (Select one)
   A B C D F

To what extent do you agree or disagree with the following statements about your program?

| | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| 3. I would recommend my program to a future teacher | | | | | |

### A2. Program Coherence

In my program...

a) a clear vision of teaching, learning, and assessment was articulated
b) coherence
c) between courses and field experiences was apparent.
d) instructors were knowledgeable about the program as a whole.
e) there was emphasis on strong preparation in one or more subject areas
f) what I learned in methods courses was reflected in my field experiences
g) what I learned in methods courses was reflected in what I did during my student teaching
h) the criteria by which I was evaluated as a student teacher were consistent with what I was taught in my methods courses

### A3. Program Faculty

Instructors in my program...

a) allowed me to evaluate my practice to improve instruction
b) gave assignments that connected my coursework with my field experiences
c) were excellent teachers themselves
d) taught in ways that complement the practices they advocate in courses
e) got to know me
f) cared about my own learning and professional growth
g) were knowledgeable about teaching
h) were knowledgeable about content areas
i) know a lot about the reality of today's schools and pupils
j) were committed to teacher preparation

### A4. Teacher Confidence

| | Completely Confident | Very Confident | Somewhat Confident | Not at all Confident | I do not know what this means |
|---|---|---|---|---|---|
| | | | | | |

If you were to enter the classroom as a teacher today, how confident are you that you would be able to...

a) know ways to diversify lessons to meet the needs of individual students who have special education needs
b) know ways to diversify lessons to meet the needs of individual students who are English language learners
c) use educational technology as a learning tool
d) teach in a high-stakes testing environment

## Section B: Preparation for the Teaching Profession

In this section, please respond to questions about your program's ability to prepare you for your future career as a teacher.

| | Very Well Prepared | Well Prepared | Prepared | Unprepared | Not at all Prepared |
|---|---|---|---|---|---|

### B1. Commitment to Students and Learning

My program has prepared me...

a) to believe all students can learn
b) to treat students equitably
c) to accommodate individual differences among students
d) to understand how students develop and learn
e) to respect the cultural and family differences students bring to the classroom
f) to be concerned with my students' self-concept, motivation and the effects of learning
g) to be concerned with the development of students' character and civic responsibility

### B2. Knowledge of Subjects and How to Teach those Subjects to Students

My program has prepared me...

a) with in-depth knowledge about the subject(s) I will teach
b) with a deep understanding of the real-world applications of the subject(s) I will teach
c) to develop skill and experience in teaching the subject(s) I will teach
d) to understand the skills and gaps students may bring to the subject(s) I will teach

### B3. Responsibility for Managing and Monitoring Student Learning

My program has prepared me...

a) to deliver effective instruction
b) to use a variety of instructional techniques
c) to keep students engaged
d) to ensure a focused learning environment
e) to organize instruction to meet instructional goals
f) to assess the progress of individual students as well as the class as a whole
g) to use multiple methods to assess student understanding
h) to explain student performance to parents/guardians, students and families.

### B4. Think Systematically about my Practice and Learn from Experience

My program has prepared me...

a) to model what it means to be an educated person (*an educated person reads, questions, creates, and is willing to try new things)
b) to be familiar with learning theories and instructional strategies

c) to stay abreast of current issues in American education
d) to examine my practice on a regular basis to deepen knowledge
e) to examine my practice on a regular basis to expand my repertoire of skills
f) to examine my practice on a regular basis to incorporate new insights into my practice

**B5. Teachers are a part of Learning Communities**

My program has helped me...

a) to collaborate with others to improve student learning
b) to work with other professionals on instructional practices
c) to work with other professionals on curriculum development
d) to work with others on my own professional development
e) to understand how to evaluate school progress
f) to meet state and local education objectives
g) to work collaboratively with parents/guardians, students and families to engage them productively in the work of the school

## Section C: Your Background and Teacher Preparation Program

In this section, please respond to questions about your background.

a) From which university are you graduating or completing your teacher preparation program? (Select one)
- ☐ Arizona State University
- ☐ Northern Arizona University
- ☐ University of Arizona

b) From which college of education? (Select one) [Nested for ASU / NAU / UA]
   a. ASU - School of Educational Innovation and Teacher Preparation
   b. ASU - Mary Lou Fulton College of Education
   c. ASU - College of Teacher Education and Leadership
   d. NAU - College of Education Flagstaff
   e. NAU - College of Education Yuma
   f. UA - College of Education
   g. UA - College of Education South
   h. Other. Please specify _____

c) From which campus? (Select one) [Nested for ASU / NAU / UA]

- ☐ ASU - West campus
- ☐ ASU - Tempe campus
- ☐ ASU - Polytechnic campus
- ☐ ASU - Avondale PDS
- ☐ ASU - Chinle PDS
- ☐ ASU - Douglas PDS
- ☐ ASU - Gadsden - Yuma-San Luis PDS
- ☐ ASU - Indian Oasis PDS
- ☐ ASU - Madison PDS
- ☐ ASU - Pendigast PDS
- ☐ NAU - College of Education Flagstaff
- ☐ NAU - Apache Junction
- ☐ NAU - Aravaipa-Winkelman
- ☐ NAU - Bullhead City
- ☐ NAU - Kingman
- ☐ NAU - Lake Havasu City
- ☐ NAU - Mesa
- ☐ NAU - Nogales
- ☐ NAU - North Valley
- ☐ NAU - Online
- ☐ NAU - Page
- ☐ NAU - Paradise Valley
- ☐ NAU - Payson
- ☐ NAU - Phoenix
- ☐ NAU - Prescott
- ☐ NAU - Scottsdale
- ☐ NAU - Show Low
- ☐ NAU - Signal Peak

- ☐ NAU - Chandler-Gilbert
- ☐ NAU - Chinle
- ☐ NAU - Coconino
- ☐ NAU - East Valley
- ☐ NAU - Fort Defiance
- ☐ NAU - Ganado
- ☐ NAU - Gateway
- ☐ NAU - Glendale
- ☐ NAU - Globe
- ☐ NAU - Holbrook
- ☐ NAU - Kayenta
- ☐ NAU - Keams Canyon
- ☐ NAU - South Mountain
- ☐ NAU - Thatcher
- ☐ NAU - Tuba City
- ☐ NAU - Tucson
- ☐ NAU - Tucson North
- ☐ NAU - Verde Valley
- ☐ NAU - West Valley
- ☐ NAU - White River
- ☐ NAU - Yuma
- ☐ UA - College of Education Tucson
- ☐ UA - College of Education South
- ☐ Other. Please specify _____

d) What degree/teacher preparation program are you completing? (Select one)
- ☐ Bachelor's Degree
- ☐ Initial Teacher Certification without Master's Degree
- ☐ Master's Degree with Initial Teacher Certification
- ☐ Other. Please specify _____

e) What Teaching Certificate did you/do you expect to earn?
- ☐ Early Childhood
- ☐ Elementary
- ☐ Secondary [Nested for subjects]
  - o Arts (dance/music/theater/visual arts)
  - o Foreign Language(s)
  - o Language Arts / English
  - o Math
  - o Physical Education
  - o Science (biology, chemistry, physics)
  - o Social Studies (history, geography)
  - o Other (please specify) _____
- ☐ Special Education
- ☐ Dual Certification (Special Education and Elementary Education)

f) Is English your primary language? (Select one)
- ☐ Yes
- ☐ No

g) Please mark the highest level of education attained by your most highly educated parent/guardian (Select one)
- ☐ Less than high school
- ☐ GED (or another high school equivalency diploma)
- ☐ High school
- ☐ Some college
- ☐ College degree (Bachelor's)
- ☐ Post-graduate education
- ☐ Unknown

## Section D: Future Plans

In this section, please respond to questions about your future career as a teacher.

## D1. Your Professional Status

a) What are your plans for the next school year? (Check ALL that apply)

- ☐ Teach in an Arizona school
- ☐ Teach in a school outside of Arizona
- ☐ Substitute teach
- ☐ Work in a non-teaching job
- ☐ Continue higher education
- ☐ I have no plans at this time
- ☐ Other. Please specify _____

b) Do you have a teaching position for the next school year? (Select one)

☐ YES---IF YES, then:

In what school _____
In what school district _____
In what state (Select one)

| | |
|---|---|
| Alabama | Montana |
| Alaska | Nebraska |
| Arizona | Nevada |
| Arkansas | New Hampshire |
| California | New Jersey |
| Colorado | New Mexico |
| Connecticut | New York |
| Delaware | North Carolina |
| Florida | North Dakota |
| Georgia | Ohio |
| Hawaii | Oklahoma |
| Idaho | Oregon |
| Illinois | Pennsylvania |
| Indiana | Rhode Island |
| Iowa | South Carolina |
| Kansas | South Dakota |
| Kentucky | Tennessee |
| Louisiana | Texas |
| Maine | Utah |
| Maryland | Vermont |
| Massachusetts | Virginia |
| Michigan | Washington |
| Minnesota | West Virginia |
| Mississippi | Wisconsin |
| Missouri | Wyoming |

What is your starting annual salary?

- ☐ Less than $25,000
- ☐ $25,001 - $30,000
- ☐ $30,001 - $35,000
- ☐ $35,001 - $40,000
- ☐ More than $40,000

☐ NO

c) If you do plan to move out of state, why? (select one)

- ☐ Moving back home
- ☐ Following a spouse
- ☐ Seeking adventure
- ☐ Family obligation
- ☐ Better career opportunity
- ☐ Other _____

d) In general, how long do you plan on teaching? (Select one)

- ☐ Not at all
- ☐ 1 – 2 years
- ☐ 3 – 5 years
- ☐ 6 – 10 years
- ☐ 11 or more years

## D2. Your Preferences for a Teaching Position

How desirable are the following school characteristics when you think about where you would like to teach?

| | Very Desirable | Desirable | No Preference | Not Very Desirable | Not at all Desirable |
|---|---|---|---|---|---|

a) High salary
b) Good benefits (health, dental, and life insurance)
c) A school near my home
d) A school in an urban environment
e) A school in a suburban environment
f) A school in a rural area
g) A private school
h) A public school
i) A charter
j) A school where students speak many languages
k) A school where students are racially diverse
l) A school that serves students from low-income backgrounds
m) A school that is high achieving

## Section E: General Questions

Based on your recent experience in your teacher preparation program, what specific change(s) would you recommend be made to your program?

## Appendix B: Exit Survey Responses by Survey Item

### Table B.1 – Exit Survey Principles and Sub-Principles

| Principles | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD |
| Program Characteristics and Quality | | | | | | |
| Program coherence | 355 | 3.95 | 0.70 | 1,101 | 3.84 | 0.76 |
| Program faculty | 355 | 3.99 | 0.62 | 1,093 | 4.05 | 0.69 |
| Teacher confidence | 351 | 3.45 | 0.79 | 1,085 | 4.03 | 0.65 |
| Preparation for Profession | | | | | | |
| NBPTS1 | 353 | 4.38 | 0.75 | 1,083 | 4.40 | 0.69 |
| NBPTS2 | 353 | 3.93 | 0.90 | 1,080 | 3.85 | 0.85 |
| NBPTS3 | 353 | 4.12 | 0.81 | 1,078 | 4.05 | 0.78 |
| NBPTS4 | 352 | 4.11 | 0.83 | 1,064 | 4.07 | 0.78 |
| NBPTS5 | 353 | 4.09 | 0.83 | 1,055 | 4.07 | 0.81 |
| Plans for the Future of the Education Profession | 351 | NA | NA | 1,096 | NA | NA |

**Table B.2 – Program Coherence**

| **Program Coherence** (Survey questions A1a-A1g) (Cronbach's alpha = 0.89) | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| In my program a clear vision of teaching, learning, and assessment was articulated. | 354 | 4.27 | 0.76 | 1,099 | 4.05 | 0.83 |
| In my program there was emphasis on strong preparation in one or more subject areas. | 354 | 4.17 | 0.91 | 1,097 | 3.92 | 0.95 |
| In my program instructors were knowledgeable about the program as a whole. | 352 | 4.11 | 0.89 | 1,098 | 3.88 | 0.99 |
| In my program what I learned in methods courses was reflected in what I did during my student teaching. | 355 | 4.06 | 1.03 | 1,097 | 3.83 | 1.00 |
| In my program the criteria by which I was evaluated as a student teacher were consistent with what I was taught in my methods courses. | 355 | 3.99 | 1.01 | 1,096 | 3.80 | 1.01 |
| In my program what I learned in methods courses was reflected in my field experiences. | 354 | 3.95 | 1.07 | 1,099 | 3.69 | 1.05 |
| In my program coherence among courses and between courses and field experiences was *apparent*[7]. | 355 | 3.12 | 1.22 | 1,101 | 3.70 | 1.06 |

[7] Changed from spring 2008, which was reverse worded to say "lacking".

## Table B.3 –Program Faculty

| **Program Faculty** (Survey questions A2a-A2j) (Cronbach's alpha = 0.93) | **Spring 2008** | | | **Spring 2009** | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| Instructors in my program were knowledgeable about teaching. | 355 | 4.38 | 0.67 | 1,092 | 4.29 | 0.69 |
| Instructors in my program were knowledgeable about content areas. | 354 | 4.34 | 0.73 | 1,091 | 4.26 | 0.78 |
| Instructors in my program were committed to teacher preparation. | 353 | 4.28 | 0.79 | 1,088 | 4.22 | 0.77 |
| Instructors in my program allowed me to evaluate my practice to improve instruction. | 353 | 4.20 | 0.79 | 1,090 | 4.08 | 0.83 |
| Instructors in my program cared about my own learning and professional growth. | 354 | 4.15 | 0.90 | 1,088 | 4.10 | 0.85 |
| Instructors in my program were excellent teachers themselves. | 353 | 4.12 | 0.88 | 1,090 | 3.93 | 0.94 |
| Instructors in my program gave assignments that connected my coursework with my field experiences. | 355 | 3.97 | 0.92 | 1,093 | 3.81 | 0.98 |
| Instructors in my program got to know me. | 354 | 3.95 | 0.98 | 1,091 | 3.90 | 1.01 |
| Instructors in my program *know a lot*[8] about the reality of today's schools and pupils. | 354 | 3.75 | 1.10 | 1,089 | 4.01 | 0.95 |
| Instructors in my program taught in ways that *complement*[9] the practices they advocate in courses. | 353 | 3.33 | 1.18 | 1,092 | 3.91 | 0.95 |

[8] Changed from spring 2008, which was reverse worded to say "do not know much".
[9] Changed from spring 2008, which was reverse worded to say "contradict".

## Table B.4 –Teacher Confidence

| **Teacher Confidence** (Survey questions A3a-A3d) (Cronbach's alpha = 0.78) | **Spring 2008** | | | **Spring 2009** | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| If you were to enter the classroom as a teacher today, how confident are you that you would be able to use educational technology as a learning tool. | | | | 1,082 | 4.22 | 0.82 |
| If you were to enter the classroom as a teacher today, how confident are you that you would be able to teach in a high-stakes testing environment. | | | | 1,084 | 4.02 | 0.84 |
| If you were to enter the classroom as a teacher today, how confident are you that you know the ways to diversity lessons to meet the needs of individual students who have special education needs. | Not asked in 2008 | | | 1,085 | 3.95 | 0.83 |
| If you were to enter the classroom as a teacher today, how confident are you that you know ways to diversity lessons to meet the needs of individual students who are English Language Learners. | | | | 1,084 | 3.95 | 0.85 |

**Table B.5 – NBPTS Proposition 1: Commitment to Students and Learning**

| NBPTS Proposition 1: Commitment to Students and Learning (Survey questions B1a – B1g) (Cronbach's alpha = 0.94) | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD |
| My program has prepared me to treat students equitably. | 353 | 4.51 | 0.74 | 1,079 | 4.53 | 0.70 |
| My program has prepared me to believe all students can learn. | 352 | 4.47 | 0.80 | 1,083 | 4.45 | 0.77 |
| My program has prepared me to respect the cultural and family differences students bring to the classroom. | 353 | 4.45 | 0.79 | 1,080 | 4.46 | 0.77 |
| My program has prepared me to be concerned with my students' self-concept, motivation and the effects of learning. | 352 | 4.40 | 0.84 | 1,080 | 4.40 | 0.80 |
| My program has prepared me to accommodate individual differences among students. | 353 | 4.33 | 0.88 | 1,080 | 4.39 | 0.80 |
| My program has prepared me to be concerned with the development of students' character and civic responsibility. | 352 | 4.27 | 0.93 | 1,082 | 4.26 | 0.91 |
| My program has prepared me to understand how students develop and learn. | 353 | 4.26 | 0.92 | 1,081 | 4.28 | 0.85 |

**Table B.6 – NBPTS Proposition 2: Knowledge of Subjects and How to Teacher those Subjects to Students**

| NBPTS Proposition 2: Knowledge of Subjects and How to Teach those Subjects to Students (Survey questions B2a-B2d) (Cronbach's alpha = 0.93) | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD |
| My program has prepared me to develop skill and experience in teaching the subject(s) I will teach. | 352 | 4.00 | 0.98 | 1,077 | 3.94 | 0.91 |
| My program has prepared me to understand the skills and gaps students may bring to the subject(s) I will teach.[a] | 353 | 3.93 | 1.00 | 1,077 | 3.91 | 0.94 |
| My program has prepared me with in-depth knowledge about the subject(s) I will teach.[a] | 352 | 3.90 | 0.99 | 1,080 | 3.75 | 0.94 |
| My program has prepared me with a deep understanding of the real-world applications of the subject(s) I will teach. | 352 | 3.87 | 1.02 | 1,080 | 3.78 | 0.96 |

**Table B.7 – NBPTS Proposition 3: Responsibility for Managing and Monitoring Student Learning**

| **NBPTS Proposition 3: Responsibility for Managing and Monitoring Student Learning** (Survey questions B3a-B3h) (Cronbach's alpha = 0.93) | **Spring 2008** | | | **Spring 2009** | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** |
| My program has prepared me to use a variety of instructional techniques. | 353 | 4.23 | 0.89 | 1,076 | 4.18 | 0.84 |
| My program has prepared me to use multiple methods to assess student understanding. | 352 | 4.22 | 0.91 | 1,073 | 4.13 | 0.85 |
| My program has prepared me to organize instruction to meet instructional goals. | 352 | 4.18 | 0.89 | 1,078 | 4.13 | 0.85 |
| My program has prepared me to keep students engaged. | 353 | 4.16 | 0.91 | 1,078 | 4.04 | 0.91 |
| My program has prepared me to deliver effective instruction. | 353 | 4.16 | 0.87 | 1,078 | 4.11 | 0.83 |
| My program has prepared me to assess the progress of individual students as well as the class as a whole. | 353 | 4.15 | 0.90 | 1,078 | 4.06 | 0.87 |
| My program has prepared me to ensure a focused learning environment. | 352 | 4.11 | 0.92 | 1,072 | 4.02 | 0.90 |
| My program has prepared me to explain student performance to parents/guardians and families. | 352 | 3.76 | 1.09 | 1,075 | 3.75 | 1.04 |

**Table B.8 – NBPTS Proposition 4: Think Systematically about My Practice and Learn from Experience**

| NBPTS Proposition 4: Think Systematically about My Practice and Learn from Experience (Survey questions B4a-B4f) (Cronbach's alpha = 0.95) | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD |
| My program has prepared me to model what it means to be an educated person (*an educated person reads, questions, creates, and is willing to try new things). | 352 | 4.19 | 0.88 | 1,063 | 4.18 | 0.88 |
| My program has prepared me to examine my practice on a regular basis to deepen knowledge. | 351 | 4.19 | 0.91 | 1,059 | 4.14 | 0.87 |
| My program has prepared me to examine my practice on a regular basis to expand my repertoire of skills. | 351 | 4.16 | 0.91 | 1,058 | 4.13 | 0.86 |
| My program has prepared me to examine my practice on a regular basis to incorporate new insights into my practice. | 351 | 4.16 | 0.90 | 1,060 | 4.13 | 0.86 |
| My program has prepared me to be familiar with learning theories and instructional strategies. | 351 | 4.08 | 0.89 | 1,063 | 4.02 | 0.85 |
| My program has prepared me to stay informed of current issues in American education. | 352 | 3.90 | 1.00 | 1,057 | 3.86 | 0.96 |

**Table B.9 – NBPTS Proposition 5: Teachers are a Part of Learning Communities**

| NBPTS Proposition 5: Teachers are a Part of Learning Communities (Survey questions B5a-B5g) (Cronbach's alpha = 0.95) | Spring 2008 | | | Spring 2009 | | |
|---|---|---|---|---|---|---|
| | N | Mean | SD | N | Mean | SD |
| My program has prepared me to meet state and local education objectives. | 352 | 4.29 | 0.89 | 1,054 | 4.23 | 0.85 |
| My program has prepared me to collaborate with others to improve student learning. | 353 | 4.22 | 0.85 | 1,053 | 4.23 | 0.85 |
| My program has prepared me to work with other professionals on instructional practices. | 353 | 4.19 | 0.90 | 1,053 | 4.19 | 0.86 |
| My program has prepared me to work with others on my own professional development. | 353 | 4.17 | 0.89 | 1,052 | 4.12 | 0.90 |
| My program has prepared me to work with other professionals on curriculum development. | 352 | 4.04 | 0.97 | 1,053 | 4.06 | 0.98 |
| My program has prepared me to work collaboratively with parents/guardians and families to engage them productively in the work of the school. | 352 | 3.93 | 1.04 | 1,054 | 4.00 | 0.97 |
| My program has prepared me to understand how to evaluate school progress. | 352 | 3.76 | 1.09 | 1,050 | 3.67 | 1.05 |


# The State of Teacher Preparation Programs in Arizona

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## Year Two Results from the Teacher Preparation Research and Evaluation Project (T-PREP)

By:

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Arizona State University

September 1, 2009

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# AGENDA ITEM NO

**ASSOCIATE SUPERINTENDENT APPROVAL**

**STATE BOARD MEETING DATE** May 24, 2010

**SUBJECT:** Arizona Accountability Evaluations, AZ LEARNS changes, and Persistently Low Achieving Schools

**SUBMITTED BY:** Robert Franciosi, Deputy Associate Superintendent, Research and Evaluation

**MANAGEMENT TEAM REVIEW:**

**BACKGROUND INFORMATION:**

Arizona uses two systems to evaluate schools: the Adequate Yearly Progress (AYP) evaluation required by federal law; and the AZ LEARNS profiles required by state law. In addition, the U.S. Department of Education has asked states to identify Persistently Low Achieving schools for the Race to the Top and American *Recovery and Reinvestment Act.*

This presentation provides an overview of both systems. It will focus on two items:

1. Reconciling the AZ LEARNS criteria for Failing schools with the state's definition of Persistently Low Achieving schools.

2. Changes to AZ LEARNS required by new state law (SB 1286).

**BOARD ACTION REQUESTED: [ ] INFORMATION [X] ACTION/DESCRIBED BELOW**

We are requesting that the Board approve the following policy:

"Schools that meet the federally-approved, state definition of Persistently Low Achieving and have ELL reclassification rates lower than 30% shall receive an AZ LEARNS profile of "Underperforming." In accordance with A.R.S. § 15-241, a school that meets the "underperforming" criteria for three consecutive years shall be classified as "failing to meet academic standards."

Arizona Department of Education
**Research and Evaluation Section**
1535 West Jefferson, Mail Bin 16, Phoenix, Arizona 85007
602-542-5151 • FAX 602-364-0887

Tom Horne
Superintendent of
Public Instruction

## Definition of Persistently Lowest Achieving Schools

**Tier I.** Any Title I school in improvement, corrective action, or restructuring that is:

1. Among the lowest-achieving 5 percent of Title I schools in improvement, corrective action, or restructuring

   Or

2. Is a high school that has not had a graduation rate of 60 percent or greater in any of the past three years.

**Tier II.** Any high school that is eligible for but did not receive Title I funds that is:

1. Among the lowest-achieving 5 percent of high schools

   Or

2. Has not had a graduation rate of 60 percent or greater in any of the past three years.

- High schools are defined as schools serving grades 9-12.
- Academic achievement is measured by performance on Arizona's standards-based test, the AIMS.
- Graduation rates are measured using a four-year, adjusted cohort graduation rate. Cohort years 2006, 2007, and 2008 were used in the determination.

**Determining the lowest-achieving 5 percent.** Arizona ranked schools using the Single Percentage Method defined in federal guidance using current year test results (p5). This ranked schools by the percentage of students scoring proficient on the AIMS. Arizona also ranked schools by lack of progress. Lack of progress was measured as the average annual change in the percentage of students scoring

proficient on AIMS over the past three years. A school's final ranking was determined by averaging the two ranks, giving each rank equal weight, using the following formula:

$$\text{Final Rank} = \frac{\text{Rank Percent Proficient} + \text{Rank Lack of Progress}}{2}$$

**Exceptions.** Schools identified as credit recovery were not included on the list. To be identified as credit recovery, a school had to have met the state Board's definition of an alternative school, and to have identified itself through its publicly posted mission statement on its school report card as a credit recovery school.

## Appendix (E)(2)-2 List of PLA Schools

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 400234 | Academy of Arizona | Academy of Arizona - Main | 2024 | X | | | |
| 0400276 | Academy with Community Pa | Academy with Community Partners | 01841 | | | X | |
| 0400450 | Agua Fria Union High School D | Agua Fria High School | 00001 | | | X | |
| 0400480 | Aguila Elementary District | Aguila Elementary School | 00002 | | | X | |
| 0400520 | Ajo Unified District | Ajo High School | 00003 | | | X | |
| 0400404 | Akimel O'Otham Pee Posh Ch | Akimel O'Otham Pee Posh (3rd & | 01993 | | | X | |
| 0400600 | Alhambra Elementary District | Andalucia Middle School | 00302 | | | X | |
| 0400600 | Alhambra Elementary District | R E Simpson School | 00015 | | | X | |
| 404770 | Altar Valley Elementary Distri | Altar Valley Middle School | 01005 | | | X | |
| 0404770 | Altar Valley Elementary Distri | Robles Elementary School | 02400 | | | X | |
| 0400353 | American Charter Schools Fou | Peoria Accelerated High School | 01896 | | | X | |
| 0400618 | American Charter Schools Fou | South Pointe High School | 03095 | | | X | |
| 0400355 | American Charter Schools Fou | West Phoenix High School | 01734 | | | X | |
| 0400680 | Amphitheater Unified District | Amphitheater High School | 00032 | | | X | |
| 0400680 | Amphitheater Unified District | Amphitheater Middle School | 00020 | | | X | |
| 0400680 | Amphitheater Unified District | Helen Keeling Elementary School | 00026 | | | X | |
| 0400790 | Apache Junction Unified Distr | Four Peaks Elementary School | 00041 | | | X | |
| 0400057 | Arizona Call-a-Teen Youth Res | Arizona Call-a-Teen Center for Excel | 00784 | | | X | |
| 0400910 | Ash Fork Joint Unified District | Ash Fork Elementary School | 00047 | | | X | |
| 0400960 | Avondale Elementary District | Lattie Coor | 00051 | | | X | |
| 0401050 | Balsz Elementary District | Balsz School | 00054 | | | X | |
| 0401050 | Balsz Elementary District | Brunson-Lee Elementary School | 03142 | | | X | |
| 0401050 | Balsz Elementary District | David Crockett School | 00055 | | | X | |
| 0400636 | Blueprint Education | Hope High School | 03108 | | | X | |
| 0401380 | Buckeye Elementary District | Buckeye Primary | 02491 | | | X | |
| 0401500 | Bullhead City School District | Bullhead City Jr High School | 00085 | | | X | |
| 0401600 | Camp Verde Unified District | Camp Verde Elementary School | 00086 | | | X | |
| 0400219 | Career Success Schools | Career Success High School - Copper | 03137 | | | X | |
| 0400219 | Career Success Schools | Career Success High School - Main Ca | 02011 | | | X | |
| 0401680 | Cartwright Elementary Distric | Cartwright School | 00089 | | | X | |
| 0401680 | Cartwright Elementary Distric | Charles W. Harris School | 00091 | | | X | |
| 0401680 | Cartwright Elementary Distric | Desert Sands Middle School | 00092 | | | X | |
| 0401680 | Cartwright Elementary Distric | Estrella Middle School | 00093 | | | X | |
| 0401680 | Cartwright Elementary Distric | Frank Borman Middle School | 00094 | | | X | |
| 0401680 | Cartwright Elementary Distric | G. Frank Davidson | 01709 | | | X | |
| 0401680 | Cartwright Elementary Distric | Heatherbrae School | 00096 | | | X | |
| 0401680 | Cartwright Elementary Distric | Marc T. Atkinson Middle School | 02005 | | | X | |
| 0401680 | Cartwright Elementary Distric | Peralta School | 00102 | | | X | |
| 0401680 | Cartwright Elementary Distric | Starlight Park School | 00104 | | | X | |
| 0401680 | Cartwright Elementary Distric | Sunset School | 00105 | | | X | |
| 0401680 | Cartwright Elementary Distric | Tomahawk School | 01055 | | | X | |
| 0401740 | Casa Grande Union High Scho | Casa Grande Union High School | 00113 | | | X | |
| 0401740 | Casa Grande Union High Scho | Desert Winds High School | 01629 | | | X | |
| 0401810 | Cedar Unified District | White Cone High School | 02544 | X | | | |
| 0400016 | Center for Academic Success, | Center for Academic Success, The #1 | 00476 | | | X | |
| 0400016 | Center for Academic Success, | Center for Academic Success, The #2 | 00481 | | | X | |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0400253 | Cesar Chavez Learning Comm | Aztlan Academy | 02208 | | | X | |
| 0400253 | Cesar Chavez Learning Comm | Cesar Chavez Middle School | 01867 | | | X | |
| 0401870 | Chandler Unified District | Erie Elementary School | 00127 | | | X | |
| 0401870 | Chandler Unified District | Galveston Elementary School | 00128 | | | X | |
| 0401940 | Chinle Unified District | Canyon De Chelly Elementary School | 00136 | | | X | |
| 0401940 | Chinle Unified District | Chinle Elementary School | 00135 | | | X | |
| 0401940 | Chinle Unified District | Chinle High School | 00127 | | | X | |
| 0401940 | Chinle Unified District | Chinle Junior High School | 00138 | | | X | |
| 0402110 | Clifton Unified District | Laugharn Elementary School | 00151 | X | | | |
| 0402320 | Coolidge Unified District | Coolidge High School | 00158 | | | X | |
| 0402320 | Coolidge Unified District | HoHoKam Elementary School | 01534 | | | X | |
| 0402320 | Coolidge Unified District | West Elementary School | 00164 | | | X | |
| 0400114 | CPLC Community Schools dba | Calli Ollin High School | 01616 | X | | | |
| 0400114 | CPLC Community Schools dba | Hiaki High School | 02554 | X | | | X |
| 0400114 | CPLC Community Schools dba | Toltecali High School | 02331 | X | | | X |
| 0402400 | Crane Elementary District | Centennial Middle School | 01976 | | | X | |
| 0402400 | Crane Elementary District | Crane Middle School | 00014 | | | X | |
| 0402430 | Creighton Elementary District | Creighton Elementary School | 00174 | | | X | |
| 0402430 | Creighton Elementary District | Excelencia School | 01999 | | | X | |
| 0402430 | Creighton Elementary District | Gateway School | 01704 | | | X | |
| 0402430 | Creighton Elementary District | Larry C Kennedy School | 00176 | | | X | |
| 0402430 | Creighton Elementary District | Papago School | 00179 | | | X | |
| 0402430 | Creighton Elementary District | William T Machan Elementary School | 00181 | | | X | |
| 0407750 | Deer Valley Unified District | Deer Valley Middle School | 00676 | | | X | |
| 0402530 | Douglas Unified District | Paul H Huber Jr High School | 00185 | | | X | |
| 0402530 | Douglas Unified District | Ray Borane Middle School | 00194 | | | X | |
| 0402690 | Dysart Unified District | El Mirage School | 00199 | | | X | |
| 0402690 | Dysart Unified District | Surprise Elementary School | 00201 | | | X | |
| 0402690 | Dysart Unified District | Thompson Ranch Elementary | 02402 | | | X | |
| 0402690 | Dysart Unified District | Valley Vista High School | 02684 | | | X | |
| 0400142 | E.Q. Scholars, Inc. | Scholars Academy, The | 01807 | | | X | |
| 0400412 | E-cademie, A Charter School | E-cademie | 02410 | | | X | |
| 0400078 | EDGE School Inc. The | Edge High School - Himmel Park | 01006 | | | X | |
| 0402760 | Elfrida Elementary District | Elfrida Elementary School | 00204 | | | X | |
| 0402790 | Eloy Elementary District | Eloy Intermediate School | 01060 | | | X | |
| 0400133 | Employ-Ability Unlimited, Inc. | Desert Pointe Academy | 01888 | | | X | |
| 0400421 | Esperanza Community Collegi | Esperanza Community Collegial Acader | 02523 | | | X | |
| 0400052 | Espiritu Community Developn | Esperanza Montessori Academy | 02451 | | | X | |
| 0400235 | Excalibur Charter School Inc | Avalon Elementary | 03157 | | | X | |
| 0402860 | Flagstaff Unified District | Coconino High School | 00212 | | | X | |
| 0402860 | Flagstaff Unified District | Flagstaff Middle School | 00216 | | | X | |
| 0402860 | Flagstaff Unified District | Leupp Public School | 00219 | | | X | |
| 0402860 | Flagstaff Unified District | Mount Elden Middle School | 00214 | | | X | |
| 0402860 | Flagstaff Unified District | W F Killip Elementary School | 00217 | | | X | |
| 0400144 | Florence Crittenton Services c | Crittenton Youth Academy | 01717 | X | | | X |
| 0403010 | Flowing Wells Unified District | Flowing Wells Junior High School | 00232 | | | X | |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0403060 | Fowler Elementary District | Fowler Elementary School | 00240 | | | X | |
| 0403060 | Fowler Elementary District | Western Valley Middle School | 03085 | | | X | |
| 0400102 | Friendly House, Inc. | Friendly House Academia Del Pueblo E | 01582 | | | X | |
| 0403200 | Ft Thomas Unified District | Fort Thomas Elementary School | 00248 | | | X | |
| 0403240 | Gadsden Elementary District | Arizona Desert Elementary | 01806 | | | X | |
| 0403240 | Gadsden Elementary District | Cesar Chavez Elementary | 03066 | | | X | |
| 0403240 | Gadsden Elementary District | Desert View Elementary | 03116 | | | X | |
| 0403240 | Gadsden Elementary District | Gadsden Elementary School | 00250 | X | | | |
| 0403240 | Gadsden Elementary District | Rio Colorado Elementary School | 01213 | | | X | |
| 0403240 | Gadsden Elementary District | San Luis Middle School | 01101 | | | X | |
| 0403240 | Gadsden Elementary District | Southwest Jr. High School | 02388 | | | X | |
| 0403290 | Ganado Unified School Distric | Ganado High School | 00252 | | | X | |
| 0403290 | Ganado Unified School Distric | Ganado Intermediate School | 00253 | | | X | |
| 0403290 | Ganado Unified School Distric | Ganado Middle School | 00254 | | | X | |
| 0400124 | Genesis Academy | Genesis Academy | 01589 | | | X | |
| 0403310 | Gila Bend Unified District | Gila Bend High School | 00256 | | | X | |
| 0400419 | Gila County Regional School D | Globe Education Center | 02473 | | | X | |
| 0403420 | Glendale Elementary District | Challenger Middle School | 01402 | | | X | |
| 0403420 | Glendale Elementary District | Desert Spirit | 02281 | | | X | |
| 0403420 | Glendale Elementary District | Don Mensendick School | 00270 | | | X | |
| 0403420 | Glendale Elementary District | Glendale Landmark Middle School | 00269 | | | X | |
| 0403420 | Glendale Elementary District | Isaac E Imes School | 00267 | | | X | |
| 0403420 | Glendale Elementary District | Melvin E Sine School | 00268 | | | X | |
| 0400146 | Global Education Foundation | Tucson Academy of Leadership & | 01780 | | | X | |
| 0403500 | Globe Unified District | High Desert Middle School | 02422 | | | X | |
| 0400445 | Imagine Charter Elementary a | Imagine Elementary at Camelback | 02676 | X | | | |
| 0403950 | Indian Oasis-Baboquivari Unif | Baboquivari High School | 00310 | X | | | X |
| 0403950 | Indian Oasis-Baboquivari Unif | Baboquivari Middle School | 00311 | | | X | |
| 0403950 | Indian Oasis-Baboquivari Unif | Indian Oasis Primary School | 00312 | | | X | |
| 0400312 | Ira H. Hayes Memorial Applie | Ira H. Hayes High School | 02216 | X | | | X |
| 0403960 | Isaac Elementary District | Alta E Butler School | 00314 | | | X | |
| 0403960 | Isaac Elementary District | Carl T. Smith Middle School | 02382 | | | X | |
| 0403960 | Isaac Elementary District | Esperanza Elementary School | 01542 | | | X | |
| 0403960 | Isaac Elementary District | Isaac Middle School | 00315 | | | X | |
| 0403960 | Isaac Elementary District | J B Sutton Elementary School | 00318 | | | X | |
| 0403960 | Isaac Elementary District | Joseph Zito Elementary School | 00319 | | | X | |
| 0403960 | Isaac Elementary District | Morris K. Udall Escuela de Bellas Ar | 01876 | | | X | |
| 0403960 | Isaac Elementary District | Moya Elementary | 02282 | | | X | |
| 0403960 | Isaac Elementary District | P T Coe Elementary School | 00317 | | | X | |
| 0403960 | Isaac Elementary District | Pueblo Del Sol Middle School | 00650 | | | X | |
| 0400332 | James Sandoval Preparatory H | James Sandoval Preparatory High Scho | 02165 | | X | | X |
| 0404060 | Kayenta Unified District | Kayenta Intermediate School | 01160 | | | X | |
| 0404060 | Kayenta Unified District | Kayenta Middle School | 01161 | | | X | |
| 0404060 | Kayenta Unified District | Monument Valley High School | 00324 | | | X | |
| 0400295 | Kingman Unified School Distri | Kingman High School | 00881 | | | X | |
| 0400295 | Kingman Unified School Distri | Mt Tipton Elementary School | 00149 | X | | | X |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0404230 | Kyrene Elementary District | Kyrene Middle School | 00334 | | | X | |
| 0404290 | Laveen Elementary District | Cheatham Elementary School | 02398 | | | X | |
| 0404290 | Laveen Elementary District | Maurice C. Cash Elementary School | 00342 | | | X | |
| 0400423 | Legacy Education Group | East Valley High School | 02525 | | X | | |
| 0400298 | Legacy Schools | Legacy Elementary School | 02143 | | | X | |
| 0404410 | Littlefield Unified District | Beaver Dam Elementary | 01302 | | | X | |
| 0404440 | Littleton Elementary District | Country Place Elementary | 02497 | | | X | |
| 0404440 | Littleton Elementary District | Quentin Elementary School | 02435 | | | X | |
| 0404720 | Maricopa Unified School Distr | Maricopa Elementary | 00371 | | | X | |
| 0404720 | Maricopa Unified School Distr | Maricopa High School | 00372 | | | X | |
| 0404720 | Maricopa Unified School Distr | Maricopa Wells Middle School | 01468 | | | X | |
| 0404860 | Mcnary Elementary District | Mcnary Elementary School | 00376 | | | X | |
| 0404970 | Mesa Unified District | Brimhall Junior High School | 00108 | | | X | |
| 0404970 | Mesa Unified District | Carson Junior High School | 00380 | | | X | |
| 0404970 | Mesa Unified District | Emerson Elementary School | 00384 | | | X | |
| 0404970 | Mesa Unified District | Fremont Junior High School | 00387 | | | X | |
| 0404970 | Mesa Unified District | Kino Junior High School | 00396 | | | X | |
| 0404970 | Mesa Unified District | Longfellow Elementary School | 00400 | | | X | |
| 0404970 | Mesa Unified District | Lowell Elementary School | 00401 | | | X | |
| 0404970 | Mesa Unified District | Mesa Junior High School | 00405 | | | X | |
| 0404970 | Mesa Unified District | Powell Junior High School | 00410 | | | X | |
| 0404970 | Mesa Unified District | S H A R P | 01076 | | | X | |
| 0404970 | Mesa Unified District | Smith Junior High School | 02110 | | | X | |
| 0404970 | Mesa Unified District | Taylor Junior High School | 01234 | | | X | |
| 0400280 | Mohave Accelerated Learning | Mohave Accelerated Learning Center | 02186 | | | X | |
| 0400379 | Flagstaff Unified School Distri | Mountain English Spanish Academy of | 02316 | X | | | |
| 0405400 | Murphy Elementary District | Alfred F Garcia School | 00445 | | | X | |
| 0405400 | Murphy Elementary District | Arthur M Hamilton School | 00446 | | | X | |
| 0405400 | Murphy Elementary District | Jack L Kuban Elementary School | 01309 | | | X | |
| 0405400 | Murphy Elementary District | William R Sullivan Elementary School | 00447 | | | X | |
| 0400611 | New Samaritan High School | New Samaritan High School | 03120 | | | X | |
| 0405530 | Nogales Unified District | Nogales High School | 00455 | | | X | |
| 0405530 | Nogales Unified District | Pierson Vocational High School | 01552 | | | X | |
| 0400077 | Northern Arizona Academy fo | Northern AZ Academy for Career Dev. | 00918 | | | X | |
| 0400077 | Northern Arizona Academy fo | Northern AZ Academy for Career Dev. | 00943 | | | X | |
| 0400284 | Omega Alpha Academy | Omega Alpha Academy School | 02095 | | | X | |
| 0400101 | OMEGA SCHOOLS d.b.a. Ome | Oasis High School | 01885 | | | X | |
| 0400101 | OMEGA SCHOOLS d.b.a. Ome | Omega Academy | 01580 | | | X | |
| 0400101 | OMEGA SCHOOLS d.b.a. Ome | S. Sturgeon Middle School | 03090 | | | X | |
| 0400101 | OMEGA SCHOOLS d.b.a. Ome | La Puerta High School | 03091 | X | | | |
| 0405670 | Osborn Elementary District | Montecito Community School | 01703 | | | X | |
| 0405670 | Osborn Elementary District | Osborn Middle School | 00461 | | | X | |
| 0405820 | Page Unified District | Desert View Elementary School | 01078 | | | X | |
| 0405820 | Page Unified District | Page Middle School | 00468 | | | X | |
| 0405930 | Paradise Valley Unified Distric | Greenway Middle School | 00130 | | | X | |
| 0405930 | Paradise Valley Unified Distric | Palomino Intermediate School | 03104 | | | X | |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0405930 | Paradise Valley Unified Distric | Palomino Primary School | 00487 | | | X | |
| 0405930 | Paradise Valley Unified Distric | Vista Verde Middle School | 01218 | | | X | |
| 0400364 | PAS Charter, Inc., dba Intelli-S | Intelli-School - Metro Center | 00804 | | | X | |
| 0400344 | Pathways KM Charter Schools | Rimrock Public High School | 01990 | | X | | |
| 0406120 | Peach Springs Unified District | Peach Springs School | 00502 | X | | | |
| 0406150 | Pearce Elementary District | Pearce Elementary School | 00503 | | | X | |
| 0406210 | Pendergast Elementary Distri | Pendergast Elementary School | 00506 | | | X | |
| 0400109 | Phoenix Advantage Charter Sc | Phoenix Advantage Charter School | 01592 | | | X | |
| 0406300 | Phoenix Elementary District | Mary Mcleod Bethune School | 00518 | | | X | |
| 0406300 | Phoenix Elementary District | Silvestre S Herrera School | 00531 | | | X | |
| 0400153 | Phoenix School of Academic E | Learning Institute, The | 01902 | | | X | |
| 0406330 | Phoenix Union High School Di | Alhambra High School | 00538 | | | X | |
| 0406330 | Phoenix Union High School Di | Camelback High School | 00540 | | | X | |
| 0406330 | Phoenix Union High School Di | Carl Hayden High School | 00541 | | | X | |
| 0406330 | Phoenix Union High School Di | Central High School | 00542 | | | X | |
| 0406330 | Phoenix Union High School Di | Cesar Chavez High School | 01882 | | | X | |
| 0406330 | Phoenix Union High School Di | Maryvale High School | 00549 | | | X | |
| 0406330 | Phoenix Union High School Di | North High School | 01244 | | | X | |
| 0406330 | Phoenix Union High School Di | South Mountain High School | 00552 | | | X | |
| 0406330 | Phoenix Union High School Di | Trevor Browne High School | 00554 | | | X | |
| 0400201 | Pima County Board of Superv | Pima Vocational High School | 02069 | | | X | |
| 0400367 | Pima Prevention Partnership | Pima Partnership School, The | 02303 | X | | | X |
| 0400023 | Pinon Unified District | Pinon Elementary School | 01352 | | | X | |
| 0400023 | Pinon Unified District | Pinon Middle School | 01355 | | | X | |
| 0400083 | PPEP & Affiliates | PPEP TEC - Celestino Fernandez Learn | 01011 | | | X | |
| 0400083 | PPEP & Affiliates | PPEP TEC - Cesar Chavez Learning Cen | 01016 | | | X | |
| 0400288 | Premier Charter High School | Premier Charter High School | 02176 | X | | | X |
| 0400081 | Presidio School | Presidio High School | 01010 | | | X | |
| 0406780 | Quartzsite Elementary Distric | Ehrenberg Elementary School | 00573 | | | X | |
| 0406870 | Red Mesa Unified District | Red Mesa Elementary School | 00141 | | | X | |
| 0406870 | Red Mesa Unified District | Red Mesa High School | 00142 | | | X | |
| 0406870 | Red Mesa Unified District | Red Mesa Junior High School | 00206 | | | X | |
| 0406870 | Red Mesa Unified District | Round Rock Elementary School | 00143 | | | X | |
| 0407020 | Riverside Elementary District | Kings Ridge School | 02487 | | | X | |
| 0407080 | Roosevelt Elementary District | Bernard Black Elementary School | 02498 | | | X | |
| 0407080 | Roosevelt Elementary District | C O Greenfield School | 00587 | | | X | |
| 0407080 | Roosevelt Elementary District | Cesar E Chavez Community School | 00605 | | | X | |
| 0407080 | Roosevelt Elementary District | Ed & Verma Pastor Elementary Sc | 01879 | | | X | |
| 0407080 | Roosevelt Elementary District | Ignacio Conchos School | 01143 | | | X | |
| 0407080 | Roosevelt Elementary District | John R Davis School | 01144 | | | X | |
| 0407080 | Roosevelt Elementary District | Rose Linda School | 00607 | | | X | |
| 0407080 | Roosevelt Elementary District | T G Barr School | 00582 | | | X | |
| 0407080 | Roosevelt Elementary District | V H Lassen Elementary School | 00593 | | | X | |
| 0407080 | Roosevelt Elementary District | Valley View School | 01100 | | | X | |
| 0407200 | Sacaton Elementary District | Sacaton Elementary | 00621 | | | X | |
| 0407200 | Sacaton Elementary District | Sacaton Middle School | 01176 | | | X | |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0407170 | Saddle Mountain Unified Scho | Ruth Fisher Elementary School | 00620 | | | X | |
| 0406960 | San Carlos Unified District | San Carlos High School | 01502 | | | X | |
| 0406960 | San Carlos Unified District | San Carlos Intermediate | 01656 | X | | | |
| 0406960 | San Carlos Unified District | San Carlos Junior High School | 00526 | X | | | |
| 0406740 | Sanders Unified District | Sanders Elementary School | 00572 | | | X | |
| 0406740 | Sanders Unified District | Sanders Middle School | 01043 | | | X | |
| 0406740 | Sanders Unified District | Valley High School | 01142 | X | | | |
| 0407520 | Santa Cruz Valley Unified Dist | San Cayetano Elementary School | 00637 | | | X | |
| 0407530 | Santa Cruz Valley Union High | Santa Cruz Valley Union High School | 00638 | | | X | |
| 0400363 | SC Jensen Corporation, Inc. db | Intelli-School | 02300 | | | X | |
| 0407570 | Scottsdale Unified District | Supai Middle School | 00661 | | | X | |
| 0407630 | Seligman Unified District | Seligman High School | 00668 | | X | | |
| 0400154 | Shonto Governing Board of Ed | Shonto Preparatory Technology High S | 01770 | X | | | X |
| 0407890 | Somerton Elementary District | Somerton Middle School | 00698 | | | X | |
| 0407890 | Somerton Elementary District | Tierra Del Sol Elementary School | 01566 | | | X | |
| 0400259 | Southgate Academy, Inc. | Southgate Academy | 02080 | | | X | |
| 0408130 | Stanfield Elementary District | Stanfield Elementary School | 00705 | | | X | |
| 0408170 | Sunnyside Unified District | Apollo Middle School | 00706 | | | X | |
| 0408170 | Sunnyside Unified District | Chaparral Middle School | 01148 | | | X | |
| 0408170 | Sunnyside Unified District | Los Amigos Elementary School | 01386 | | | X | |
| 0408170 | Sunnyside Unified District | Sierra Middle School | 01149 | | | X | |
| 0400387 | Tempe Accelerated Public Cha | Tempe Accelerated High School | 01735 | | | X | |
| 0408310 | Tempe School District | Connolly Middle School | 00768 | | | X | |
| 0408310 | Tempe School District | Fees Middle School | 01107 | | | X | |
| 0408310 | Tempe School District | Gililland Middle School | 00775 | | | X | |
| 0408310 | Tempe School District | Mckemy Middle School | 00779 | | | X | |
| 0400062 | Tertulia: A Learning Communi | Tertulia Pre-College Community Inter | 01598 | | | X | |
| 0400062 | Tertulia: A Learning Communi | Tertulia Pre-College Community Prima | 00811 | | | X | |
| 0408490 | Tolleson Elementary District | Arizona Desert Elementary School | 01705 | | | X | |
| 0408490 | Tolleson Elementary District | Porfirio H. Gonzales Elementary Scho | 01477 | | | X | |
| 0408520 | Tolleson Union High School D | Copper Canyon High School | 02416 | | | X | |
| 0408520 | Tolleson Union High School D | La Joya Community High School | 02339 | | | X | |
| 0408680 | Tuba City Unified District | Eagles Nest Intermediate School | 00813 | | | X | |
| 0408680 | Tuba City Unified District | Tuba City High School | 00812 | | | X | |
| 0408680 | Tuba City Unified District | Tuba City Junior High School | 00814 | | | X | |
| 0408800 | Tucson Unified District | Cavett Elementary School | 01267 | | | X | |
| 0408800 | Tucson Unified District | Hohokam Middle School | 01480 | | | X | |
| 0408800 | Tucson Unified District | Howenstine High School | 01450 | | X | | |
| 0408800 | Tucson Unified District | Lynn Urquides | 00861 | | | X | |
| 0408800 | Tucson Unified District | Maxwell Middle School | 00867 | | | X | |
| 0408800 | Tucson Unified District | Myers-Ganoung Elementary School | 00871 | | | X | |
| 0408800 | Tucson Unified District | Naylor Middle School | 00872 | | | X | |
| 0408800 | Tucson Unified District | Project More High School | 01508 | | X | | |
| 0408800 | Tucson Unified District | Richey Elementary School | 00877 | | | X | |
| 0408800 | Tucson Unified District | Robison Elementary School | 00880 | | | X | |
| 0408800 | Tucson Unified District | Safford Engineering/Technology Magn | 00886 | | | X | |

| LEA NCES# | District Name | School Name | School NCES# | Tier I | Tier II | Tier III | Graduation Rate |
|---|---|---|---|---|---|---|---|
| 0408800 | Tucson Unified District | Teenage Parent Program - TAPP | 01509 | | | X | |
| 0408800 | Tucson Unified District | Valencia Middle School | 00972 | | | X | |
| 0408800 | Tucson Unified District | Wakefield Middle School | 00901 | | | X | |
| 0408820 | Union Elementary District | Hurley Ranch Elementary | 02496 | | | X | |
| 0400207 | Vechij Himdag Alternative Sch | Vechij Himdag MashchamakuD | 02215 | | | X | |
| 0409060 | Washington Elementary Scho | Cholla Middle School | 00921 | | | X | |
| 0409060 | Washington Elementary Scho | Maryland Elementary School | 00930 | | | X | |
| 0409060 | Washington Elementary Scho | Mountain View Elementary School | 00932 | | | X | |
| 0409060 | Washington Elementary Scho | Palo Verde Middle School | 00935 | | | X | |
| 0409060 | Washington Elementary Scho | Shaw Butte School | 00941 | | | X | |
| 0409060 | Washington Elementary Scho | Sunnyslope Elementary School | 00944 | | | X | |
| 0409090 | Wellton Elementary District | Wellton Elementary School | 00948 | | | X | |
| 0409160 | Whiteriver Unified District | Alchesay High School | 00005 | X | | | |
| 0409160 | Whiteriver Unified District | Canyon Day Junior High School | 00952 | X | | | |
| 0409160 | Whiteriver Unified District | Seven Mile School | 02190 | X | | | |
| 0409160 | Whiteriver Unified District | Whiteriver Elementary | 00951 | | | X | |
| 0409250 | Willcox Unified District | Willcox Middle School | 00958 | | | X | |
| 0409430 | Window Rock Unified District | Dine Bi'Olta (Immersion School) | 02447 | | | X | |
| 0409430 | Window Rock Unified District | Tse'Hootsooi Elementary School | 02764 | | | X | |
| 0409430 | Window Rock Unified District | Tsehootsooi Middle School | 00968 | | | X | |
| 0409460 | Winslow Unified District | Winslow High School | 00975 | | | X | |
| 0400277 | Youngtown Public Charter Sch | Youngtown Public Charter School | 02167 | | | X | |
| 0409600 | Yuma Elementary District | Fourth Avenue Junior High School | 00985 | | | X | |
| 0409600 | Yuma Elementary District | George Washington Carver Elementary | 00983 | | | X | |
| 0409600 | Yuma Elementary District | Pecan Grove Elementary School | 00993 | | | X | |
| 0400095 | Yuma Private Industry Counci | Educational Opportunity Center | 01114 | | | X | |
| 0409630 | Yuma Union High School Distr | Cibola High School | 01388 | | | X | |
| 0409630 | Yuma Union High School Distr | Kofa High School | 00996 | | | X | |
| 0409630 | Yuma Union High School Distr | Yuma High School | 00997 | | | X | |

## APPLICATION COVER SHEET

## SCHOOL IMPROVEMENT GRANTS

| Legal Name of Applicant: | Applicant's Mailing Address: |
|---|---|
| **Arizona Department of Education** | 1535 W. Jefferson St.<br>Phoenix, AZ 85007 |

State Contact for the School Improvement Grant

Name: Angela Denning

Position and Office: Deputy Associate Superintendent of School Improvement and Intervention; School Effectiveness Division

Contact's Mailing Address:

1535 W. Jefferson St., Bin #10
Phoenix, AZ 85007

Telephone: 602.364.2281

Fax: 602.364.2334

Email address: Angela.Denning@azed.gov

| Chief State School Officer (Printed Name): | Telephone: |
|---|---|
| Tom Horne | 602.542.5460 |
| Signature of the Chief State School Officer:<br>X Tom Horne | Date: 2/16/10<br>**Revised 3/17/2010** |

The State, through its authorized representative, agrees to comply with all requirements applicable to the School Improvement Grants program, including the assurances contained herein and the conditions that apply to any waivers that the State receives through this application.

## PART I: SEA REQUIREMENTS

As part of its application for a School Improvement Grant under section 1003(g) of the ESEA, an SEA must provide the following information.

**A. ELIGIBLE SCHOOLS: An SEA must provide a list, by LEA, of each Tier I, Tier II, and Tier III school in the State. (A State's Tier I and Tier II schools are its persistently lowest-achieving schools and, if the SEA so chooses, certain additional Title I eligible schools that are as low achieving as the State's persistently lowest-achieving schools or that have had a graduation rate below 60 percent over a number of years.) In providing its list of schools, the SEA must indicate whether a school has been identified as a Tier I or Tier II school solely because it has had a graduation rate below 60 percent over a number of years. In addition, the SEA must indicate whether it has exercised the option to identify as a Tier I, Tier II, or Tier III school a school that was made newly eligible to receive SIG funds by the Consolidated Appropriations Act, 2010.**

**Along with its list of Tier I, Tier II, and Tier III schools, the SEA must provide the definition that it used to develop this list of schools. If the SEA's definition of persistently lowest-achieving schools that it makes publicly available on its Web site is identical to the definition that it used to develop its list of Tier I, Tier II, and Tier III schools, it may provide a link to the page on its Web site where that definition is posted rather than providing the complete definition.**

| LEA NAME, NCES ID # | | | | | | |
|---|---|---|---|---|---|---|
| SCHOOL NAME | NCES ID # | TIER I | TIER II | TIER III | GRAD RATE | NEWLY ELIGIBLE[1] |
| | | | | | | |

- **See attached Excel Spreadsheet (Appendix A) for List of Arizona's Tier I, Tier II & Tier III Schools**

An SEA should attach a table with this information to its School Improvement Grant application. If an SEA is providing the definition it used to develop its list of Tier I, Tier II, and Tier III schools rather than a link to its definition of persistently lowest-achieving schools, it should also attach the definition to its application.

**Definition of Persistently Lowest Achieving Schools**

**Tier I.** Any Title I school in improvement, corrective action, or restructuring that is:

1. Among the lowest-achieving 5 percent of Title I schools in improvement, corrective action, or restructuring

**OR**

[1] As noted above, an SEA must identify newly eligible schools on its list only if it chooses to take advantage of this option.

2. Is a high school that has not had a graduation rate of 60 percent or greater in any of the past three years.

**Tier II.** Any high school that is eligible for but did not receive Title I funds that is (High schools are defined as schools serving grades 9-12):

1. Among the lowest-achieving 5 percent of high schools
   **OR**
2. Has not had a graduation rate of 60 percent or greater in any of the past three years.

High schools are defined as schools serving grades 9-12.
Academic achievement is measured by performance on Arizona's standards-based test, the AIMS.
Graduation rates are measured using a four-year, adjusted cohort graduation rate. Cohort years 2006, 2007, and 2008 were used in the determination.
**Determining the lowest-achieving 5 percent.** Arizona ranked schools using the Single Percentage Method defined in federal guidance using current year test results (p5). This ranked schools by the percentage of students scoring proficient on the AIMS. Arizona also ranked schools by lack of progress. Lack of progress was measured as the average annual change in the percentage of students scoring Arizona Department of Education March 2010 proficient on AIMS over the past three years. A school's final ranking was determined by averaging the two ranks, giving each rank equal weight, using the following formula:

$$\text{Final Rank} = \frac{\text{Rank Percent Proficient} + \text{Rank Lack of Progress}}{2}$$

**Exceptions:** Schools identified as credit recovery were not included on the list. To be identified as credit recovery, a school had to have met the state Board's definition of an alternative school, and to have identified itself through its publicly posted mission statement on its school report card as a credit recovery school.

**Link to "PLA" Definition on Arizona Department of Education's Website:**

**http://www.ade.az.gov/azlearns/aypdeterminations.asp**

## Alignment of SIG Requirements between SEA and LEA Applications

**See Appendix B for LEA Application**

| **Section of SEA Application that addresses requirements of LEA** | | **Section of LEA Application Item is Addressed** | **Evaluation Tool** |
|---|---|---|---|
| ***SEA Section*** | ***Topic*** | ***LEA Section*** | |
| B. Part 1.1 | Needs Analysis of Tier I and Tier II Schools | A (Analysis) and C (Root Causes) | Rubric A, C & D |
| B. Part 1.2 | LEA demonstrates capacity to use funds (**NOTE:** The questions on the LEA Application do not have a 1-to-1 correlation with the rubric-the SII Team will address the items in the rubric by reviewing information contained in the LEA's responses to all items in B.1) | B.1a and B.1b | Rubric B.1a |
| B. Part 1.3 | LEA's budget includes sufficient funds to implement selected model | F | Rubric F |
| B. Part 2 (1-4) | Actions LEAs will most likely take after receiving a School Improvement Grant | B.1b | Rubric B.1b & E |
| B. Part 2 (5) | Sustaining reforms | G | Rubric G |

**See Appendix C for complete Evaluation Tool**

**EVALUATION CRITERIA: An SEA must provide the criteria it will use to evaluate the information set forth below in an LEA's application for a School Improvement Grant.**

| **AREA** | **Total Points Possible** | **Minimum Points Needed for Approval** |
|---|---|---|
| **A – Analysis of School Needs** | **30** | **27** |
| **B.1a – Analysis of LEA Capacity** | **85** | **78** |
| **B.1b – Analysis of LEA Commitment** | **35** | **32** |
| **C – Root Causes** | **40** | **36** |
| **D – School's to Be Served** | **15** | **12** |
| **E – LEA's Accountability** | **35** | **32** |
| **F – Budget** | **20** | **18** |
| **G – Sustainability** | **10** | **10** |

**LEA applications must meet the minimum points for each area for approval. In addition, applications must score in the Fully Addressed or Partially Addressed indicators to be approved. Applications that meet the minimum points but receive a rubric score in Not Addressed, specifically in LEA Capacity, will not be approved.**

**Rubric points to be assigned for each component of the LEA application during the review process:**

**Fully Addressed**
5 – All items addressed
4 – May be missing 1 component, but it is recognized and inclusion addressed

**Partially Addressed**
3 – Components addressed but with little detail or connectedness
2 – Missing a number of components
**Not Addressed**
1 – Nothing in place but an indication that a plan is needed to address issue
0 – Nothing in place and no indication of plan

## B. EVALUATION CRITERIA: An SEA must provide the criteria it will use to evaluate the information set forth below in an LEA's application for a School Improvement Grant.

**Part 1**

**The three actions listed in Part 1 are ones that an LEA must take prior to submitting its application for a School Improvement Grant. Accordingly, the SEA must describe, with specificity, the criteria the SEA will use to evaluate an LEA's application with respect to each of the following actions:**

**(1) The LEA has analyzed the needs of each Tier I and/or Tier II school identified in the LEA's application and has selected an intervention for each school.**

*Evaluation Criteria*
***The SEA will review the LEA's responses to questions in Sections A, C and D of the LEA application to determine the degree and level the LEA analyzed the needs of their schools and selected the best intervention for these schools using the following Rubrics:***

- Rubric A – ***LEA's Analysis of School Needs*** - addresses A.1-A.3 of the LEA Application
  - Minimum Rubric Score for consideration is 27 with scores in Fully Addressed and/or Partially Addressed.
- Rubric C – ***Root Causes*** - addresses C.1-C.4 of the LEA Application
  - Minimum Rubric Score for consideration is 36 with scores in Fully Addressed and/or Partially Addressed.
- Rubric D – ***Schools to Be Served*** – addresses D.1-D.3 of the LEA Application
  - Minimum Rubric Score for consideration is 12 with scores in Fully Addressed and/or Partially Addressed.

**Rubric points to be assigned during the review process:**
**5 – All items addressed**
**4 – May be missing 1 component, but it is recognized and inclusion addressed**
**3 – Components addressed but with little detail or connectedness**
**2 – Missing a number of components**
**1 – Nothing in place but an indication that a plan is needed to address issue**
**0 – Nothing in place and no indication of plan**

**(2) The LEA has demonstrated that it has the capacity to use school improvement funds to provide adequate resources and related support to each Tier I and Tier II school identified in the LEA's application in order to implement fully and effectively the selected intervention in each of those schools.**

*Evaluation Criteria*
***The SEA will review the LEA's responses to the capacity matrix indicators to determine the LEA***

***capacity to implement one of the four intervention models in their Tier I and Tier II schools using the following Rubrics:***

- Rubric B.1 – ***Evaluation of LEA Capacity*** - addresses B.1a of the LEA Application
  - Minimum score for consideration is 76 with scores in Fully Addressed and/or Partially Addressed.
  - The matrix responses on the LEA Application do not have a 1-to-1 correlation with the rubric-the SI Team will address the items in the rubric by reviewing information contained in the LEA's responses to all items in B.1

**Rubric points to be assigned during the review process:**
**5 – All items addressed**
**4 – May be missing 1 component, but it is recognized and inclusion addressed**
**3 – Components addressed but with little detail or connectedness**
**2 – Missing a number of components**
**1 – Nothing in place but an indication that a plan is needed to address issue**
**0 – Nothing in place and no indication of plan**

**(3) The LEA's budget includes sufficient funds to implement the selected intervention fully and effectively in each Tier I and Tier II school identified in the LEA's application as well as to support school improvement activities in Tier III schools throughout the period of availability of those funds (taking into account any waiver extending that period received by either the SEA or the LEA).**

*Evaluation Criteria*
***The SEA will review the LEA's budget proposal, section F of the LEA application, to determine the level and degree that the LEA budget sufficiently funds the necessary components to implement the chosen intervention model and support the continued improvement efforts in specified schools using the following Rubrics:***

- Rubric F – ***Analysis of Budget*** – addresses Section F of the LEA Application
  - Minimum score for consideration is 18 with scores in Fully Addressed and/or Partially Addressed.

**Rubric points to be assigned during the review process:**
**5 – All items addressed**
**4 – May be missing 1 component, but it is recognized and inclusion addressed**
**3 – Components addressed but with little detail or connectedness**
**2 – Missing a number of components**
**1 – Nothing in place but an indication that a plan is needed to address issue**
**0 – Nothing in place and no indication of plan**

**<u>Part 2</u>**

**The actions in Part 2 are ones that an LEA may have taken, in whole or in part, prior to submitting its application for a School Improvement Grant but, most likely, will take after receiving a School Improvement Grant. Accordingly, an SEA must describe how it will assess the LEA's commitment to do the following:**

**(1) Design and implement interventions consistent with the final requirements.**

**(2) Recruit, screen, and select external providers, if applicable, to ensure their quality.**

**(3) Align other resources with the interventions.**

**(4) Modify its practices or policies, if necessary, to enable it to implement the interventions fully and effectively.**

*Evaluation Criteria*
***The SEA will review the LEA's responses to determine the level and degree of LEA commitment to implement one of the four intervention models in their Tier I and Tier II schools using the following Rubrics:***

- Rubric B.2 – ***LEA Commitment*** - addresses B.1b of the LEA Application
  - Minimum score for consideration is 32 with scores in Fully Addressed and/or Partially Addressed.
- Rubric E – ***LEA's Accountability*** – addresses E.1-E.4 of the LEA Application
  - Minimum score for consideration is 32 with scores in Fully Addressed and/or Partially Addressed.

**Rubric points to be assigned during the review process:**
**5 – All items addressed**
**4 – May be missing 1 component, but it is recognized and inclusion addressed**
**3 – Components addressed but with little detail or connectedness**
**2 – Missing a number of components**
**1 – Nothing in place but an indication that a plan is needed to address issue**
**0 – Nothing in place and no indication of plan**

**(5) Sustain the reforms after the funding period ends.**

*Evaluation Criteria*
***The SEA will review LEA's Sustainability Plan, section G, to determine quality and viability of the long range plan to sustain continue improvement efforts after the funding period ends using the following Rubrics***

- Rubric G – ***Sustainability Plans*** – addresses Section G of the LEA Application
  - Minimum score for consideration is 10 with scores in Fully Addressed and/or Partially Addressed.

**Rubric points to be assigned during the review process:**
**5 – All items addressed**
**4 – May be missing 1 component, but it is recognized and inclusion addressed**
**3 – Components addressed but with little detail or connectedness**
**2 – Missing a number of components**
**1 – Nothing in place but an indication that a plan is needed to address issue**
**0 – Nothing in place and no indication of plan**

## C. CAPACITY: The SEA must explain how it will evaluate whether an LEA lacks capacity to implement a school intervention model in each Tier I school.

**An LEA that applies for a School Improvement Grant must serve each of its Tier I schools using one of the four school intervention models unless the LEA demonstrates that it lacks sufficient capacity to do so. If an LEA claims it lacks sufficient capacity to serve each Tier I school, the SEA must evaluate the sufficiency of the LEA's claim. Claims of lack of capacity should be scrutinized carefully to ensure that LEAs effectively intervene in as many of their Tier I schools as possible.**

**The SEA must explain how it will evaluate whether an LEA lacks capacity to implement a school intervention model in each Tier I school. The SEA must also explain what it will do if it determines that an LEA has more capacity than the LEA demonstrates.**

LEA capacity will be determined through the analysis of responses to the capacity matrix using the Scoring Rubrics. LEAs demonstration of capacity will be assessed in the five areas for the Arizona Standards and Rubric for District and School Improvement; LEA and School Leadership, Curriculum, Instruction and Professional Development, Assessment, Culture, Climate, and Communication and Resource Management. The LEA's rubric score in Capacity and Commitment will determine whether an LEA demonstrates the capacity to implement the School Improvement Grant in their Tier I or Tier II school(s). LEAs responses must achieve a rubric score of at least 54 for Capacity and 32 for Commitment to be considered having the capacity to implement. The rubric scores represent the LEAs work and efforts to demonstrate their capacity to fully and completely implement an intervention model and support the continuous improvement work in Tier III schools

To determine the validity of an LEA's claim that it lacks sufficient capacity to serve one or more of its Tier I and Tier II school(s), the Arizona Department of Education will utilize the following actions:

1. Review the LEA Application. Specifically LEA responses to the individual indicators in the capacity matrix, synthesizing the strengths and weakness. Review the LEA responses demonstrating commitment, synthesizing the actions that have already taken place and those that are planned. Review the Standards and Rubrics for School/District Improvement Self Assessment to identify foundational indicators that are in the approaches or falls far below category.
2. Reference the evaluation tool completed for Part B – *B.1a-Analysis of LEA's Capacity*
3. Meet with the LEA Team together and individually to gather information on the perception of capacity
4. Arizona Department of Education's School Improvement and Intervention team will conduct on-site visits of Tier I and/or Tier II schools in that LEA

If the Arizona Department of Education agrees that the LEA does not have the capacity at this time, the ADE will work with the LEA team, incorporating findings from above and will develop an Action Plan for building their capacity. The capacity issue will be reviewed when the 2010 SIG Grant becomes available.

If the Arizona Department of Education disagrees with the LEA determination that it lacks capacity, the

ADE will:

1. Convene a meeting with the LEA Team and provide evidence that the LEA has capacity and determine then if it is a "commitment" issue
2. Outline the LEA capacity identified in the evidence. Create an action plan for the LEA to implement the chosen intervention model in Tier I and/or Tier II school(s).
3. Provide technical assistance to address the issues that are most interfering with the LEA's moving forward with the grant application
4. Provide information on additional resources and external providers that would support the LEA
5. In addition, the Arizona Department of Education may convene a community forum to seek input from stakeholders

## D. DESCRIPTIVE INFORMATION: An SEA must include the information set forth below.

**(1) Describe the SEA's process and timeline for approving LEA applications.**

Approval of LEA's applications for their Tier I, Tier II, and Tier III schools will be accomplished in three steps: (The first two weeks after the application period ends will be focused on the Tier I and Tier II schools. After completing the review and approval of Tier I and Tier II, School Improvement and Intervention (SII) staff will review the applications for Tier III.). The School Improvement and Intervention (SII) Review teams will consist of three ADE Educational Program Specialists. Members of the review team will initially score independently, and then convene in small groups to collectively reach consensus on scores.

a) **Step One**: upon receiving an LEA's Application, the SII Review Teams will apply the scoring rubric detailed in Appendix D. The rubric offers quality insight into the criteria that will be used to assess the applications. Review team members will review each application and provide a score for each section based on the rubrics A through G. If the application does not reach the minimum number of points required to move to Step 2, an Education Program Specialist will contact the district and assist with modifying the weaker areas. If the application achieves the necessary points, that LEA will move to Step Two.

b) **Step Two**: using the online Arizona LEA Tracker (ALEAT) tool, the LEA creates a detailed action plan that includes goals, action steps, tasks, timeline, person responsible and budget allocation using the application components. Their completed action plan will be reviewed for alignment with their goals and actions outlined in the application.

- The LEAs will use the ADE's online *Tracker* system, ALEAT to submit their plan for implementing the selected Improvement Model. ALEAT is an online tool to monitor the implementation and evaluate the effectiveness of a district and/or school Improvement

Plan. ALEAT allows ADE to post support materials to provide guidance and assistance to LEAs to organize the information for planning, monitoring, and reporting. Once the plan is entered and approved, school, district and SEA staff can view the plan, and monitor progress of activities as well as report progress and outcomes. Currently, ADE is using *ALEAT* for LEA monitoring of federal and state programs and improvement planning. The SIG Goals and plans for individual schools will be incorporated into this same system, thus maintaining a consistent system for planning, monitoring implementation and reporting.

If there are discrepancies between Action Plan on ALEAT and the SIG Application, the LEA will be contacted by their Education Program Specialist. If there is alignment the LEA's application will be considered approved and complete. Award Letters will be sent to LEAs.

c) **Step Three:** once the LEA receives the grant Award Letter, the LEA places the detailed budget sheet on to the ADE's Grant Management System. Once the budget information is placed on to the Grants Management System, it will be reviewed for alignment with the ALEAT budget and the action plan.

Any grant proposal that does not meet the minimum threshold, as determined through each review process, will be returned to the LEA with specific suggestions for improvement. At each step in the process, staff of the School Improvement Section will be available to support LEA Teams as they work through the application process through on-site visits, informational sessions and conference calls.

***Revised TIMELINE***

| *Action* | *Date* | *Purpose/Rationale* |
|---|---|---|
| Conference calls to all superintendents of LEAs with schools in Tier I and Tier II | February 3-4, 2010 | To inform them of the school or schools in Tier I and/or Tier II status prior to the information going public and to let them know of the Feb. 11 meeting |
| Initial overview Workshop with Leadership Teams from all LEAs with a Tier I and/or Tier II school | February 11, 2010 | To set the stage for the upcoming grant application and identify steps needed to be taken prior to application release |
| Provide a 2-day Data Summit for LEAs with Tier I and/or Tier II schools (inviting Tier III LEAs as space permits) | March 22-23, 2010 | ADE will facilitate a process that LEA teams can use to complete and in depth analysis of their current level of performance |
| Release SIG LEA Application* | March 29, 2010 | This is the expected timeframe for approval of the SEA Application |
| SIG LEA Applications Due* | May 14, 2010 | ADE wants to provide enough time for teams to address the items in the application, leaving time for approval and accessing funds in early |

| | | |
|---|---|---|
| | | summer |
| ADE SII Unit Review of LEA Tier I and Tier II Applications* | May 14 – May 28, 2010 | Small teams will review and evaluate each Tier I and Tier II application |
| Tier I and Tier II LEAs will have access to funds* | June, 2010 | LEAs will complete budget sheet on Grants Management |
| ADE SII Unit Review Tier III Applications* | May 17 – June 11, 2010 | Small teams will review and evaluate each Tier III Application |
| Tier III LEAs will have access to funds* | July 1, 2010 | LEAs will complete budget sheet on Grants Management |
| LEAs and Schools implement chosen intervention model(s) and improvement plans | 2010-2011 school year | |

*Actual date dependent on SEA Application approval at the Federal Level

**(2) Describe the SEA's process for reviewing an LEA's annual goals for student achievement for its Tier I and Tier II schools and how the SEA will determine whether to renew an LEA's School Improvement Grant with respect to one or more Tier I or Tier II schools in the LEA that are not meeting those goals and making progress on the leading indicators in section III of the final requirements.**

The Arizona Department of Education's School Improvement Section will employ a two-part process for reviewing an LEA's annual goals for each of its Tier I and/or Tier II schools. The first part will be focused on those items that can be monitored and reviewed throughout the year (a,b) and the second part will be looking at change from year to year (c,d). The combination of this data will be reviewed to address renewal (e,f).

The Arizona Department of Education will review, on a quarterly basis, the LEA's goals for student achievement for its Tier I and Tier II schools using progress monitoring tools outlined by the LEA in its application. LEA will submit a quarterly report detailing the progress towards goals and implementation progress. Site visits will be conducted by School Improvement Education Program Specialists using an implementation checklist based on the Standards and Rubrics for School Improvement.

a) The Arizona Department of Education will monitor goals, timelines and implementation of activities and strategies reported by the LEA on its Implementation Plan for Tier I and Tier II schools using ALEAT and site visits on a monthly basis.
The *ALEAT* Plan includes descriptions of the Goals and Strategies, detailed Action Steps (start and end dates, person(s) responsible, specified budget allocations and expenditures), and related Tasks with due dates and assignments. The ADE will review and approve these plans online, and make

comments back to the LEA about each item in the plan. Comments appear within the plan at the point of origin, and may also be emailed from *ALEAT* to the persons responsible for that section of the Plan. ADE will provide templates and guidance documents to the LEAs, attached within their online Plan, and may view documents uploaded by the LEAs. As the LEA implements their plan, they record their progress in *ALEAT* by providing status updates of Tasks and Action Steps, recording actual expenditures in their budgets, and uploading documentation related to activities and events to the file cabinet. The Plan Overview page shows the Status of each Goal, Strategy, and Action Step, including when it was last updated and by whom. Action Steps may be "tagged" with one or more designation set by ADE (e.g. SIG, PD, ELL, Parent) and the Plan View may be filtered by a Tag, and/or by a Funding Source, and/or by the Status of Action Steps (Not Begun, In Progress, Completed). The filters provide a view of just those selected features in the Plan, so Reviewer(s) may quickly assess all of the SIG-related Action Steps and see the progress that has been made on each one. An Implementation report is also available, which presents a chart view of each Action Step, it's current Status, and the history of Progress updates with related comments. Certain documentation can be uploaded to a particular Strategy or Action Step, showing the implementation process and the impact on student achievement.

b) The Arizona Department of Education will review the LEAs annual goals for student achievement for its Tier I and Tier II schools by evaluating essential data to include, but not limited to, student achievement and leading indicators (Baseline data on the following indicators will be collected as part of the LEA's initial SIG Application Process:
   - Teacher attendance rate
   - Number and percentage of students completing advanced coursework (e.g. AP/IB), early-college high schools, or dual enrollment classes (High School)
   - Number of minutes within the school year
   - Average scale scores on AIMS (Arizona's Instrument to Measure Standards) assessments in reading/language arts and in mathematics, by grade for the "all students" group, for each achievement quartile, and for each subgroup
   - AYP status
   - Which AYP targets the school met and missed
   - School improvement status
   - Percentage of students that perform at the "meets" or "exceeds" level on the AIMS reading and math portions
   - Student participation rate on AIMS
   - Percentage of limited English proficient students who attain English language proficiency
   - Graduation rate (High School)
   - Dropout rate (High School)
   - Student attendance rate
   - College enrollment rates (High School)
   - Discipline incidents
   - Truants
   - Distribution of teachers by performance level on LEA's teacher evaluation system

c) Every school and district in improvement needs to complete the corresponding *Arizona's Standards and Rubrics for District/School Improvement* self assessment and the results for each district with a Tier I and/or Tier II school, plus a self assessment for each of the Tier I and Tier II schools will be reviewed to identify progress made.

d) The Arizona Department of Education will determine whether or not to renew an LEA's School Improvement Grant with respect to one or more Tier I or Tier II schools in the LEA that are not meeting goals and making progress on the achievement and leading indicators (identified above) in

addition to the review of the self assessment using the *Standards and Rubrics for District/School Improvement*. If substantial progress has not been made, the SEA will meet with the LEA team to review the data, progress reported on the Implementation Plan as documented in ALEAT, progress on the leading indicators (identified above) and other relative data that would aid the SEA in identifying specifically in which areas significant progress was not made in order to assist the LEA in prioritizing critical areas for improvement.

e) The LEA must revise their School Improvement Grant and Implementation Plan to meet these priorities and resubmit their application to the SEA. The School Improvement Grant and Implementation Plan will be reviewed by the SEA to determine viability and LEA capacity to implement the revised plans. If the revised application is approved, the SEA will renew the LEA's School Improvement Grant.

**(3) Describe the SEA's process for reviewing the goals an LEA establishes for its Tier III schools (subject to approval by the SEA) and how the SEA will determine whether to renew an LEA's School Improvement Grant with respect to one or more Tier III schools in the LEA that are not meeting those goals.**

The Arizona Department of Education's School Improvement and Intervention Section will employ a two-part process for reviewing an LEA's annual goals for each of its Tier III schools. The first part will be focused on those items that can be monitored and reviewed throughout the year (a,b) and the second part will be looking at change from year to year (c,d). The combination of this data will be reviewed to address renewal (e,f).

a) The Arizona Department of Education will review the LEA's goals for student achievement for its Tier III schools using progress monitoring tools outlined by the LEA in its application
The SEA will monitor goals, timelines and implementation of activities and strategies reported by the LEA on its Implementation Plan for Tier III schools on ALEAT on a quarterly basis. The *ALEAT* Plan includes descriptions of the Goals and Strategies, detailed Action Steps (start and end dates, person(s) responsible, specified budget allocations and expenditures), and related Tasks with due dates and assignments. The ADE will review and approve these plans online, and make comments back to the LEA about each item in the plan. Comments appear within the plan at the point of origin, and may also be emailed from *ALEAT* to the persons responsible for that section of the Plan. ADE will provide templates and guidance documents to the LEAs, attached within their online Plan, and may view documents uploaded by the LEAs. As the LEA implements their plan, they record their progress in *ALEAT* by providing status updates of Tasks and Action Steps, recording actual expenditures in their budgets, and uploading documentation related to activities and events to the file cabinet. The Plan Overview page shows the Status of each Goal, Strategy, and Action Step, including when it was last updated and by whom. Action Steps may be "tagged" with one or more designation set by ADE (e.g. SIG, PD, ELL, Parent) and the Plan View may be filtered by a Tag, and/or by a Funding Source, and/or by the Status of Action Steps (Not Begun, In Progress, Completed). The filters provide a view of just those selected features in the Plan, so Reviewer(s) may quickly assess all of the SIG-related Action Steps and see the progress that has been made on each one. An Implementation report is also available, which presents a chart view of each Action Step, its current Status, and the history of Progress updates with related comments. Certain documentation can be uploaded to a particular Strategy or Action Step, showing the implementation process and the impact on student achievement.

b) The Arizona Department of Education will review the LEAs annual goals for student achievement for its Tier I and Tier II schools by evaluating essential data to include, but not limited to, student achievement and leading indicators (Baseline data on the following indicators will be collected as part of the LEA's initial SIG Application Process:
   - Teacher attendance rate
   - Number and percentage of students completing advanced coursework (e.g. AP/IB), early-college high schools, or dual enrollment classes (High School)
   - Number of minutes within the school year
   - Average scale scores on AIMS (Arizona's Instrument to Measure Standards) assessments in reading/language arts and in mathematics, by grade for the "all students" group, for each achievement quartile, and for each subgroup
   - AYP status
   - Which AYP targets the school met and missed
   - School improvement status
   - Percentage of students that perform at the "meets" or "exceeds" level on the AIMS reading and math portions
   - Student participation rate on AIMS
   - Percentage of limited English proficient students who attain English language proficiency
   - Graduation rate (High School)
   - Dropout rate (High School)
   - Student attendance rate
   - College enrollment rates (High School)
   - Discipline incidents
   - Truants
   - Distribution of teachers by performance level on LEA's teacher evaluation system

c) Every school and district in improvement needs to complete the corresponding *Arizona's Standards and Rubrics for District/School Improvement* self assessment and the results for each district with a Tier I and/or Tier II school, plus a self assessment for each of the Tier I and Tier II schools will be reviewed to identify progress made.

d) The Arizona Department of Education will determine whether or not to renew an LEA's School Improvement Grant with respect to one or more Tier III schools in the LEA that are not meeting goals and making progress on the achievement and leading indicators (identified above) in addition to the review of the self assessment using the *Standards and Rubrics for District/School Improvement*. If substantial progress has not been made, the SEA will meet with the LEA team to review the data, progress reported on the Implementation Plan as documented in ALEAT, and other relevant data that would aid ADE in identifying specifically in which areas significant progress was not made in order to assist the LEA in prioritizing critical areas for improvement.

e) The LEA must revise their School Improvement Grant and Implementation Plan to meet these priorities and resubmit their application to the SEA. The School Improvement Grant and Implementation Plan will be reviewed by the SEA to determine viability and LEA capacity to implement the revised plans. If the revised application is approved, the SEA will renew the LEA's School Improvement Grant.

**(4) Describe how the SEA will monitor each LEA that receives a School Improvement Grant to ensure that it is implementing a school intervention model fully and effectively in the Tier I and Tier II schools the LEA is approved to serve.**

The Arizona Department of Education will employ a variety of methods of continuous monitoring and annual review when monitoring the LEA that receives a School Improvement Grant to ensure that it is implementing a school intervention model fully and effectively in the Tier I and Tier II schools the LEA is approved to serve.

a) This monitoring will include, but is not limited to, the following:
**ALEAT (LEA Tracker)** will assist the Arizona Department of Education in monitoring the implementation progress for each Tier I and Tier II schools in accordance with the intervention model selected by the LEA. ADE will monitor the LEA's plan implementation using *ALEAT*, providing "real-time" information on implementation (status updates, comments, documentation provided) as well as review the SIG schools' plans and the LEA's interactions within the school plans (e.g. comments, LEA-provided documents, monitoring reports in the LEA plans.) The implementation of the school intervention model will be evident in both the LEA plan implementation and in their interaction with the progress of the school plans. In addition to the LEA plans, *ALEAT* provides individual school Improvement Plans, accessible from their LEA Overview page. The school plans are structured like the LEA plans, and schools may "pull in" specific goals from the LEA plan, then edit them to reflect school-level implementation. The User Permission structure of *ALEAT* permits School users to view their LEA's Plan and other school plans within their LEA. They may only edit their own school plan. The LEA users may view and add comments to their schools' plans, and edit their LEA plan. State Administrators may view, edit, and add comments to all plans in ALEAT. The LEA and the ADE will monitor the school's progress in implementing their plan just as the ADE monitors the LEA's plan. The LEA may request specific documentation or evidence be attached to the school plan elements, such as formative assessment data, or evaluations of professional development. The school may upload the documents one time, yet provide them to anyone at the LEA who needs to see them, and attach them to multiple points within the plan, as appropriate. The LEA will report on implementation according to approved timelines, strategies and activities included in the plan and documentation of progress made or outcomes. The LEA will update status reports quarterly.

- The Arizona Department of Education will provide weekly monitoring and review of plans, including use of funds, in ALEAT to ensure timelines are met and that adequate documentation is made by the LEA demonstrating implementation and sufficient progress. ADE will provide the LEA with ongoing feedback and guidance on documentation and implementation through weekly phone calls and/or emails. Webinars and online conferencing will be scheduled as needed.

b) In addition, the Arizona Department of Education will employ other methods to efficiently monitor an LEA that receives a School Improvement Grant to ensure that it is implementing a school intervention model fully and effectively in the Tier I and Tier II schools the LEA is approved to serve. The following of which are embedded in the monitoring process, but are not limited to:
- Onsite visits and observations conducted monthly and documented by School Improvement Program Specialists
- Review of assessment and achievement data (progress monitoring data described in LEA plan) on a quarterly basis
- Face-to-Face regional meetings of Tier I and Tier II LEA teams, facilitated by School Improvement staff, to have LEA staff share successes and roadblocks with a broader audience

building lateral capacity
- Quarterly reports on plan implementation completed by LEA
- End-of-Year Report submitted by LEA
- Annual review of leading indicators (as defined in Section 3 of the final guidance)

c) The SEA may request certain documentation from the LEA or employ more intensive support or monitoring (e.g. more frequent on-site monitoring, fiscal monitoring, etc.) as deemed necessary by the School Improvement Section staff.

**(5) Describe how the SEA will prioritize School Improvement Grants to LEAs if the SEA does not have sufficient school improvement funds to serve all eligible schools for which each LEA applies.**

Arizona Department of Education will prioritize funding of School Improvement Grants in the following manner:

a) First, applications received from LEAs with schools in Tier I and Tier II will be reviewed through use of rubrics in the Evaluation of LEA Applications.
b) LEAs with Tier I and Tier II Applications will be prioritized by:
   - applications that have a plan for all Tier I and II schools in the LEA
   - the total combined score of the 8 rubrics used in the evaluation process
   - the score for capacity and commitment to fully implement the chosen model (a strong focus on building district capacity to support all schools)
   - the score for budget – that sufficient funds were requested to fully implement the chosen model
c) Once all applications for Tier I and Tier II have been addressed, applications from LEAs with schools in Tier III will be reviewed. Priority will be given to LEAs with Tier III schools that choose to fully implement one of two priority intervention models (Turnaround Model, Transformation Model).
d) Once all applications for LEAs with a Tier III school(s) that have chosen to fully implement one of the priority intervention models (Turnaround Model, Transformation Model) have been approved, remaining applications from LEAs with Tier III schools that have not chosen to fully implement one of the priority intervention models will be reviewed. The SEA will determine the funding allocations depending on the schools identified priority needs and the LEA's capacity to meet those needs.

**(6) Describe the criteria, if any, the SEA intends to use to prioritize among Tier III schools.**

a) First, as part of the application process, the LEA will prioritize their Tier III schools and provide their rationale for this order. The rationale needs to be data-driven.
b) Arizona Department of Education will compare the LEAs prioritized list of Tier III schools against the same criteria the SEA used in identifying Tier I and II schools and the ranking list developed by our research department (percent of students below proficient on AIMS, number of years in improvement and for high school the percentage of students who graduate in four years.)
c) LEAs with a Tier III school(s) that have chosen to fully implement one of the priority intervention models (Turnaround Model, Transformation Model)
d) Additionally, the SEA will consider past performance of an individual Tier III school's progress in implementing their ASIP (Arizona School Improvement Plan) to determine if there has been significant change and whether or not the school has the capacity for continued improvement.

**(7) If the SEA intends to take over any Tier I or Tier II schools, identify those schools and indicate the school intervention model the SEA will implement in each school.**

Due to local control, the state does not have plans to take over operation of a school, at this time. If an LEA requests a takeover, the Arizona of Department of Education would contract with an EMO or a CMO to implement one of the models.

**(8) If the SEA intends to provide services directly to any schools in the absence of a takeover, identify those schools and, for Tier I or Tier II schools, indicate the school intervention model the SEA will implement in each school, and provide evidence of the LEA's approval to have the SEA provide the services directly.**

Arizona Department of Education does not intend to provide services directly to any schools in absence of a takeover.

The provisions in items 7 and 8 are not applicable to Arizona at this time. State law does not currently allow a direct takeover of a district school. However, it does allow for significant interventions to be imposed upon low performing schools. These consequences apply to a school if it earns a "Failing to Meet Academic Standards" label. This can occur when a school receives an "Underperforming" label for three consecutive years in the state's accountability system known as AZ LEARNS. The main performance measures are: pass rate and growth rate on the state's assessment instrument, reclassification rate of ELL students and graduation and drop-out rates (for high schools only).

A "Failing" school may be required to remove school administrators, select new curricula, hire additional personnel, and the like. Progress on these requirements will be monitored by the Intervention unit for a minimum of three years. Arizona law also allows the State Board of Education to select an outside agency to take control of a Failing school. This provision has not yet been imposed on any school within the state. All of the above flows from Arizona Revised Statute § 15-241.

The SEA is exploring the possibilities of extending this type of intervention to schools identified as persistently lowest achieving under ESEA.

## E. ASSURANCES: The SEA must provide the assurances set forth below.

By submitting this application, the Arizona Department of Education assures that it will do the following:

✓ Comply with the final requirements and ensure that each LEA carries out its responsibilities.

✓ Award each approved LEA a School Improvement Grant in an amount that is of sufficient size and scope

to implement the selected intervention in each Tier I and Tier II school that the SEA approves the LEA to serve.

- ✓ Apportion its school improvement funds in order to make grants to LEAs, as applicable, that are renewable for the length of the period of availability, taking into account any waivers that may have been requested and received by the SEA or an individual LEA to extend the period of availability.

- ✓ Carry over 25 percent of its FY 2009 school improvement funds, combine those funds with FY 2010 school improvement funds, and award those funds to eligible LEAs consistent with the final requirements if not every Tier I school in the State receives FY 2009 school improvement funds to implement a school improvement model in the 2010-2011 school year (unless the SEA does not have sufficient school improvement funds to serve every Tier I school in the State).

  Ensure, if the SEA is participating in the Department's differentiated accountability pilot, that its LEAs will use school improvement funds consistent with the final requirements. Not applicable, as the state is not participating in this pilot project.

- ✓ Monitor each LEA's implementation of the interventions supported with school improvement funds.

- ✓ To the extent a Tier I or Tier II school implementing the restart model becomes a charter school LEA, hold the charter school operator or charter management organization accountable, or ensure that the charter school authorizer holds the respective entity accountable, for meeting the final requirements.

- ✓ Post on its Web site, within 30 days of awarding School Improvement Grants, all final LEA applications and a summary of the grants that includes the following information: name and NCES identification number of each LEA awarded a grant; amount of the grant; name and NCES identification number of each school to be served; and type of intervention to be implemented in each Tier I and Tier II school.

- ✓ Report the specific school-level data required in section III of the final requirements.

## F. SEA RESERVATION: An SEA may reserve an amount not to exceed five percent of its School Improvement Grant for administration, evaluation, and technical assistance expenses.

**The SEA must briefly describe the activities related to administration, evaluation, and technical assistance that the SEA plans to conduct with the State-level funds it has received from its School Improvement Grant.**

Arizona Department of Education and specifically the School Improvement Section within the School Effectiveness Division has engaged in a review of our current practices with regard to supporting schools and districts in order to enhance the services we are providing. The SEA completed the State System of Support Evaluation process with the Southwest Comprehensive Center and the Center for Innovation and Improvement. Arizona had two separate groups serving schools and districts in improvement. One group focused on AZLEARNS accountability system and the other group focused on the NCLB/ESEA accountability system. Significant steps have been taken over the past year to coordinate these efforts.

Arizona has formalized processes in place for addressing the underperformance of schools identified through the AZLEARNS system. These have been established in Arizona Statute 15-241. These processes include coaches, Solutions Team visits, development of School Improvement Plans and District Plans, Turnaround Coaches, Turnaround Principals, and Comprehensive Site visits with extensive planning. The Solutions Team and Comprehensive Site visits require teams of people to travel to the school and spend 1-2 days on-site collecting data, meeting with staff, reviewing documents to determine the current conditions in the school. This involves looking at the overall systems that are in place what needs to be done to improve those systems so students can learn.

Beginning with the 2009-2010 school year, Arizona provided coaches to schools in Year 1 of School Improvement under NCLB/ESEA. Arizona will continue to expand the technical assistance that it provides to its schools and districts in NCLB/ESEA improvement to include Solutions Team visits and Comprehensive Site visits as currently provided under AZLEARNS.

Beginning July 1, 2010 the School Improvement and Intervention Section will be reorganized to offer high quality service in a more effective and efficient manner. All Education Program Specialist will work with the schools in their region regardless of which accountability system brought them into school improvement status. This will require professional development for staff to insure a clear understanding of both systems. There will be an increase in the number of on-site visits to those schools and districts on the Tier I and Tier II lists. At least one additional Education Program Specialist will be hired to better support the number of schools in improvement. Webinars and other technology will be used to support ongoing communication and training in order to facilitate a high level of interaction with the schools and districts and to be able to provide them "just in time" training opportunities.

Additional support will be provided through regional meetings and a statewide school improvement conference held in conjunction with our annual Title I conference. Increased professional development opportunities will be provided to the School Improvement staff to continue to build the capacity of the state's system of support.

## G. CONSULTATION WITH STAKEHOLDERS: An SEA must consult with its Committee of Practitioners and is encouraged to consult with other stakeholders regarding its application for a School Improvement Grant.

**Before submitting its application for a School Improvement Grant to the Department, the SEA must consult with its Committee of Practitioners established under section 1903(b) of the ESEA regarding the rules and policies contained therein.**

- ✓ The School Improvement and Intervention section of the Arizona Department of Education (ADE) has consulted with its Committee of Practitioners regarding the information set forth in its application.

    1. School Improvement and Intervention (SII) team sent the first draft of the LEA application out by email to all COP members for their feedback. Members were encouraged to provide feedback.
    2. On January 29, SII Unit held an audio conference with COP members to update them on the process and solicit additional information.
    3. On February 5th, Angela Denning, Deputy Associate Superintendent, made a presentation and

provided the latest application draft at COP's monthly meeting. Members worked in small groups to provide additional feedback.

The SEA may also consult with other stakeholders that have an interest in its application.

✓ The School Improvement and Intervention section of the Arizona Department of Education has consulted with other relevant stakeholders, including:

- Parent Information Resource Center (PIRC),
- ADE's Title I Department,
- ADE's Research and Evaluation staff,
- ADE's High School Renewal staff,
- Various Race to the Top Committee members,
- Arizona RTI
- Southwest Comprehensive Center @ WestEd

## H. WAIVERS: The final requirements invite an SEA to request waivers of the requirements set forth below. An SEA must list in its application those requirements for which it is seeking a waiver.

***ARIZONA*** requests a waiver of the requirements it has listed below. These waivers would allow any local educational agency (LEA) in Arizona that receives a School Improvement Grant to use those funds in accordance with the final requirements for School Improvement Grants and the LEA's application for a grant.

The State of Arizona believes that the requested waiver(s) will increase the quality of instruction for students and improve the academic achievement of students in Tier I, Tier II, and Tier III schools by enabling an LEA to use more effectively the school improvement funds to implement one of the four school intervention models in its Tier I or Tier II schools and to carry out school improvement activities in its Tier III schools. The four school intervention models are specifically designed to raise substantially the achievement of students in the State's Tier I and Tier II schools.

- ✓ Waive section 421(b) of the General Education Provisions Act (20 U.S.C. § 1225(b)) to extend the period of availability of school improvement funds for the SEA and all of its LEAs to September 30, 2013.

- ✓ Waive section 1116(b)(12) of the ESEA to permit LEAs to allow their Tier I and Tier II Title I participating schools that will implement a turnaround or restart model to "start over" in the school improvement timeline.

- ✓ Waive the 40 percent poverty eligibility threshold in section 1114(a)(1) of the ESEA to permit LEAs to implement a schoolwide program in a Tier I or Tier II Title I participating school that does not meet the poverty threshold.

The State of Arizona assures that it will ensure that any LEA that chooses to implement one or more of these waivers will comply with section II.A.8 of the final requirements.

The State of Arizona assures that it will permit an LEA to implement the waiver(s) only if the LEA receives a School Improvement Grant and requests to implement the waiver(s) in its application. As such, the LEA may only implement the waiver(s) in Tier I, Tier II, and Tier III schools, as applicable, included in its application.

The State of Arizona assures that, prior to submitting this request in its School Improvement Grant application, the State provided all LEAs in the State that are eligible to receive a School Improvement Grant with notice and a reasonable opportunity to comment on this request and has attached a copy of that notice as well as copies of any comments it received from LEAs. The State also assures that it provided notice and information regarding this waiver request to the public in the manner in which the State customarily provides such notice and information to the public (*e.g.*, by publishing a notice in the newspaper; by posting information on its Web site) and has attached a copy of, or link to, that notice.

The State of Arizona assures that, if it is granted one or more of the waivers requested above, it will submit to the U.S. Department of Education a report that sets forth the name and NCES District Identification Number for each LEA implementing a waiver, including which specific waivers each LEA is implementing.

# School Improvement Grant - 1003(g) Funds

# LEA APPLICATION
## TIER I, TIER II and/or TIER III

# GUIDANCE DOCUMENT

March 12, 2010

Arizona Department of Education
School Effectiveness Division
SCHOOL IMPROVEMENT SECTION
1535 W. Jefferson St., Bin #10
Phoenix, AZ 85007

**Table of Contents – Brief** *Change page numbers as document changes*



**Table of Contents – Detailed**



**Guidance**

This guidance document consists of activities that are recommended to be completed by the LEA prior to the formal completion of the School Improvement Grant Application, as well as Guidance for Completing the SIG Application.

Before you complete your application, activities include:

- Identifying the LEA Team
- Gathering appropriate resource materials
- Analyzing the LEA and schools' needs
- Choosing a model
- Determining capacity of the LEA to implement one of the four models

**As you complete your application, please consult with your ADE Program Specialist and refer to the guidance offered within this document.**

**Part II – Forming Your Team**

☐ Identifying the LEA Team

**Part III – Collecting and Working with Your Data**

☐ Identifying and Gathering Resources
☐ Analysis of LEA and Schools Needs and Root Causes
- Gathering data
- What is the data telling you?
- What are possible causes?

**Part IV – Choosing Your Model**

☐ The Four Models
- Detailed description of the four models
- Things to consider when selecting and implementing a model
- Criteria Funding Matrix – examples of allowable expenses for each model

## Step 2

**Part V - What is Your Capacity to Implement the Model?**
☐ Determining LEA's capacity to implement the model

**Part VI – Completing the Application**
☐ Guidance and directions for completing the application

**Part VII – ADE/SII Rubric for Use in Evaluating Applications**
☐ Evaluation rubric

**Part VIII – Baseline Data to be Submitted with SIG LEA Application**
☐ An SEA must report metrics for the school year prior to implementing the intervention (if the data are available) to serve as a baseline, and for each year thereafter for which the SEA allocates school improvement funds under section 1003(g) of the NLB.

**Part VIIII – Links to Resources**
☐ Links to numerous tools and resources to assist the LEA in planning and implementing the four models

## PART ONE – OVERVIEW OF THE SIG GRANT

### INTRODUCTION

#### *The Purpose of the School Improvement Grants*

Section 1003(g) of the Elementary and Secondary Education Act provides for the U.S. Secretary of Education to allocate funds to SEAs for the purpose of school improvement. Within the regulations and guidelines established by the Secretary, each SEA administers grants to LEAs to "enable the lowest-achieving schools" to meet accountability requirements. In 2009 the U.S. Department of Education announced a dramatic increase in the funds that would be provided to SEAs under section 1003(g) while issuing program requirements that charged the SEAs with channeling the funds to LEAs for the "persistently lowest-achieving schools" to support rapid improvement through one of four intervention models.

#### *Guiding Principles*

- Students who attend a state's persistently lowest-achieving school deserve better options and can't afford to wait
- Not quantity, but quality
- Need to build capacity and support at all levels (school, LEA and state)
- Not a one-year activity

The School Improvement Grant program for 2009 strongly amplifies the restructuring provisions of NCLB and commits a massive surge of funding to rid the nation of its persistently lowest-achieving schools. The SIG provisions make it clear that change must be dramatic, improvement rapid, and results significant. Moving beyond the restructuring provisions of NCLB, the SIG program:

- Considers student growth in determining school progress
- Sharply focuses on the "persistently lowest-achieving schools"
- Limits strategies employed under the transformation model to a defined and robust set of effective practices;
- Stresses the importance of talent, the human capital necessary for rapid school improvement; and
- Requires changes in governance and leadership to pave the way for rapid and sustained improvement.

When considering "restructuring," the research highlights four areas that need focus. Those areas are governance, leadership factors, organizational factors and environmental factors. Following are some questions related to restructuring:

**Governance**
This is management of the turnaround process at the district level, including identification of schools that will use a turnaround strategy, selection of turnaround leaders, and ongoing support and management of turnaround schools. What governance role should the district play during a school turnaround effort? How should the district oversee and support the turnaround leader? How much freedom to act should the district give turnaround leaders?

**Environmental Factors**
In additional to district governance, many factors outside the control of an individual school's leader and staff affect the success of a turnaround attempt. How should the district and the school best engage the surrounding community in the turnaround effort? How much time should be provided for the change?

**Leadership Factors**
Research suggests that the turnaround leader is often the determining factor for a turnaround's success or failure. Most often, a new leader is required for a successful turnaround. Recognizing the limitations of the school's current leadership and selecting the right replacement are essential to the turnaround process. What are the characteristics to look for in a school turnaround leader? What specific actions do successful turnaround leaders take once they are on the job? How should the district assess a potential school leader's qualifications?

**Organizational Factors**
One of the largest challenges of turnaround efforts is galvanizing staff members—old and new—under a new school leader. What do research and previous experience teach us about how to do this well? How important is replacing existing staff? How should remaining staff be managed and new staff trained to create a school culture that supports learning? What elements of school design are most important in turnaround schools? (p.9 of *Restructuring Handbook*)

The document, "***Turnarounds with New Leaders and Staff***," published by the **Comprehensive Center for School Reform and Improvement**, addresses these four components in more detail. These four components are recommended to be considered as you complete the activities under **GETTING STARTED.**

***Arizona's Definition of "Persistently Lowest Achieving" Schools***

**Tier I.** Any Title I school in improvement, corrective action, or restructuring that is:

1. Among the lowest-achieving 5 percent of Title I schools in improvement, corrective action, or restructuring
   **OR**
2. A high school that has not had a graduation rate of 60 percent or greater in any of the past three years.

**Tier II.** Any high school (high schools are defined as schools serving grades (9-12) eligible for but did not receive Title I funds that is

1. Among the lowest-achieving 5 percent of high schools
   **OR**
2. Has not had a graduation rate of 60 percent or greater in any of the past three years. (Should it be 60% average over three years??)

**Determining the Lowest-Achieving 5 Percent:** Arizona ranked schools using the single percentage method defined in federal guidance using current year test results (p. 5). Arizona also ranked schools by progress achieved. Progress was measured as the average annual change in percent proficient over the past three years. A school's final ranking was determined by averaging the two ranks.

**Exceptions:** Schools identified as credit recovery were not included on the list. To be identified as credit recovery, a school had to have met the State Board's definition of an alternative school, and to have identified itself through its publicly posted mission statement on its school report card as a credit recovery school.

**Link to "PLA" Definition on Arizona Department of Education's Website:**

**http://www.ade.az.gov/azlearns/aypdeterminations.asp**

## PART II – FORMING YOUR TEAM

### *Identifying the LEA Restructuring Team*

The first major action is to form a district team. This team will be responsible for organizing and leading the restructuring process. Research and experience indicate that having a strong restructuring governance team is a key component of success.

This is a huge job. Big change takes a focus on student learning. The team must be committed to taking *new* approaches when previous efforts have not worked well enough for failing children.

Having a team is not enough if your superintendent and school board are not ready to support big changes with resolve. Even when top leadership—the superintendent or school board—initiates and leads the restructuring process, a team of people is needed to plan, execute, and monitor major change in multiple schools.

Keep this working team small enough to focus on action. Teams larger than seven members may have more trouble making decisions and taking action. Your district team may begin its work with only a few central office staff members. The remainder of Step 1 will help you add others. One of your early steps will be including all important stakeholders in other ways. You also may choose to involve outside restructuring experts or process facilitators to help, either at this time or later. *(Taken from **School Restructuring Handbook**, p.18)*

Consider the following characteristics as you identify team members:

- Diverse representation–represent areas of student needs (special education, English language learners, community's culture, administrative, teacher leaders, assessment/data person, other stakeholders)
- Experienced and successful with school improvement
- Strong skills in curriculum, instruction, and assessment
- Evidence of instructional leadership practices
- Good communication skills

**Tool #4**, below, is recommended as you identify your LEA team.

**Tool 4 - Restructuring Team Checklist**

**Team Members:** Who should be on your team to organize restructuring throughout the district? Readiness and willingness to drive major change are important, but credibility and district knowledge also are important.

**Lead Organizer:** In a smaller district, the superintendent may lead the team. In a larger district, this might be a deputy or assistant superintendent or other senior person who is ready and able to organize a major change process. In some cases, a credible outsider who is familiar with the district

schools may be best. Strong team leadership skills are essential to keep the team motivated, informed, and productive through a challenging change process.

Qualifications to consider for your total working team include people with…

**A Drive for Results**

- ☐ A record of implementing change despite political and practical barriers
- ☐ An unyielding belief that all children—no matter how disadvantaged—can learn
- ☐ Organizing and planning skills to keep the decision process and implementation for each failing school on track

**Relationship and Influence Skills**

- ☐ Good relationships with a wide range of district staff, parents and community organizations
- ☐ Willingness and ability to disagree with others politely; a "thick skin"
- ☐ Teamwork skills to complete tasks responsibly and support team members
- ☐ Strong influence skills

**Readiness for Change**

- ☐ An open mind about ways to improve student learning
- ☐ Willingness to learn about what kinds of big changes work under differing circumstances
- ☐ Willingness to try new restructuring strategies
- ☐ No political agenda that may interfere with student learning-centered decisions

**Knowledge to do What Works** (or willingness to acquire it quickly)

- ☐ Knowledge of the formal and informal decision-making processes in your district
- ☐ Knowledge of past efforts to change and improve schools in your district
- ☐ Knowledge of education management, effective schools research and the like, with a focus on what has been proven to produce student learning results with disadvantaged children.

Consider using *Tool # 10* from the ***School Restructuring Handbook*** (see below)

**Tool 10 - Step 1 Organizer's Checklist**

**A. Get Started**

- ☐ Decide who will be on the initial district restructuring team.
- ☐ Assess your district's capacity to restructure low-performing schools directly.

**B. Plan Stakeholder Roles****

☐ Make a plan to include stakeholders in choosing school restructuring strategies.
☐ Invite or notify stakeholders to participate as decided; *make additions to district restructuring team first, as decided.*

**C. Prepare Your Team to Perform**

☐ Determine leadership and roles on the district restructuring team.
☐ Determine whether and which external experts and facilitators are needed.
☐ Determine process for the district restructuring team.
☐ Create a standing agenda for district restructuring team meetings.

**For additional information on involving stakeholders in the decision-making process, go to the section on Stakeholders in this document or in the ***School Restructuring Handbook***.

**Tools (Available in *School Restructuring Handbook*)**

• *What Works When* Restructuring Decision Tree, Tool 3 (*page 26*)
• Restructuring Team Checklist, Tool 4 (*page 27*)
• Assessing Your District's Capacity to Lead Change—a Guided SWOT Analysis, Tool 5 (*page 28*)
• District Behavior Shifts to Enable Success in Previously Unsuccessful Schools, Tool 6 (*page 29*)
• Restructuring Stakeholder Summary, Tool 7 (*page 30*)*
• Restructuring Stakeholder Planner, Tool 8 (*pages 31–32*)*
• Meeting Action Planner, Tool 9 (*page 33)*
*These tools are included in this document, as well as the ***School Restructuring Handbook.***

**Stakeholder Planner for Restructuring**

**District:** _____ **Date:** _____
**School:** _____

**Instructions:**

- Fill in the names of the people completing the tool (District Leadership Team) and the date.
- Fill out requested information in columns below

**Name(s):** _____ _____
_____ _____
_____ _____

| Stakeholders | Expected Stakeholder Reaction to Restructuring | Ways to Include Without Preventing Successful Restructuring |
|---|---|---|
| Principals | | |
| Teachers | | |
| Other School Staff | | |
| District Administrators | | |
| Students | | |
| Parents | | |
| Special Education | | |
| ELL | | |
| Community Groups: | | |
| School Board | | |
| Teacher Union | | |
| External Experts | | |
| Other | | |

## PART III – COLLECTING AND WORKING WITH YOUR DATA

*Gathering Resource Materials*

### Gathering Data

Determining the most effective model begins with a careful analysis of the data related to the desired changes. However, planners can get lost in the myriad data that are available. Carefully selecting the data to be used to determine not only the current status but also what the LEA will accept as evidence of success is critical. Consider using the following types of data points in setting the LEA's long-term improvement goals and determining the success in reaching them.

**Individual Schools' Performance Data**

- Online Reading and Math data can be located via common logon, then

  AZ LEARNS/Adequate Yearly Progress

  AYP/ AZ LEARNS Evaluations

  2008 2009 AYP/AZ Evaluations

- Provide reading, math, and writing data for all items on the "Individual Schools' Student Performance Data Chart".
- Include data for years 2007, 2008, and 2009.
- Not Meeting the Standard is the combined percent or number of students included in the "Approaches" and "Falls Far Below" categories.

**List of Potential Data available for Review**

| Student Achievement Data | Instructional Data | Family Support |
|---|---|---|
| □ Standardized test scores, including AIMS, ACT, SAT, and others | □ Classroom observation data | □ Before and after-school programs |
| □ District benchmark assessments, district averages, school and grade level averages | □ Evaluation data by administrators | □ Assistance with homework |
| □ Performance assessments, formative assessments | □ Amount of time spent on subject areas | □ Number of homeless children |
| □ Criterion-referenced tests, including those from test publishers | □ Types of classroom assessments used | □ Number of migrant children |
| □ Classroom grades | □ Lesson plans | □ Single-parent households |
| □ Number of students receiving failing grades | □ Alignment of instruction with curriculum, assessments and state standards | □ Socioeconomic level of families |
| □ Student portfolios | □ Time audit of instructional techniques | □ Education and background of parents |
| □ Readiness testing | □ On-task time in classrooms | □ Preschool experiences available |
| □ Promotion/retention rates | □ Wait time for student responses | □ Availability of technology in the home |
| □ Graduation/dropout rates | □ Types of questions asked in class | □ Information available to families about educational programs |
| □ Advanced placement, Honor Roll lists | □ How learning styles are addressed in instruction | □ Communication methods between school and home |
| □ Special programs: special needs, Title I, gifted and talented | □ Instructional assistance available to students | □ Home visits by school personnel |
| □ Success in postsecondary schools | □ Grouping patterns for instruction | □ Parent-school associations |
| □ Attendance, Tardies, Discipline referrals | □ Technology use during instruction | □ Parent/family support and involvement in the school |
| □ Data disaggregated by gender | □ Class size | □ Parent attendance (e.g. conferences, other) |
| □ Data disaggregated by race/ethnicity | □ Student surveys about instructional strategies | □ Surveys, such as the 'What Works in Schools' online survey (www.whatworksinschools.org) or other Parent/Guardian/Community Surveys |
| □ Data disaggregated by language proficiency | □ Graduate feedback on effectiveness of instruction | □ Other: _____ |
| □ Other:_____ | □ Other: _____ | |

| Community Support | School Climate/Environment | Organizational Data |
|---|---|---|
| □ Recreational opportunities for students<br>□ Financial support provided to the school<br>□ Communications with the public<br>□ Human services available<br>□ Attendance at school events<br>□ School newsletters/news articles<br>□ Media coverage<br>□ Participation of community on advisory boards<br>□ Partnerships between school and business and industry<br>□ Scholarships from community organizations<br>□ Demographics of the community, including per capita income, race/ethnicity, attendance at public and private schools, home ownership, educational background, and age<br>□ Community use of school facilities<br>□ Reporting of student progress to the community<br>□ Community surveys on attitudes and perceptions about school<br>□ Private/business/foundation contributions<br>□ Other:_____ | Feedback from community, parents, and students<br>AND/OR<br>□ Surveys from parents and the community;<br>□ **Staff surveys**;<br>AND Surveys of student perceptions of:<br>□ Academic safety<br>□ Physical safety<br>□ Emotional safety<br>□ Sense of belonging<br>□ Peer relationships<br>□ Student-adult relationships<br>□ Conflict resolution processes<br>□ Rule violations<br>□ Counseling programs available<br>□ Student assistance programs<br>□ Student participation in extracurricular activities<br>□ Other: _____ | □ Identified vision and mission of the district and school<br>□ **Staff surveys** on collegiality, trust/confidence, accountability, risk-taking, communication, recognition, inquiry<br>□ Organizational surveys, such as the What Works In Schools Online Staff Survey (www.whatworksinschools.org)<br>□ Professional development opportunities<br>□ **Staff surveys** of professional development effectiveness<br>□ Personnel evaluation processes<br>□ Internal communications and processes<br>□ Decision-making procedures<br>□ Planning processes<br>□ Support for innovations<br>□ Assistance programs available<br>□ Educational level of school personnel<br>□ Budget allocations and processes<br>□ District costs per student<br>□ Teacher loads and assignments<br>□ Traditions<br>□ Celebrations<br>□ Other:_____ |

## *Analysis of LEA and School's Needs and Root Causes*

**What Does Your Data Tell You?**

- Gather all existing data for making observations about the data
- Look at the trends over time (over three or more years)
- Disaggregate by ethnicity, subgroups, gender, other relative groups
- Disaggregate by subject area

**Observations, Discussion and Documentation**

What patterns do you observe in the data?

Study the data and discuss patterns that members see. Record the observations as "data findings" for all members to see. Be sure each statement indicates:

- What was the pattern and over what period of time?
- What was the source?
- Which subjects or skills?
- Which students?

**Examples:**

- Percent of students at proficient and above has increased every year for the past three years for 3rd grade students with disabilities.
- Attendance rate was below 80% for girls in grades 6, 7, and 8.
- Mean math scales have increased for the past five years for all students in 10th grade, though less than one standard deviation.

Identify the possible root causes. When the team is creating their hypotheses, the focus needs to be on what the district and school have control over. This is not the time to place blame, but to determine those things that if changed, will have the most positive effect on student achievement.

**Hypotheses**

What is it that you are doing that might contribute to these data patterns?

**Hypotheses should:**
Be explanations that come from school and classroom factors

Be explanations about practices that can be altered

**Hypotheses should NOT:**
Be regarding characteristics of individuals
Be explanations about unalterable factors

**Example**:

| Instead of… | Use this… |
|---|---|
| These students are poor | Students of poverty are not gaining ample access to reading materials from our school |

The following chart is an example of how the LEA Team may want to organize the information from the previous activities:

| **Observations**<br><br>***What patterns do we observe?*** | **Hypotheses of Root Causes**<br><br>***What do we do that might contribute to the patterns we see?*** | **Solutions**<br><br>***What could we do that might impact the data?*** |
|---|---|---|
| | | |

## PART IV – CHOOSING YOUR MODEL

### Selecting an Intervention Model

- ***Use the information and guiding questions below, in conjunction with your data analysis and analysis of LEA capacity, to determine the most appropriate model for your Tier I or Tier II school.***

The School Improvement Grant directs LEAs to select for their Tier I and Tier II schools one of four intervention models:

☐ **Turnaround model:** The LEA replaces the principal (although the LEA may retain a recently hired principal where a turnaround, restart, or transformation was instituted in past two years) and rehiring no more than 50% of the staff; gives greater principal autonomy; implements other prescribed and recommended strategies;

☐ **Restart model:** The LEA converts or closes and reopens a school under a charter school operator, charter management organization, or education management organization;

☐ **School closure:** The LEA closes the school and enrolls the students in other schools in the LEA that are higher achieving; or

☐ **Transformation model:** The LEA replaces the principal (although the LEA may retain a recently hired principal where a turnaround, restart, or transformation was instituted in past two years); implements a rigorous staff evaluation and development system; rewards staff who increase student achievement and/or graduation rates and removes staff who have not improved after ample opportunity; institutes comprehensive instructional reform; increases learning time and applies community-oriented school strategies; and provides greater operational flexibility and support for the school.

For most schools eligible for School Improvement Grants, the persistence of their low achievement calls for dramatically new governance structures, human capital, decision-making mechanisms, and operational practices. Change of this magnitude and immediacy is most likely through:

☐ Turnaround (infusion of talent and change in decision-making and operational practices); or

☐ Restart (change in governance and decision-making, an infusion of talent, and change in operational practices).

When the school's context and conditions do not suggest that a turnaround or restart is possible, the transformation model pertains and brings with it change in decision making, strategic staff replacement, and substantial improvement of operational practices. When the LEA (in consultation with the SEA) determines that the students attending a persistently low-achieving school may be better served by attending other schools, and when turnaround, restart, and transformation do not offer the certain promise of rapid improvement, the school is a candidate for closure.

**The Turnaround Model**

Because the turnaround model relies principally upon an infusion of human capital, along with changes in decision-making and operational practice, the following considerations must be taken into account in determining if turnaround is the best fit for a persistently low-achieving school:

1. How will the LEA select a new leader for the school, and what experience, training, and skills will the new leader be expected to possess?
2. How will the LEA assign effective teachers and leaders to the lowest achieving schools?
3. How will the LEA begin to develop a pipeline of effective teachers and leaders to work in turnaround schools?
4. How will staff replacement be executed—what is the process for determining which staff remains in the school and for selecting replacements?
5. How will the language in collective bargaining agreements be negotiated to ensure the most talented teachers and leaders remain in the school?
6. What supports will be provided to staff being assigned to other schools?
7. What are the budgetary implications of retaining surplus staff within the LEA if that is necessary?
8. What is the LEA's own capacity to execute and support a turnaround? What organizations are available to assist with the implementation of the turnaround model?
9. What changes in decision-making policies and mechanisms (including greater school-level flexibility in budgeting, staffing, and scheduling) must accompany the infusion of human capital?
10. What changes in operational practice must accompany the infusion of human capital, and how will these changes be brought about and sustained?

**The Restart Model**

1. Are there qualified charter management organizations (CMOs) or education management organizations (EMOs) willing to partner with the LEA to start a new school (or convert an existing school) in this location?
2. Will qualified community groups initiate a homegrown charter school? The LEA is best served by developing relationships with community groups to prepare them for operating charter schools.
3. Based on supply and capacity, which option is most likely to result in acceptable student growth for the student population to be served—homegrown charter school, CMO, or EMO?
4. How can statutory, policy, and collective bargaining language relevant to the school be negotiated to allow for closure of the school and restart?
5. How will support be provided to staff that are reassigned to other schools as a result of the restart?
6. What are the budgetary implications of retaining surplus staff within the LEA if that is necessary?
7. What is the LEA's own capacity to support the charter school with access to contractually specified district services and access to available funding?
8. How will the SEA assist with the restart?
9. What performance expectations will be contractually specified for the charter school, CMO, or EMO?
10. Is the LEA (or other authorizer) prepared to terminate the contract if performance expectations are not met?

**The Transformation Model**

1. How will the LEA select a new leader for the school, and what experience, training, and skills will the new leader be expected to possess?
2. How will the LEA enable the new leader to make strategic staff replacements?
3. What is the LEA's own capacity to support the transformation, including the implementation of required, recommended, and diagnostically determined strategies?
4. What changes in decision making policies and mechanisms (including greater school-level flexibility in budgeting, staffing, and scheduling) must accompany the transformation?
5. What changes in operational practice must accompany the transformation, and how will these changes be brought about and sustained?

**School Closure Model**

1. What are the metrics to identify schools to be closed?
2. What steps are in place to make certain closure decisions are based on tangible data and readily transparent to the local community?
3. How will the students and their families be supported by the LEA through the re-enrollment process?
4. Which higher-achieving schools have the capacity to receive students from the schools being considered for closure?
5. How will the receiving schools be staffed with quality staff to accommodate the increase in students?
6. How will current staff be reassigned—what is the process for determining which staff members are dismissed and which staff members are reassigned?
7. Does the statutory, policy, and collective bargaining context relevant to the school allow for removal of current staff?
8. What supports will be provided to recipient schools if current staff members are reassigned?
9. What safety and security considerations might be anticipated for students of the school to be closed and the receiving school(s)?
10. What are the budgetary implications of retaining surplus staff within the LEA if that is necessary?
11. How will the LEA track student progress in the recipient schools?
12. What is the impact of school closure to the school's neighborhood, enrollment area, or community?
13. How does school closure fit within the LEA's overall reform efforts?

(The above information was taken from pp. 16-18 of the ***Handbook on Effective Implementation of School Improvement Grants***)

# School Intervention Models

## Criteria Funding Matrix

| **TURNAROUND / TRANSFORMATION MODELS:** | | |
|---|---|---|
| Criteria – Required | Explanation | Allowable Budget Items |
| (i) Replace the principal and grant the principal sufficient operational flexibility (including in staffing, calendars/time, and budgeting) | • Implement fully a comprehensive approach in order to substantially improve student achievement outcomes and increase high school graduation rates | Turnaround Principal stipend.<br><br>Approved Intervention and Supplemental core materials, expository and narrative classroom and library books, and research-based instructional software. |
| (ii) Using locally adopted competencies to measure the effectiveness of staff | • Screen all existing staff and rehire no more than 50 percent;<br>• Select new staff; | Instructional Interventionist /Academic Coach |
| (iii) Implement strategies to recruit, place, and retain staff with the skills necessary to meet the needs of the students. | • May include financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions | Teacher stipends for willingness to work in high-need school.<br><br>Performance-based stipends for teachers and administrators. |
| (iv) Provide staff with ongoing, high quality, job-embedded professional development | • Must be aligned with school's comprehensive instructional program and designed with school staff to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies. | Targeted professional development for teachers, administrators and Leadership Team to attend ADE-approved trainings, including registration fees and related travel.<br><br>Substitute teachers to enable local professional development days. |
| (v) Adopt a new governance structure | • May include, but is not limited to:<br>○ Require school to report to a new ''turnaround office'' in the LEA or SEA.<br>○ Hire a ''turnaround leader'' who reports directly to the Superintendent or Chief Academic Officer.<br>○ Enter into a multi-year contract with the LEA or SEA for added flexibility in exchange for greater accountability. | LEA School Improvement Coordinator to facilitate and oversee implementation of LEA's school improvement plan and site-based support/activities at Tier I, II & III schools. |

| | | |
|---|---|---|
| (vi) Use data to identify and implement an instructional program | • Comprehensive assessments for screening, diagnosis, monitoring progress that inform instructional decisions.<br>• Must be research-based and ''vertically aligned'' from one grade to the next and aligned with State academic standards. | Approved Assessments and Supplemental Assessments of comprehension-related student skills.<br><br>Annual fee for processing student data.<br><br>Training for new teachers. |
| (vii) Continuous use of student data to inform and differentiate instruction to meet the academic needs of individual students | • Sources of student data include formative, interim, and summative assessments. | Assessment Coordinator / Data Entry Specialist |
| (viii) Establish schedules and implement strategies that provide increased learning time. | • Increased learning time" means using a longer school day, week, or year schedule to significantly increase the total number of school hours to include additional time for:<br>○ Instruction in core academic subjects.<br>○ Instruction in other subjects and enrichment activities that contribute to a well-rounded education.<br>○ Teacher collaboration, planning, and professional development within and across grades and subjects. | Teacher salary stipends for before- and after-school tutoring, intersession and summer school instructional programs.<br><br>Substitute Teachers to enable teacher collaborative time days.<br><br>Stipends for teachers for team planning, lesson design, data analysis, preparation of common assessments, review of instructional strategies.<br><br>Full-day kindergarten or prekindergarten programs. |
| (ix) Provide appropriate social-emotional and community-oriented services and supports for students. | • Partnering with parents and parent organizations, faith- and community-based organizations, health clinics, other State or local agencies, and others to create safe school environments that meet students' social, emotional, and health needs | Behavior Interventionist / Parent Engagement Specialist to work with family involvement action teams (FIAT).<br><br>Summer transition programs or freshman academies.<br><br>IGA/Contract/Partnership to provide identified need-based support services to students. |

## Step 2

**PART V – WHAT IS OUR CAPACITY TO IMPLEMENT THE MODEL?**

***Determining LEA's Capacity to Implement the Model(s)***

- ***Review the tools, process and data collected in Step I of this guidance***
- ***The LEA Team needs to complete the chart in the application, Section B., pages 2-8 of the SIG LEA Application packet***

This grant makes possible the opportunity to implement significant changes in order to dramatically improve student performance, however, grants will only be awarded to LEAs who demonstrate the capacity to fully implement a selected model. (Tier I and Tier II).

The School Improvement and Intervention Section will be using a rubric to evaluate all applications (this rubric is included at the end of this guidance for your reference). Be specific as possible. If the evidence is not cited, we will assume it is not in place and your application may be rejected.

***Note:*** All indicators are based on the Arizona LEA Standards and Rubrics, School Restructuring Under No Child Left Behind by CSRI; the Federal Guidance for the School Improvement Grants; and current research on Turnaround Models.

## PART VI – COMPLETING THE APPLICATION

### *Directions for Completing the Application*

There is one application for all LEAs with Tier I, Tier II, and Tier III schools. This one application is used even if you are an LEA with only Tier III schools. If you are applying to implement one of the four models in your Tier I and/or Tier II schools, you need to complete all the sections of the application. The LEA Team will need to analyze the data for each school included in its application. If you only have Tier III schools that you are applying for, Sections A.1-A.3, C.1-C.3, E.2-E.4, F.1, G.1,H, I and J need to be completed.

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*Guidance: Fill in the information, paying careful attention to providing working email and phone contacts. These individuals will be our primary contact for the grant.*

| | |
|---|---|
| **LEA Name:** | |
| **Superintendent:** | **Federal Programs Director:** |
| **LEA Contact Information** | |
| **Mailing Address:** | **Email address:** |
| **Telephone number:** | **Superintendent** |
| **Fax:** | **Fed. Prog. Director** |

## IDENTIFICATION OF SCHOOLS

*Guidance: Fill in the names of the schools in improvement in your district. At right, mark appropriate Tier for each school.*

| School Name | Tier I | Tier II | Tier III |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**Where are we now?**

**A.1. Who are we? (as an LEA, school, staff, and community)**

*Guidance: Use existing descriptions where possible; i.e. board member application, teacher application, web page items which describe the district? Once all of the descriptions have been compiled, edit to ensure all parts of the question are addressed.*

- Provide a brief description of the LEA and each school to be served using School Improvement Grant funds. Explain how the LEA and school(s) are organized; describe the characteristics of the student population, the teaching and administrative staff; and discuss the level of community involvement and parent engagement.

| |
|---|
| |

**A.2 How do we do operate and do business at the LEA and school levels?**

*Guidance: Copy and paste from the answer above into this section. For each part of the description of the school community, provide an appropriate comment about climate, culture, values, and beliefs. (What is the mission statement? Have core values and beliefs been identified for the district…. for each individual school?)*

- Based on the description in A.1, provide a brief description of the climate, culture, values and beliefs that are part of the LEA and schools.

| |
|---|
| |

**A.3 How are our students doing?**

*Guidance: Please review data collected in Step 1 of this guidance. Consider all information about the students including:*

| | |
|---|---|
| □ *Student Achievement: overall proficiency in reading and math over a number of years (three or more)*<br>□ *Attendance: attendance percentage of the school (three or more years)*<br>□ *Drop-out Rate: What is the drop-out rate of the school for the last three (or more) years?* | □ *Ethnicity: What is the percentage of students in various ethnicity categories?*<br>□ *Gender: male/female percentage numbers*<br>□ *Grade Level: What are the grade levels that the school serves?* |

- Provide detailed summary of the student data for each Tier I, Tier II and/or Tier III school. Include data documents or reports as attachments.

| |
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| |

## B. DESCRIPTION OF LEA'S CAPACITY

### B.1 How effective are our processes?

*Guidance: Analysis of LEA's Capacity.*

1. *Convene the current LEA Leadership Team to complete the LEA Capacity Indicators.*
2. *Citing specific evidence, data, resources, etc, complete each indicator describing what is currently in place (Column 1); what is currently lacking in the LEA systems (Column 2); and what it would take to put it in place or improve upon it.(Column 3)*
3. *In Column 4 rank the LEA* based on the LEA's ability to create quick, dramatic change. Use the following rating scale:*

   *3 = It's already in place. Choose this if the system is currently in place as of spring 2010. It is working well and needs little modifications or changes.*

   *2 = It can be put in place in 2010-2011. Choose this if it is possible to immediately put this system in place for this coming school year. By the end of the year, this indicator will be fully functional and working.*

   *1 = It will be difficult to put into place. Choose this if it can be put into place by June 2011. There are major hurdles to overcome in order for this to be a reality.*

**Below is a sample chart. Complete ALL the indicators in the application.**

- LEA demonstrates that it has the capacity to use school improvement funds to provide adequate resources and related support to each Tier I and Tier II school identified in the LEA's application in order to implement, fully and effectively, the required activities of the school intervention model it has selected**.**

**Key for last column:* ***3****= it's already in place;* ***2****= we can put it in place in 2010-2011;* ***1****= it will be difficult to put in place*

| **Behavior for successful restructuring of persistently low achieving schools** | **What are the strengths? What is in place?** | **What are the weaknesses? What is lacking in the system?** | **What changes will be made to address the weaknesses and improve on the strengths?** | **Rate the LEA for its capacity to create change for each of the indicators*:** |
|---|---|---|---|---|
| **Standard 1: Leadership Systems** | | | | |
| Administrators are chosen for getting results, influencing others and willingness to change | | | | *What data do you have to support your rating? What other evidence do you have?* |

***Note:*** All indicators are based on the Arizona LEA Standards and Rubrics, School Restructuring Under No Child Left Behind by CSRI; the Federal Guidance for the School Improvement Grants; and current research on Turnaround Models.

### B.2. Describe the actions the LEA has taken or will take to address the following:

*Guidance: The following section, B., has four questions to be answered relating to four topics.*

***Design and Implement Interventions***

*This section should be completed at the LEA level with consideration given to input from stakeholders of identified schools, which would include the formulation of a comprehensive committee to identify and prioritize all steps in the implementation process. This section should consist of a detailed developed assessment of data that has been thoroughly analyzed by the LEA Leadership Team. Prioritize the identified focus areas. Each identified focused area that is addressed by the implementation plan* ***should include a general*** *timeline.*

*In completing the areas related to actions the LEA has taken, and those the LEA will take, these actions should be pertinent and essential to the implementation process with direct emphasis on supporting the chosen model. The following should be included:*

- *distribution of financial support*
- *significant changes in teaching and learning*
- *curricular needs*
- *recruitment and retention of highly effective staff*
- *the evaluation and use of data and assessment*
- *comprehensive professional development plan aligned to instruction and learning needs*
- *the monitoring process to be used*
- *adjustments in facilities*
- *parental and community engagement*

***Screen and Select External Providers*** – *Is there new guidance for this section? If so, we should compare to ensure the following is correct:*

*The LEAs should develop a complete process that explicitly outlines the appropriation and use of external providers in this section. This section should address the screening process to be used for selecting all external providers that will support the chosen model, steps, and implementation plan. The selection should run parallel with established internal procedures and guidelines, as well as, follow any SEA established guides and policies.*

*Selecting an external provider should include:*

- *Identified procedures & guidelines*
- *Data indicating the effectiveness of the external provider*

***Alignment of Other Resources***

*This section should describe any additional resources (e.g. financial resources, additional grants, facilities, programs, etc.) that will be used that are external to the grant but will contribute to the implementation process. A description of these resources and the supplemental support they will provide to each intervention should be included in this section.*

*The additional resources should include:*

- *Specific requirements of additional resources (grants, programs, etc.)*
- *How will the resource(s) compliment the chosen model?*
- *What is the purpose and intent of the supplemental resource/program?*
- *Who does this resource target or support?*
- *What are the procedures and guidelines for implementation of the program/resource?*
- *Are there any specific monitoring or reporting requirements or expected outcomes?*
- *Are there pre-existing agreements which could influence implementation of the model selected (e.g. IGA, other)*

***Modification of Policies***

*In order to implement certain plans or parts of plans a modification of internal policies may be needed. Identify changes in existing policies, procedures and practices that will need to be made in order to fully implement the chosen model. The modifications should also identify the responsible person(s) for either implementing or creating the policy changes along with the timeline for full or partial policy implementation. The changes should directly support the chosen model, step, and implementation plan created.*

*Modifications of policies may include the following areas:*

- *Staffing prioritization changes*
- *Budgetary reallocations*
- *Professional development additional needs*
- *Redirection of staff evaluation focus and process*
- *Modification of bargaining unit agreements*
- *Adjustment or revision of calendar*

**B.2. Describe the actions the LEA has taken or will take to address the following:**

*Guidance: Answer the following questions using the guidance that was provided for each section of this table. Each answer should include as much detail as possible and take into account actions at the district level as well as actions for each individual school that will apply for SIG funding:*

| | **Actions LEA has taken:** | **Actions LEA will take:**<br><br>**Include a general timeline** |
|---|---|---|
| **Design and implement interventions aligned with the requirements of the selected model;** | | |
| **Describe the process the LEA will use to screen and select quality external providers;** | | |
| **Alignment of other resources;** | | |
| **Policies and Practices LEA will modify to enable its schools to implement the selected intervention(s) fully and effectively** | | |

## C. ROOT CAUSES

**How did we get to this place?**

**After the data has been examined and analyzed the LEA must determine the root causes from the results. Based on the analyzed information, examine possible reasons for current level of performance. This requires the LEA to move from problem identification to problem solving.**

**C.1 Provide the conclusions the LEA has reached, that is based on the analyzed data from the previous section.**

- Include the data used for analysis, the observations, findings, identified root causes, and conclusions reached by the team.

| |
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| |

***C.2*** *Guidance: Identify the strengths, needs and barriers of the LEA and its schools. Based on the previous analysis, identify in what areas the students excel and in what areas the students need help. Be specific in identifying subgroups and grade levels.*

*Based on the previous analysis, identify the areas that the LEA and school(s) have established systems in place that help facilitate increased student achievement; i.e. strong policies, aligned curriculum, evaluation of staff, data warehouse system, etc. Identify systems that are inhibiting student progress. Refer to the School Improvement Standards and Rubrics Self-Assessment data and the school(s)'ASIP prioritized areas of need addressing student learning, assessment, culture and climate, parent engagement, etc.*

*Based on the previous analysis, identify any school or district barriers that are impeding the school improvement process, such as district policies, culture or climate concerns, school board and community concerns, association contracts, etc.*

**C.2 Identify the strengths, needs and barriers of the LEA and schools.**

| ***Student Strengths*** |
|---|
| |
| |

| ***System Strengths*** |
|---|
| |
| |

| ***Student Needs*** |
|---|
| |
| |

| ***System Needs*** |
|---|
| |
| |

| *School Barriers* |
|---|
| |
| |

| *District Barriers* |
|---|
| |
| |

C.3.

**C.3 Provide an outline of the steps the district will take to address the needs and barriers of the school, as well as, the district's needs and barriers in supporting this school:**

| |
|---|
| |

**C.4 Identify the intervention model that is chosen for each Tier I and/or Tier II school. Provide a brief justification - including how student achievement will be improved by this model.**

*Guidance: Identify the intervention model. Each model has specific mandatory components, time frames, and structures. Include in the justification why this model was chosen based on the previously stated data and information, how this particular model will provide significantly increased student achievement, or how this model will provide structures to enable the LEA to move forward.*

| |
|---|
| |

## D. SCHOOLS TO BE SERVED

**D.1 Identify each Tier I, Tier II, and Tier III school the LEA *commits to serve* and identify the model that the LEA will use in each Tier I and Tier II school.** (The model is identified after the team analyzes the data, identifies the schools' needs and examines LEA capacity to serve the school.)

| SCHOOL NAME | NCES ID # | TIER I | TIER II | INTERVENTION MODEL CHOSEN | | | |
|---|---|---|---|---|---|---|---|
| | | | | turnaround | restart | closure | transformation |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**D.2 Prioritize, by need, the district's TIER III schools:**
*Guidance: Identify and prioritize Tier III schools. Every school in Title I school improvement that has not been identified as a Tier I or Tier II school is considered a Tier III school. Funding will be given based on the LEA's ability to provide the capacity to create change. See E.2 for guidance on how to prioritize Tier III schools.*

| SCHOOL NAME | NCES ID# | AYP Designation | Area of Need(s) Based on 2009 AIMS Assessment |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**D.3 If the LEA is not applying to serve each Tier I and/or Tier II school, the LEA must explain why it lacks capacity to serve each school:**

*Guidance: Lack of Capacity Statement. An LEA is responsible for improving the quality of its schools and increasing student achievement. The School Improvement and Intervention Section of ADE is dedicated to helping LEAs provide the highest quality of instruction and attainment of student achievement possible. If an LEA does not believe they have the capacity to serve their schools, ADE will help to provide the support needed for 2010-2011 so that in the upcoming years the LEA may re-apply for funding. Provide below the information needed to explain why the LEA is unable to implement any of the four models at this time. ADE will determine the LEA's capacity for implementation and take the necessary steps to ensure the LEA has the capacity for the following year.* ***If an LEA has both Tier I and Tier III schools, they must implement a Tier I model in order to receive any additional funding for their Tier III schools.***

## E. LEA'S ACCOUNTABILITY

**E.1 Describe the annual goals for student achievement on the State's assessments in both reading, math and or graduation rate that have been established in order to monitor the Tier I and Tier II schools. Using the Analysis of Data completed in A.3., complete the following for each Tier I and/or Tier II school being served:**

*Guidance: Beginning with the goal area: Reading/Language Arts on B.5, cite, under the topic "Goal Area", what the goals are for Reading/Language Arts for each subgroup and for all students; then, do the same for math and graduation rate. In creating the goals, be sure to use the results of the previous data analysis and the percent proficient requirements, as that will inform the team as to whether significant changes are needed for the whole school or for a specific grade and/or sub-group, (see page 38, "**School Restructuring Under No Child Left Behind: What Works When?"**).*

| Goal Area | Goals | Baseline |
|---|---|---|
| **Reading** | | *What level of proficiency, (percentage), are students currently performing?* |
| **Math** | | *What level of proficiency, (percentage), are students currently performing?* |
| **Graduation Rate (for High Schools only)** | | *What level of proficiency, (percentage), are students currently graduating?* |

| For each Goal in: | Progress Monitoring Plan | | Person(s) Responsible |
|---|---|---|---|
| | **Process**<br>*Describe how students' progress will be monitored/checked, ( what assessments, programs, software will teachers use to determine how each student is progressing)*<br><br>*Also, describe how decisions will be made as to HOW instruction needs to change AND what else needs to be done as a result of the progress monitoring results.* | **Timeline**<br>*How often each type of progress monitoring will occur AND*<br>*How often AND how progress monitoring data will be used to inform instruction* | *Position, Name (responsible for progress monitoring and for using the results to inform instruction)* |
| **Reading** | | | |
| **Math** | | | |
| **Graduation Rate** | *High Schools only* | | |

**E.2 Using the prioritized list developed in D.2, provide a description of the support that the LEA will provide to each Tier III school. Include the interventions provided by level of need.**

*Guidance on Identification of Tier III school: The LEA will identify the Tier III schools in the district using the same criteria as Tier I and Tier II schools:*

- *Absolute performance on AIMS (three year trend)*
- *Student growth (three year trend)*

*The LEA will prioritize the Tier III schools based on need from highest to lowest.*

| ***Highest Need*** | ***Medium Need*** | ***Lowest Need*** |
|---|---|---|
| *Low student achievement and/or growth but showing movement up, capacity is there but needs support, sustainability questionable, resources available but not fully utilized, data gathered but not focused to drive instruction, consistently in school improvement, leadership is struggling to develop a model of collaboration* | *Student achievement and growth show improvement but may not be at level where it should be, school has capacity and ability to sustain changes, resources available and utilized, data utilized but not consistently to drive instruction, in school improvement for three or less years, adequate instructional leadership and some staff are using a collaborative model* | *Student achievement and growth on upward trend and at acceptable levels, school demonstrates capacity and sustainability, resources utilized, data drives instruction, strong parental involvement, in school improvement for three or less years, strong leadership and collaborative environment* |

*The LEA will provide a description of the support it will provide its Tier III schools based on the level of need. This support* ***may include, but is not required to include,*** *the choice of one of the four models. (Top priority will be given to those LEAs that commit to a chosen model as long as the LEA provides substantial evidence of LEA/school capacity to fully implement the chosen model). Other LEA support choices can be internal and/or external and be funded or non-funded support. The support will include timelines based on the level of need as well as the support provided.*

*Examples of other LEA support may include:*

- *The LEA will work with staff on development and analysis of quarterly benchmarks, a progress monitoring process, and student interventions based on assessment data.*
- *The LEA will provide training on the use and analysis of different types of data, especially data from formative and summative assessments, to develop appropriate lessons and units, as well as modify instructional practice.*
- *The LEA will supply release time for staff development to focus on specific instructional strategies, differentiated instruction, Structured English Immersion (SEI), time-on-task, as well as time for staff to collaborate on effective instructional practices.*
- *The LEA will provide release time to support district mentoring, peer coaching and K-12 horizontal and vertical curriculum articulation, evaluate current curricular programs*
- *The LEA will provide funding for proven data supported programs.*
- *The LEA will meet with site leadership monthly or more frequently as needed*
- *The LEA will assist in revising and updating the Arizona School Improvement Plan through technical assistance, meeting with the leadership team, and reviewing the needs assessment and priorities of the school.*
- *The LEA will review data quarterly with the site leadership.*

**E.2 Using the prioritized list developed in D.2, provide a description of the support that the LEA will provide to each Tier III school. Include the interventions provided by level of need.**

| School | Level of Need | | | Describe LEA Support (Internal and/or External) Funded and non-Funded support | Timeline |
|---|---|---|---|---|---|
| | Highest | Medium | Lowest | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

*E.3 See guidance for E.1*

**E.3 Describe the annual goals the LEA has established in order to hold accountable your Tier III schools that receive school improvement funds.**

| Goal Area | Goals | Baseline | Progress Monitoring Plan | | Person Responsible |
|---|---|---|---|---|---|
| | | | Process | Timeline | |
| Reading/Language Arts | | | | | |
| Math | | | | | |
| Graduation Rate | | | | | |

**E.4 Describe the LEA's technical assistance plan for schools that do not achieve the progress that is expected.**

*Guidance: In a brief format, outline the steps the LEA will take to hold the schools accountable for their progress in either implementing the chosen model or implementing the stated interventions. Explain the evaluation process the LEA will use to ensure that the chosen model/interventions will be implemented with fidelity. Explain how the LEA will provide ongoing technical assistance and monitoring throughout the year to ensure quality of implementation. Explain the outcome actions/consequences the LEA will take if the school does not make the significant student achievement that is expected.*

## F. BUDGET

**BUDGET DEVELOPMENT**

- ***Teri? Is this the excel spreadsheet below that they will receive?***

***Attachments to support budget work:***

- ☐ Criteria Funding Matrix (this was included in Step I as part of the guidance)
- ☐ Sample Budget

- ***A formal budget will be completed on ADE's Grant Management System that needs to include the following information (this will be completed only after the LEA Application and the ALEAT Action Plan are completed and approved by the School Improvement Section. Use this excel spreadsheet to estimate the costs necessary to fully implement the chosen model/interventions***

**LEA Name**

**LEA SIG 1003(g) Budget and Line Item Detail Descriptions**
**Turnaround / Transformation Models**

| Line Item | | School SIG 1003(g) Budget | Line Item Detail Descriptions / Explanations |
|---|---|---|---|
| **Instruction 1000** | | | |
| | | $ | |
| Salaries | 6100 | - | |
| Employee Benefits | 6200 | | |
| Purchased Professional Services | 6300 | | |
| Purchased Property Services | 6400 | | |
| Other Purchased Services | 6500 | | |
| Supplies | 6600 | | |

| | | |
|---|---|---|
| Other Expenses | 6800 | |
| | | $ |
| Sub-total | | - |
| **Support Services 2100, 2200, 2600 – 2900** | | |
| | | $ |
| Salaries | 6100 | - |
| Employee Benefits | 6200 | |
| Purchased Professional Services | 6300 | |
| Purchased Property Services | 6400 | |
| Other Purchased Services | 6500 | |
| Supplies | 6600 | |
| Other Expenses | 6800 | |
| Sub-total | | |
| **Support Services - Admin 2300, 2400, 2500** | | |
| Salaries | 6100 | |
| Employee Benefits | 6200 | |
| Purchased Professional Services | 6300 | |
| Purchased Property Services | 6400 | |
| Other Purchased Services | 6500 | |
| Supplies | 6600 | |
| Other Expenses | 6800 | |
| Sub-total | | |
| **Indirect Cost** | | |
| Restricted Indirect Cost Rate | 6910 | |
| **Capital Outlay** | | |
| Property | 6700 | |
| **Total** | | |

[1/] Footnotes:

**F. Using the Budget Excel spreadsheet, provide a budget that indicates the amount of school improvement funds the LEA will use each year to –**

- Implement the selected model in each Tier I and Tier II school it commits to serve;
- Conduct LEA-level activities designed to support implementation of the selected school intervention models in the LEA's Tier I and Tier II schools; and
- Support school improvement activities, at the school or LEA level, for each Tier III school identified in the LEA's application.

An LEA's budget must cover the period of availability, including any extension granted through a waiver, and be of sufficient size and scope to implement the selected school intervention model in each Tier I and Tier II school the LEA commits to serve.
An LEA's budget for each year may not exceed the number of Tier I, Tier II and Tier III schools it commits to serve multiplied by $2,000,000.
Attach LEA budget as an appendix.

## G. SUSTAINABILITY

*Guidance: Once identified as a Tier I, II, or III school for 2010, the LEA will receive funding for three years. To ensure that continuous school improvement and reform continues, after the funding from federal dollars end, it is necessary for the LEA to provide evidence that there is capacity for district and school sustainability. For ideas and resources see pp. 85-86 of the* ***Handbook on Effective Implementation of School Improvement Grants).*** *Below are some ideas to think about as the LEA plans for sustainability.*

1. *Invite faculty and community input in the planning stage and subsequently seek continued support and involvement of all stakeholders to ensure continuity of the reform effort.*
2. *Create contingency plans to address possible changes in staffing and resources.*
3. *Ensure that new staff is committed to adopting the reform measures.*
4. *Provide dedicated time and space for teams of educators to seek ways to maintain reforms and identify strategies for further improvement.*
5. *Provide professional development to educators on how to engage in ongoing problem solving, thereby establishing a culture geared toward continuous improvement.*

**G. Describe your plan for sustaining these efforts after the funding period ends? Address in your plan: funding sources, hiring practices, professional development, changes in policies and practices.**

## H. ASSURANCES: An LEA must include the following assurances in it application for a School Improvement Grant.

By indicating with a mark on the below items, the _____District or Charter Holder name_____ fully and completely assures that it will:

☐ Use its School Improvement Grant to implement fully and effectively an intervention in each Tier I and Tier II school that the LEA commits to serve consistent with the final requirements;

☐ Establish annual goals for student achievement on the State's assessments in both reading and mathematics and measure progress on the leading indicators in section III of the final requirements in order to monitor each Tier I and Tier II school that it serves with school improvement funds, and establish goals (approved by the SEA) to hold accountable its Tier III schools that receive school improvement funds;

☐ If it implements a restart model in a Tier I or Tier II school, include in its contract or agreement terms and provisions to hold the charter operator, charter management organization, or education management organization accountable for complying with the final requirements; and

☐ Report to the SEA the school-level data required under section III of the final requirements

**I. WAIVERS: If the SEA has requested any waivers of requirements applicable to the LEA's School Improvement Grant, an LEA must indicate which of those waivers it intends to implement.**

**Arizona Department of Education has applied, through its SEA level application, for all of the Waivers offered for the School Improvement Grant. If Arizona receives approval for these waivers, all waivers automatically apply to any LEA in the state.**

The LEA must indicate each waiver that the LEA will implement. If the LEA does not intend to implement the waiver with respect to each applicable school, the LEA must indicate for which schools it will implement the waiver.

_____District or Charter Holder___ will implement the below marked waivers:

☐ Extending the period of availability of school improvement funds. School(s): _____

☐ "Starting over" in the school improvement timeline for Tier I and Tier II Title I participating schools implementing a turnaround or restart model. School(s): _____

☐ Implementing a schoolwide program in a Tier I or Tier II Title I participating school that does not meet the 40 percent poverty eligibility threshold. School(s): _____

**J. CONSULTATION WITH STAKEHOLDERS: The LEA must consult with relevant stakeholders regarding the LEA's application and implementation of school improvement intervention models in its Tier I and Tier II schools.**

*Guidance: Before submitting its application for School Improvement Grant, the LEA must consult with all relevant stakeholders. Use the chart below to help with the consultation process. Then complete section J.*

**District:** _____ **Date:** _____
**School:** _____

**Stakeholder Summary for Restructing**

**Instructions:** Use this tool to make a stakeholder plan.

- Fill in the names of the people completing the tool (District Leadership Team) and the date.
- Review the list of possible stakeholders in the far left column.
- Use Tool 8 Restructuring Stakeholder Planner on pages 31–32 to decide how you will involve various stakeholders.
- Record your decisions here or use this as a checklist to ensure you have planned for all important stakeholders.

**Name(s):** _____ _____
_____ _____
_____ _____

| Stakeholders | Representatives' Role(s) in Restructuring Decisions | Communication Plan for All Stakeholders | |
|---|---|---|---|
| | | Action | Date Completed |
| Principals | | | |
| Teachers | | | |
| Other School Staff | | | |
| District Administrators | | | |
| Students | | | |
| | | | |

| | | | |
|---|---|---|---|
| Parents | | | |
| Special Education | | | |
| ELL | | | |
| Community Groups: | | | |
| School Board | | | |
| Teacher Union | | | |
| External Experts | | | |
| Other | | | |

**J. Before submitting its application for School Improvement Grant, the LEA must consult with all relevant stakeholders.**

The LEA has consulted with the following stakeholders:

| | | |
|---|---|---|
| | | |
| | | |

**PART II.**

**K. The LEA must include a timeline delineating the steps it will take to implement the selected intervention in each Tier I and Tier II schools identified in the LEA's application.**

**Part 3 Guidance:**

**ACTION PLAN**

***Once the LEA has an Approved LEA Application, the team will need to complete the following on the ALEAT system: (Your LEA Improvement Education Program Specialist will assist you with this)***

- **To be completed in ALEAT Plan. The first step is to ensure that all parties responsible for the implementation of the improvement process that will need access to ALEAT have access. Send a list of these names to ADE Technical Support for the ALEAT link to be put on their common-logon access. If they currently do not have access to common-logon, that is the LEAs decision as to the level of responsibility that is to be granted.**

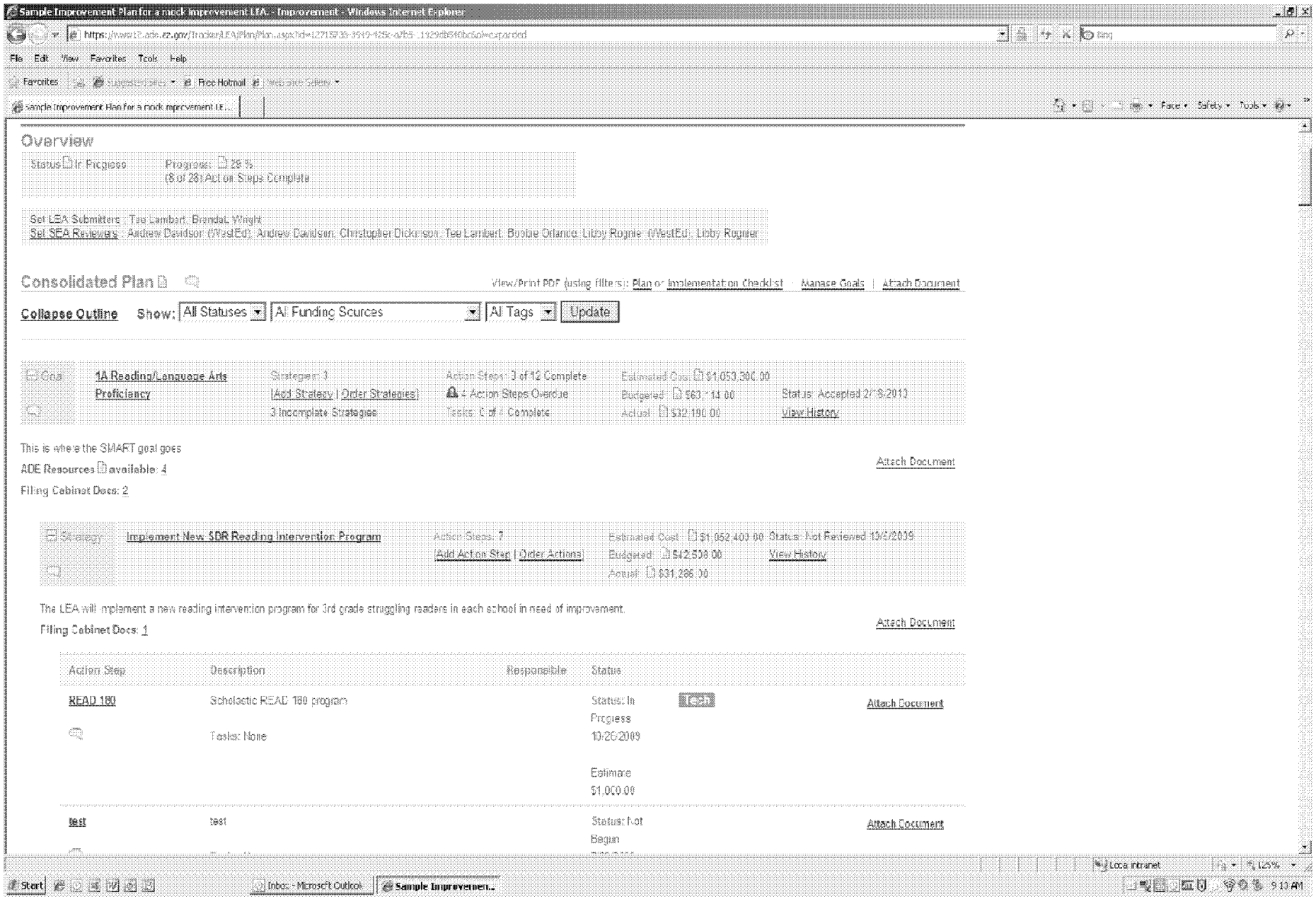
- **Once ALEAT link has been provided on common-logon, contact Tee Lambert in Title I for the password to access ALEAT for the first time. Once the LEA is able to gain access to the site follow the directions below. Title I LEAs will already have completed Goals 1-8 for 2009-2010. (If the LEA is not a Title I LEA, contact your LEA Improvement Education Program Specialist to assist you in the following process.)**

- **On ALEAT, add a Goal #9: Title it: School Improvement. Flag the goal, strategies, and action steps as "Restructuring" (This goal will be accepted by your LEA Improvement Specialist)**

- **Write a smart goal for the overarching outcome that is to be achieved in the 2010-2011 school year.**

- **Write a strategy for <u>each individual school</u> that is in school improvement in either Tier I, II, or III.**

- **Write specific action steps that will be taken that were <u>provided in the approved application</u>. Include in the action steps the person responsible, budget estimations, professional development needed, etc. Status updates will be required quarterly and monitored consistently by ADE.**


Sample Improvement Plan for a mock improvement LEA. - Improvement - Windows Internet Explorer
File Edit View Favorites Tools Help
Overview
Status: In Progress
Progress: 29 %
(8 of 28) Action Steps Complete
Set LEA Submitters: Tee Lambert, Brenda L Wright
Set SEA Reviewers: Andrew Davidson (WestEd), Andrew Davidson, Christopher Dickerson, Tee Lambert, Bobbie Orlando, Libby Rognlie (WestEd), Libby Rognlie
Consolidated Plan
View/Print PDF (using filters): Plan or Implementation Checklist | Manage Goals | Attach Document
Collapse Outline
Show: All Statuses | All Funding Sources | All Tags | Update
Goal
1A Reading/Language Arts Proficiency
Strategies: 3
[Add Strategy | Order Strategies]
3 Incomplete Strategies
Action Steps: 3 of 12 Complete
4 Action Steps Overdue
Tasks: 0 of 4 Complete
Estimated Cost: $1,053,300.00
Budgeted: $63,714.00
Actual: $32,190.00
Status: Accepted 2/18/2010
View History
This is where the SMART goal goes
ADE Resources available: 4
Filing Cabinet Docs: 2
Attach Document
Strategy
Implement New SDR Reading Intervention Program
Action Steps: 7
[Add Action Step | Order Actions]
Estimated Cost: $1,052,400.00
Budgeted: $42,538.00
Actual: $31,286.00
Status: Not Reviewed 10/6/2009
View History
The LEA will implement a new reading intervention program for 3rd grade struggling readers in each school in need of improvement.
Filing Cabinet Docs: 1
Attach Document
Action Step
Description
Responsible
Status
READ 180
Scholastic READ 180 program
Tasks: None
Status: In Progress
10/26/2009
Estimate
$1,000.00
Edit
Attach Document
test
test
Status: Not Begun
Attach Document
Start
Inbox - Microsoft Outlook
Sample Improvemen...
Local intranet
125%
9:13 AM

This is incomplete and needs to be re-entered by Teri.

**Part VII – ADE/SII Rubric for Use in Evaluating Applications**

- The rubric ADE/SII staff will use to evaluate the application

EVALUATION CRITERIA: An SEA must provide the criteria it will use to evaluate the information set forth below in an LEA's application for a School Improvement Grant.

| A. LEA'S ANALYSIS OF SCHOOL NEEDS | | | | |
|---|---|---|---|---|
| **Fully Addressed 4/ 5** | **Partially Addressed 2/3** | **Not Addressed 0/1** | **School 1** | **School 2** |
| 1. LEA description includes a detailed description of location characteristics, demographic information, size and composition of staff, and community resources disaggregated by school. | 1. LEA description includes an adequate description of location characteristics, demographic information, size and composition of staff, and community resources disaggregated by school. | 1. LEA description does not include a description of location characteristics, demographic information, size and composition of staff, and community resources disaggregated by school. | Score:<br>Rationale: | Score:<br>Rationale: |
| 2. Culture and Climate of LEA and schools are thoroughly described. Includes references to mission, vision, values and beliefs. Strengths as well as challenges are described. | 2. Culture and Climate of LEA and schools are adequately described. Includes limited references to mission, vision, values and beliefs. Strengths are described but not challenges. | 2. Culture and Climate of LEA and schools are loosely described. Includes no references to mission, vision, values and beliefs. Neither strengths nor challenges are described. | Score:<br>Rationale: | Score:<br>Rationale: |
| 3. Data analysis was done using multiple sources of data (student achievement, school process, perceptions and demographics). Reports & documents are attached. | 3. Data analysis was done using a couple of sources of data (student achievement, school process, perceptions and demographics). Reports & documents are attached. | 3. Data analysis was not complete. | Score:<br>Rationale: | Score:<br>Rationale: |

| | | | | |
|---|---|---|---|---|
| 4. Data trends were identified using data from 2007, 2008, and 2009. Data was used to identify the needs of each Tier I and Tier II School. Reports & documents are attached. | 4. Data trends were identified using data. Some data was used to identify the needs of each Tier I and Tier II School. Reports & documents are attached. | 4. Data was not used to identify the needs of each Tier I and Tier II schools | Score:<br>Rationale: | Score:<br>Rationale: |
| 5. Needs assessment was completed by LEA team using provided process and protocols. Included classroom observations, surveys, and principal/ teacher interviews. Site visit was conducted. | 5. Needs assessment was completed using process and protocols. Some items were not gathered. Site visit conducted. | 5. Needs assessment was not completed by LEA. | Score:<br>Rationale: | Score:<br>Rationale: |
| 6. A detailed description of the student learning (observations) of each Tier I and Tier II school to be served is provided. (based on site visit classroom walkthroughs) | 6. An adequate description of the student learning (observations) of each Tier I and Tier II school to be served is provided. (based on site visit classroom walkthroughs) | 6. No description of the student learning (observations) of each Tier I and Tier II school to be served was provided. | Score:<br>Rationale: | Score:<br>Rationale: |

| School Improvement Grant<br><br>BASELINE DATA (To be submitted with SIG LEA Application) | | |
|---|---|---|
| An SEA must report these metrics for the school year prior to implementing the intervention, if the data are available, to serve as a baseline, and for each year thereafter for which the SEA allocates school improvement funds under section 1003(g) of the ESEA. With respect to a school that is closed, the SEA need report only the identity of the school and the intervention taken--i.e., school closure. | | |
| **SCHOOL DATA** | **BASELINE** | |
| | **2008-2009** | **2009-2010 (If available)** |
| Which intervention the school used (i.e., turnaround, restart, closure, or transformation ) | | |
| AYP status | | |
| Which AYP targets the school met and missed | | |
| School improvement status | | |
| Number of minutes within the school year | | |
| **STUDENT OUTCOME/ACADEMIC PROGRESS DATA** | | |
| Percentage of students at or above each proficiency level on State assessments in reading/language arts and mathematics (e.g., Basic, Proficient, Advanced), by grade and by student subgroup | | |
| Student participation rate on State assessments in reading/language arts and in mathematics, by student subgroup | | |
| Average scale scores on State assessments in reading/language arts and in mathematics, by grade, for the "all students" group, for each achievement quartile, and for each subgroup | | |
| Percentage of limited English proficient students who attain English language proficiency | | |

| | | |
|---|---|---|
| Graduation rate | | |
| Dropout rate | | |
| Student attendance rate | | |
| Number and percentage of students completing advanced coursework (e.g., AP/IB), early-college high schools, or dual enrollment classes | | |
| College enrollment rates | | |
| **STUDENT CONNECTION AND SCHOOL CLIMATE** | | |
| Discipline incidents | | |
| Truants | | |
| **TALENT** | | |
| Distribution of teachers by performance level on LEA's teacher evaluation system | | |
| Teacher attendance rate | | |

PART VIIII - LINKS TO RESOURCES

**One of the reference materials available is, "***School Restructuring Under No Child Left Behind: What Works When? A Guide for Educational Leaders.***"** After certain sections below you will see page numbers in parenthesis. These page numbers will refer to the above handbook. An additional resource, ***"Handbook on Effective Implementation of School Improvement Grants,"*** can be downloaded from the following site; http://www.centerii.org/handbook/ .

**Data Quality Campaign**
http://www.dataqualitycampaign.org/

**Mass Insight Education – Meeting the Turnaround Challenge**
http://www.massinsight.org/turnaround/reports.aspx

**Center on Instruction**
http://www.centeroninstruction.org/

**Center on Innovation and Improvement**
http://centerii.org/

**National Comprehensive Center for Teacher Quality**
http://www.tqsource.org/

**National School Reform Faculty (protocols to facilitate a wide variety of focused discussions)**
http://www.nsrfharmony.org/protocols.html

**National Center on Response to Intervention**
http://www.rti4success.org/index.php?option=com_frontpage&Itemid=1

**Doing What Works**
http://dww.ed.gov/

**All Things PLC**
http://www.allthingsplc.info/

# School Intervention Models
# Criteria Funding Matrix

| **TURNAROUND / TRANSFORMATION MODELS:** | | |
|---|---|---|
| Criteria – Required | Explanation | Allowable Budget Items |
| (i) Replace the principal and grant the principal sufficient operational flexibility (including in staffing, calendars/time, and budgeting) | • Implement fully a comprehensive approach in order to substantially improve student achievement outcomes and increase high school graduation rates | Turnaround Principal stipend.<br>Approved Intervention and Supplemental core materials, expository and narrative classroom and library books, and research-based instructional software. |
| (ii) Using locally adopted competencies to measure the effectiveness of staff | • Screen all existing staff and rehire no more than 50 percent;<br>• Select new staff; | Instructional Interventionist /Academic Coach |
| (iii) Implement strategies to recruit, place, and retain staff with the skills necessary to meet the needs of the students. | • May include financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions | Teacher stipends for willingness to work in high-need school.<br>Performance-based stipends for teachers and administrators. |
| (iv) Provide staff with ongoing, high quality, job-embedded professional development | • Must be aligned with school's comprehensive instructional program and designed with school staff to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies. | Targeted professional development for teachers, administrators and Leadership Team to attend ADE-approved trainings, including registration fees and related travel.<br>Substitute teachers to enable local professional development days. |
| (v) Adopt a new governance structure | • May include, but is not limited to:<br>○ Require school to report to a new ''turnaround office'' in the LEA or SEA.<br>○ Hire a ''turnaround leader'' who reports directly to the Superintendent or Chief Academic Officer.<br>○ Enter into a multi-year contract with the LEA or SEA for added flexibility in exchange for greater accountability. | LEA School Improvement Coordinator to facilitate and oversee implementation of LEA's school improvement plan and site-based support/activities at Tier I, II & III schools. |
| (vi) Use data to identify and implement an instructional program | • Comprehensive assessments for screening, diagnosis, monitoring progress that inform instructional decisions.<br>• Must be research-based and ''vertically aligned'' from one grade to the next and aligned with State academic standards. | Approved Assessments and Supplemental Assessments of comprehension-related student skills.<br>Annual fee for processing student data.<br>Training for new teachers. |
| (vii) Continuous use of student data to inform and differentiate instruction to meet the academic needs of individual students | • Sources of student data include formative, interim, and summative assessments. | Assessment Coordinator / Data Entry Specialist |
| (viii) Establish schedules and implement strategies that provide increased learning time. | • Increased learning time" means using a longer school day, week, or year schedule to significantly increase the total number of school hours to include additional time for:<br>○ Instruction in core academic subjects.<br>○ Instruction in other subjects and enrichment activities that contribute to a well-rounded education.<br>○ Teacher collaboration, planning, and professional development within and across grades and subjects. | Teacher salary stipends for before- and after-school tutoring, intersession and summer school instructional programs.<br>Substitute Teachers to enable teacher collaborative time days.<br>Stipends for teachers for team planning, lesson design, data analysis, preparation of common assessments, review of instructional strategies.<br>Full-day kindergarten or prekindergarten programs. |
| (ix) Provide appropriate social-emotional and community-oriented services and supports for students. | • Partnering with parents and parent organizations, faith- and community-based organizations, health clinics, other State or local agencies, and others to create safe school environments that meet students' social, emotional, and health needs | Behavior Interventionist / Parent Engagement Specialist to work with family involvement action teams (FIAT).<br>Summer transition programs or freshman academies.<br>IGA/Contract/Partnership to provide identified need-based support services to students. |
| | | |

# Arizona Department of Education

## School Improvement Grant 1003(g)

**LEA Application for Tier I, Tier II and Tier III**

***LEA APPLICATION COVER PAGE***

| LEA Name: | NCES ID# | CTDS# | Entity ID |
|---|---|---|---|
| | | | |
| Superintendent: | Email: | | |
| Federal Programs Director: | Email: | | |
| | | | |
| LEA Contact Information | | | |
| Mailing Address: | | | |
| Telephone number: | | | |
| Fax: | | | |

**School Board President**_____ **Date**_____

**Superintendent Signature**_____ **Date**_____

**Federal Program Director Signature**_____ **Date**_____

# Arizona Department of Education

## School Improvement Grant
### LEA Application for Tier I, Tier II and Tier III

**DIRECTIONS: There are 3 STEPS to this application process:**

- **Step 1: LEA teams work to complete this application form. This part consists of Sections A through J. *(Approval from SI Team required to move to Step 2)***
- **Step 2 – Complete Section K – complete detailed action plan for implementation of plan components for the 2010-2011 school year on ALEAT. *(This section needs to be approved before moving to Step 3)***
- **Step 3 – Complete Section L – detailed budget information needs to be completed on ADE's Grants Management System**

## IDENTIFICATION OF SCHOOLS

| School Name | NCES ID# | CTDS# | Entity ID# | Tier I | Tier II | Tier III |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

**The three actions listed in Part 1 are ones that an LEA must take prior to submitting its application for a School Improvement Grant.**

## A. LEA'S ANALYSIS OF SCHOOL'S NEEDS

**With data and information available to you, analyze the needs of each of your Tier I, Tier II and Tier III schools. The goal is for your LEA's Leadership team to carefully analyze and interpret all data in order to accurately and completely assess the needs of your Tier I and/or Tier II schools. The knowledge gained during this investigative and analytical phase will be the basis for your decision as to which of the four intervention models should be implemented in your schools. The guiding questions to consider as the LEA Leadership analyzes and interprets data are: Where are we now?; and How did we get to this place?**

### Where are we now?

**A.1. Who are we? (as an LEA, school, staff, and community)**

- Provide a brief description of the LEA and each school to be served using School Improvement Grant funds. Explain how the LEA and school(s) are organized; describe the characteristics of the student population, the teaching and administrative staff; and discuss the level of community involvement and parent engagement.

**A.2 How do we do operate and do business at the LEA and school levels?**

- Based on the description in A.1, provide a brief description of the climate, culture, values and beliefs that are part of the LEA and schools.

**A.3 How are our students doing?**

- Provide detailed summary of the student data for each Tier I, Tier II and/or Tier III school. Include data documents or reports as attachments.

****The following is baseline data that needs to be included with your LEA Application.**

| School Improvement Grant<br><br>BASELINE DATA (To be submitted with SIG LEA Application) | | | |
|---|---|---|---|
| An SEA must report these metrics for the school year prior to implementing the intervention, if the data are available, to serve as a baseline, and for each year thereafter for which the SEA allocates school improvement funds under section 1003(g) of the ESEA. With respect to a school that is closed, the SEA need report only the identity of the school and the intervention taken--i.e., school closure. | | | |
| **SCHOOL DATA** | **BASELINE** | | |
| | **2007-2008 Optional** | **2008-2009 (Must Complete** | **2009-2010 Optional** |
| Which intervention the school used (i.e., turnaround, restart, closure, or transformation ) | | | |
| AYP status | | | |
| Which AYP targets the school met and missed | | | |
| School improvement status | | | |
| Number of minutes within the school year | | | |
| **STUDENT OUTCOME/ACADEMIC PROGRESS DATA** | | | |
| Percentage of students at or above each proficiency level on State assessments in reading/language arts and mathematics (e.g., Basic, Proficient, Advanced), by grade and by student subgroup | | | |
| Student participation rate on State assessments in reading/language arts and in mathematics, by student subgroup | | | |
| Average scale scores on State assessments in reading/language arts and in mathematics, by grade, for the "all students" group, for each achievement quartile, and for each subgroup | | | |

| | | | |
|---|---|---|---|
| | | | |
| Percentage of limited English proficient students who attain English language proficiency | | | |
| Graduation rate | | | |
| Dropout rate | | | |
| Student attendance rate | | | |
| Number and percentage of students completing advanced coursework (e.g., AP/IB), early-college high schools, or dual enrollment classes | | | |
| College enrollment rates | | | |
| **STUDENT CONNECTION AND SCHOOL CLIMATE** | | | |
| Discipline incidents | | | |
| Truants | | | |
| **TALENT** | | | |
| Distribution of teachers by performance level on LEA's teacher evaluation system | | | |
| Teacher attendance rate | | | |

## B. DESCRIPTION OF LEA'S CAPACITY

**B1.a How effective are our processes?**

- LEA demonstrates that it has the capacity to use school improvement funds to provide adequate resources and related support to each Tier I and Tier II school identified in the LEA's application in order to implement, fully and effectively, the required activities of the school intervention model it has selected.

| **Behavior for successful restructuring of persistently low achieving schools** | **What are the strengths? What is in place?** | **What are the weaknesses? What needs to be put in place?** | **What changes will be made to address the weaknesses and improve on the strengths?** |
|---|---|---|---|
| **Standard 1: Leadership Systems** | | | |
| Administrators are chosen for getting results, influencing others and willingness to change | | | |
| District has a comprehensive plan for recruiting and retaining highly effective teachers and leaders. | | | |
| There is a process to evaluate principals' abilities to demonstrate behavioral competencies of instructional leadership | | | |
| The LEA aligns personnel evaluations to effective instructional performance. | | | |

| | | | |
|---|---|---|---|
| The LEA has a process and procedures in place to exempt schools from district policies that restrict innovation; i.e. staffing, budgeting, and scheduling. | | | |
| District has a plan to monitor implementation of the intervention model or school improvement plan. This would include processes to be used, timelines, benchmarks, consequences, etc. | | | |
| **Standard 2: Curriculum, Instruction and Professional Development** | | | |
| The LEA has core curriculum that is evaluated and revised annually. Programs & practices are evaluated and discarded in a timely manner if they do not show measurable learning results | | | |
| The LEA has a professional development plan that allows for PD during the work day and specifically addresses and targets school improvement needs | | | |
| The LEA has negotiated the necessary changes in collective bargaining agreements to provide the LEA/principals with greater | | | |

| | | | |
|---|---|---|---|
| control over hiring, placement, and retention of staff. | | | |
| The LEA has a strong teacher evaluation process in place that provides for removing ineffective teachers that aren't committed to the turnaround process. | | | |
| The LEA has a systematic process for measuring quality instruction and student engagement including walkthrough procedures | | | |
| The LEA has a systematic process enabling teachers to collaborate during the work day to use data to improve instruction. | | | |
| **Standard 3: Assessment System** | | | |
| The LEA has a comprehensive data warehouse system that allows for the collection of student data down to individual student performance | | | |
| The measurement of student learning is used to better support systemic, programmatic and instructional decisions, and is part of the core work of the district and schools. | | | |
| Clear LEA/school goals are set based on what students need to know, think, and do | | | |

| | | | |
|---|---|---|---|
| for personal, economic, and civic success for the 21st century. | | | |
| The LEA has a system in place to train and support teachers in using data to drive instruction. | | | |
| **Standard 4: Culture, Climate, and Communication** | | | |
| District staff, school board members, and association members work together to make the dramatic changes the restructured school(s) need for improving student learning | | | |
| The LEA sets school improvement as a priority and adheres to the implementation and monitoring of the school's goals, including consistently monitoring improvement timelines for student achievement | | | |
| The LEA has a valued culture of high expectations for student achievement including established vision, mission, and goals | | | |
| All staff members are held accountable for increased student achievement. | | | |
| The LEA is committed to involving community/parents in the restructuring process | | | |

| | | | |
|---|---|---|---|
| including communicating current reality, new vision, buy in, and silencing of naysayers. | | | |
| **Standard 5: Resource Management** | | | |
| The LEA has prioritized the reallocation of resources to schools in improvement including personnel, funding, programming, etc. | | | |
| LEA leverages funds in order to design a viable sustainability plan for future years. | | | |
| The LEA Consolidated Plan includes strategies/action steps aligned to school improvement needs (Sustainability) | | | |

**B1.b Describe the actions the LEA has taken or will take to address the following:**

| | Actions LEA has taken: | Actions LEA will take:<br><br>Include a general timeline |
|---|---|---|
| **Design and implement interventions aligned with the requirements of the selected model;** | | |
| **Describe the process the LEA will use to screen and select quality external providers;** | | |
| **Alignment of other resources;** | | |
| **Policies and Practices LEA will modify to enable its schools to implement the selected intervention(s) fully and effectively** | | |

## C. ROOT CAUSES

### How did we get to this place?

**After the data, including information on capacity, has been analyzed the LEA must determine the root causes from the results. Based on the analyzed information, examine possible reasons for current level of performance. This requires the LEA to move from problem identification to problem solving.**

**C.1 Provide the conclusions the LEA has reached, that is based on the analyzed data from the previous section.**

- Include the data used for analysis, the observations, findings, identified root causes, and conclusions reached by the team.

| |
|---|
| |

**C.2 Identify the strengths, needs and barriers of the LEA and schools.**

| *Student Strengths* | *System Strengths* | *Student Needs* | *System Needs* | *School Barriers* | *District Barriers* |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |

**C.3 Provide an outline of the steps the district will take to address the needs and barriers of the school, as well as, the district's needs and barriers in supporting this school.**

| |
|---|
| |

**C.4 Identify the intervention model that is chosen for each Tier I and/or Tier II school. Provide a brief justification - including how student achievement will be improved by this model.**

| |
|---|
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| |

## D. SCHOOLS TO BE SERVED

**D.1 Identify each Tier I and Tier II school the LEA *commits to serve* and identify the model that the LEA will use in each Tier I and Tier II school.** (The model is identified after the team analyzes the data, identifies the schools' needs and examines LEA capacity to serve the school.)

| SCHOOL NAME | NCES ID # | TIER I | TIER II | INTERVENTION MODEL CHOSEN | | | |
|---|---|---|---|---|---|---|---|
| | | | | turnaround | restart | closure | transformation |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**D.2 Prioritize, by need, the district's TIER III schools:**

| SCHOOL NAME | NCES ID# | AYP Designation | Area of Need(s) Based on 2009 AIMS Assessment |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**D.3 If the LEA is not applying to serve each Tier I and/or Tier II school, the LEA must explain why it lacks capacity to serve each school:**

| |
|---|
| |

## E. LEA'S ACCOUNTABILITY

**E.1 Describe the annual goals for student achievement on the State's assessments in both reading, math and or graduation rate that have been established in order to monitor the Tier I and Tier II schools. Using the Analysis of Data completed in A.3., complete the following for each Tier I and/or Tier II school being served:**

| Goal Area | Goals | Baseline |
|---|---|---|
| Reading | | |
| Math | | |
| Graduation Rate (for High Schools only) | | |

| For each Goal in: | Progress Monitoring Plan | | Person(s) Responsible |
|---|---|---|---|
| | Process | Timeline | |
| Reading | | | |
| Math | | | |
| Graduation Rate (for High Schools only) | | | |

**E.2 Using the prioritized list developed in D.2, provide a detailed description of the support that the LEA will provide for each Tier III school. Include the interventions provided by level of need.**

| School | Level of Need | | | Describe LEA Support (Internal and/or External) Funded and non-Funded support | Timeline |
|---|---|---|---|---|---|
| | Highest | Medium | Lowest | | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**E.3 Describe the annual goals the LEA has established in order to hold accountable your Tier III schools that receive school improvement funds.**

| Goal Area | Goals | Baseline | Progress Monitoring Plan | | Person Responsible |
|---|---|---|---|---|---|
| | | | Process | Timeline | |
| Reading/Language Arts | | | | | |
| Math | | | | | |
| Graduation Rate | | | | | |

**E.4 Describe the LEA's technical assistance plan for schools that do not achieve the progress that is expected.**

| |
|---|
| |

## F. BUDGET

**F. Using the Budget Excel spreadsheet, provide a budget that indicates the amount of school improvement funds the LEA will use each year to –**

- Implement all components of the selected model in each Tier I and Tier II school it commits to serve;
- Conduct LEA-level activities designed to support implementation of the selected school intervention models in the LEA's Tier I and Tier II schools; and
- Support school improvement activities, at the school or LEA level, for each Tier III school identified in the LEA's application.

An LEA's budget must cover the period of availability (3 years), including any extension granted through a waiver, and be of sufficient size and scope to implement the selected school intervention model in each Tier I and Tier II school the LEA commits to serve.
An LEA's budget for each year may not exceed the number of Tier I, Tier II and Tier III schools it commits to serve multiplied by $2,000,000.

****Attach LEA budget as an appendix.**

## G. SUSTAINABILITY

**G. Describe your plan for sustaining these efforts after the funding period ends? Address in your plan: funding sources, hiring practices, professional development, changes in policies and practices.**

## H. ASSURANCES: An LEA must include the following assurances in it application for a School Improvement Grant.

By indicating with a mark on the below items, the _____LEA or Charter Holder name_____ fully and completely assures that it will:

☐ Use its School Improvement Grant to implement fully and effectively an intervention in each Tier I and Tier II school that the LEA commits to serve consistent with the final requirements;

☐ Establish annual goals for student achievement on the State's assessments in both reading and mathematics and measure progress on the leading indicators in section III of the final requirements in order to monitor each Tier I and Tier II school that it serves with school improvement funds, and establish goals (approved by the SEA) to hold accountable its Tier III schools that receive school improvement funds;

☐ If it implements a restart model in a Tier I or Tier II school, include in its contract or agreement terms and provisions to hold the charter operator, charter management organization, or education management organization accountable for complying with the final requirements; and

☐ Report to the SEA the school-level data required under section III of the final requirements

**I. WAIVERS: If the SEA has requested any waivers of requirements applicable to the LEA's School Improvement Grant, an LEA must indicate which of those waivers it intends to implement.**

**Arizona Department of Education has applied, through its SEA level application, for all of the Waivers offered for the School Improvement Grant. If Arizona receives approval for these waivers, all waivers automatically apply to any LEA in the state.**

The LEA must indicate each waiver that the LEA will implement. If the LEA does not intend to implement the waiver with respect to each applicable school, the LEA must indicate for which schools it will implement the waiver.

_____LEA or Charter Holder___ will implement the below marked waivers:

☐ Extending the period of availability of school improvement funds. School(s): _____

☐ "Starting over" in the school improvement timeline for Tier I and Tier II Title I participating schools implementing a turnaround or restart model. School(s): _____

☐ Implementing a schoolwide program in a Tier I or Tier II Title I participating school that does not meet the 40 percent poverty eligibility threshold. School(s): _____

**J. CONSULTATION WITH STAKEHOLDERS: The LEA must consult with relevant stakeholders regarding the LEA's application and implementation of school improvement intervention models in its Tier I and Tier II schools.**

**J. Before submitting its application for School Improvement Grant, the LEA must consult with all relevant stakeholders.**

The LEA has consulted with the following stakeholders:

| | | |
|---|---|---|
| | | |
| | | |

***STEP 2: COMPLETE PLANNING TEMPLATE ON ALEAT***

**K. The LEA must include a timeline delineating the steps it will take during the 2010-2011 school year to implement the selected intervention in each Tier I and Tier II schools identified in the LEA's application.**

**To be completed in ALEAT Plan**

***STEP 3: COMPLETE BUDGET ON GRANTS MANAGEMENT***

**L. The LEA must complete the budget information on ADE's Grant Management System.**

## Appendix (E)(2)-5a - Description of SW Consortia

## Outline of Southwest Consortia for Turnaround Leadership Development

### A Southwest Consortia: Rationale

The Southwest Comprehensive Center at WestEd, a federally-funded technical assistance provider to state departments of education (SEAs) in the states of Arizona, Colorado, Nevada, New Mexico and Utah, has entered into discussions with SEA leadership, at their request, about the formation of a SW regional consortia that will develop jointly, and implement in each state, a plan to recruit, select, and train turnaround specialists through the establishment of a Turnaround Academy. The goal is to prepare and "certify" highly specialized turnaround leaders who demonstrate the knowledge, skill and abilities unique to the needs of turnaround settings and build the capacity of each state to sustain its turnaround leader pipeline. The advantage in forming a consortia is three-fold:

- ⇒ ***It is efficient***: Rather than each state launching this effort individually in five states, a consortia will provide the opportunity to maximize national expertise on this aspect of school reform and build on shared ideas among the states. Since all five states face similar needs and challenges in launching this effort and share the same goals and outcomes for the project i.e., building a pipeline of turnaround specialists, it makes sense to join forces. This collaborative approach will provide the opportunity to accomplish, collectively, more than each state could accomplish individually.
- ⇒ ***It is cost-effective*:** By leveraging resources, the consortia can maximize fiscal and human resources by pulling funds dedicated for this purpose, contracting with one or more providers/experts collectively, and sharing the costs.
- ⇒ ***It builds on existing collaborative relationships***: The Southwest Comprehensive Center has been working with the SEAs in the Southwest for the last five years under a cooperative agreement with the U.S. Department of Education. An integral part of this technical assistance work has been the practice of bringing the five states together to address issues and challenges these states share in common such as district and school improvement, English language learners, and teacher evaluation systems. This facilitated regional collaboration has resulted in increased communication, trusting relationships that have fostered a collaborative spirit, and joint regional outcomes, such as the development of shared web-based technology tools. This consortia is a logical and urgent next step for the five states to take.

### Structure of the Consortia

- ⇒ The Southwest Comprehensive Center will continue to support regional collaboration by facilitating planning among the members of the consortia.
- ⇒ Each SEA will have the option of joining the consortia. Upon commitment, the SEAs will form a steering committee to jointly make decisions regarding the goals, objectives, and strategies of the Turnaround Academy, allowing flexibility to customize implementation for each individual state. The SEAs will release a joint RFP once the scope of work is defined, to contract with a provider who will be responsible for the training of the turnaround leaders in the Academy.
- ⇒ The contracted provider will provide the training for the Turnaround Academy participants in: 1) leading a turnaround school 2) coaching and mentoring turnaround leaders, and/or 3) becoming trainers, thus building capacity within each state.

## Turnaround Specialists

Although strong leadership training and support is an asset for any school leader, the turnaround leader is a specialized role requiring a specialized set of skills, knowledge and abilities. The tenacity and influence skills needed to execute fast, dramatic improvements in failing organizations are exceptional. Successful turnaround principals are likely to differ from principals who succeed in maintaining better performing schools (Public Impact, 2008).

**"As far as we are aware, there is not a single documented case of a school successfully turning around its pupil achievement trajectory in the absence of talented leadership"** (*Seven Strong Claims About Successful School Leadership,* 2006)

Across sectors, the term "turnaround" describes a dramatic improvement in the performance of a previously failing organization in a very short period of time. In education, the term most often refers to the parallel situation: a rapid dramatic improvement in a previously failing school. "Many reforms in education focus on instruction, curriculum, or other structural improvements without regard for the will or capacity of the people making changes. In contrast, turnarounds are at the outset a *people-driven strategy* (Public Impact, 2009).

Current federal policy reform efforts require districts to consider four bold actions to intervene in the nation's lowest performing schools supported with significant funding from the American Recovery and Reinvestment Act and Section 1003(g) of the Elementary and Secondary Education Act. These reform models call for replacing the principals, and in some cases, the teaching staff. Although there are abundant leadership training programs, few focus on the unique knowledge and skill of a turnaround leader charged with transforming a school. States and districts are encouraged to recruit and train turnaround and transformation principals, school leaders and teachers, but many do not have the systems in place to do that, or the time to develop one. Few administrative or leadership programs promote specialization in this area and yet, there is a pressing need.

This proposed leadership program will identify and select those candidates who have demonstrated the willingness and potential to become specialized turnaround leaders. Upon selection– Turnaround Specialization, candidates will participate in an extended training and coaching model with an internship in one of the state's lowest performing schools. The core content will focus on topics specific to the turnaround and transformation context such as: ***core competencies unique to the turnaround context***: ***change theory***; ***personnel management***; ***accountability conditions and strategic decision making.*** Upon completion of the program, the candidate will be certified as a "turnaround specialist" and agree to serve in a low-performing school for at least two years. This will not only strengthen human capital by developing specialization in turnaround leadership, but begin to build a pipeline of turnaround leaders in the state who can then serve to train and coach additional turnaround leaders, thus building overall state capacity and sustainability.

# Arizona Department of Education

## AIMS Intervention and Dropout Prevention Program TOOLKIT

- **How to Use the Toolkit**

This Toolkit has been organized to help anyone working in dropout prevention find useful information on a topic quickly. The framework for the Toolkit is a list of **Key Themes** that emerged from our analysis of both Arizona programs and literature from the national dropout prevention community. These themes capture recommendations for best practice according to questions or goals that a practitioner might have.

We recommend you navigate through the Toolkit by picking a theme of interest and following the related links. For example, if your program is struggling with how to improve student attendance, click on "Attendance." This will take you to an index page with a brief definition of the topic and links to resources and data. You can then choose to read about best practice suggestions from both the research and national programs, or from Arizona program staff.

The themes in this Toolkit are cross-linked to three different sources of data:

1. Articles and resources excerpted from the national dropout prevention community on model programs and best practices (click on "Bibliography" link at the left to read article excerpts)

2. Profiles of exemplary Arizona programs (click on "Arizona Exemplary Programs" link at left to read these).

3. Quotes from Arizona program staff related to various topics/questions (click on "Key Themes" link at left and select a theme to access quotes.

Please note that clicking on a link to the research literature will take you to a "bookmark" that is embedded in a longer article that includes many themes. We hope to emphasize that no "best practice" in education stands alone. As good educators know, any practical strategy is part of a larger *system* of instruction or program design, and will work differently for different students, in different contexts. Our intent with this design is to help readers keep in mind the bigger picture of the program or context in which that practice was successful.

Finally, you can click on the "Links" tag at left, which will take you to other useful sources of dropout prevention information on the Internet. The Arizona Department of Education and LeCroy & Milligan Associates, Inc. are not endorsing or responsible for the content of any Internet site outside the Toolkit, but provide these as a resource.

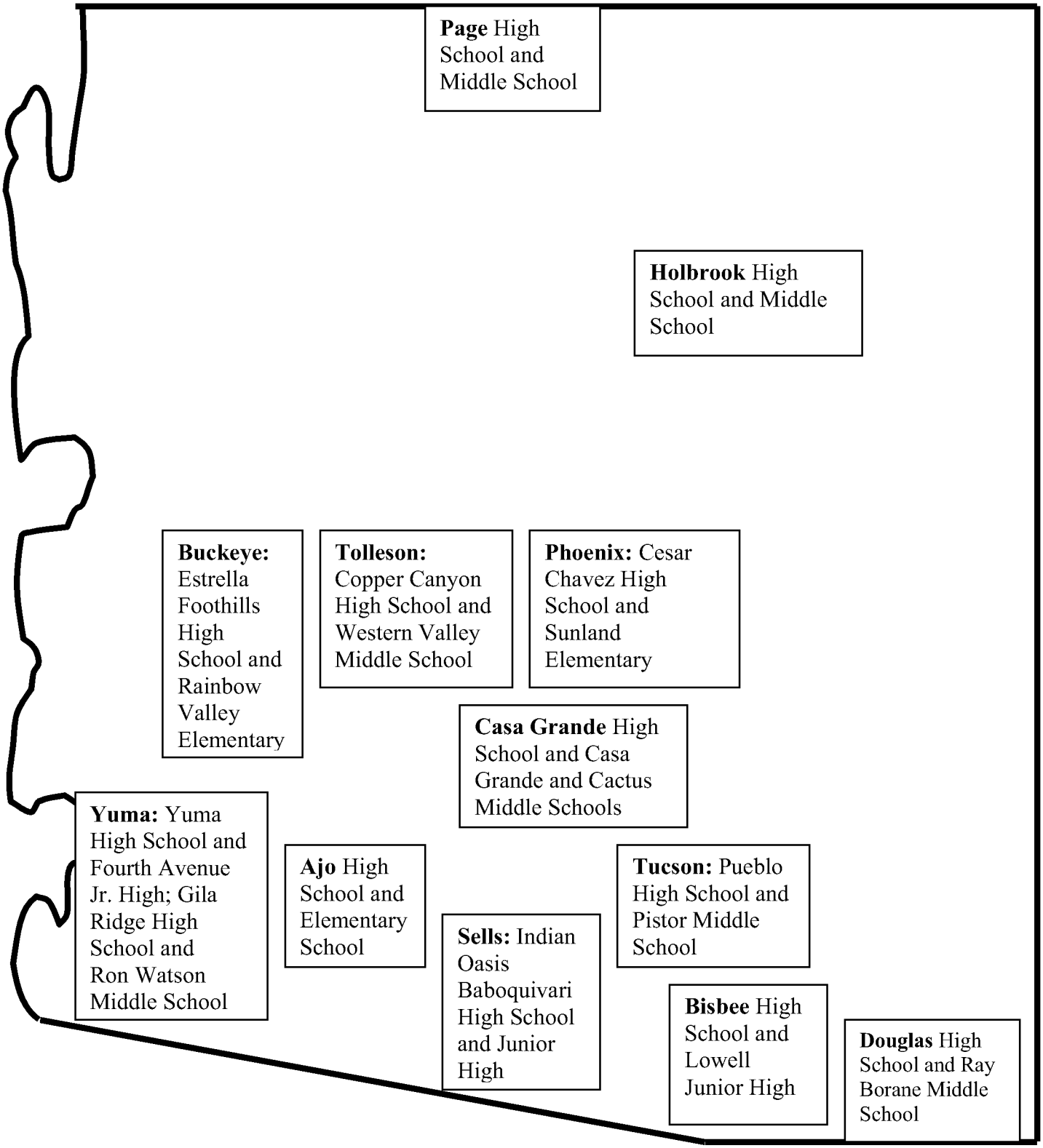
The Arizona Department of Education and LeCroy & Milligan Associates will be tracking feedback on the design and content of this Toolkit. Please take this online survey to provide feedback. We appreciate you taking the time to do this. https://www.surveymonkey.com/s.aspx?sm=DUTKsKVbiokKpbPfX1n55w_3d_3d

# ARIZONA'S ADVANCED PLACEMENT INCENTIVE PROGRAM (APIP)

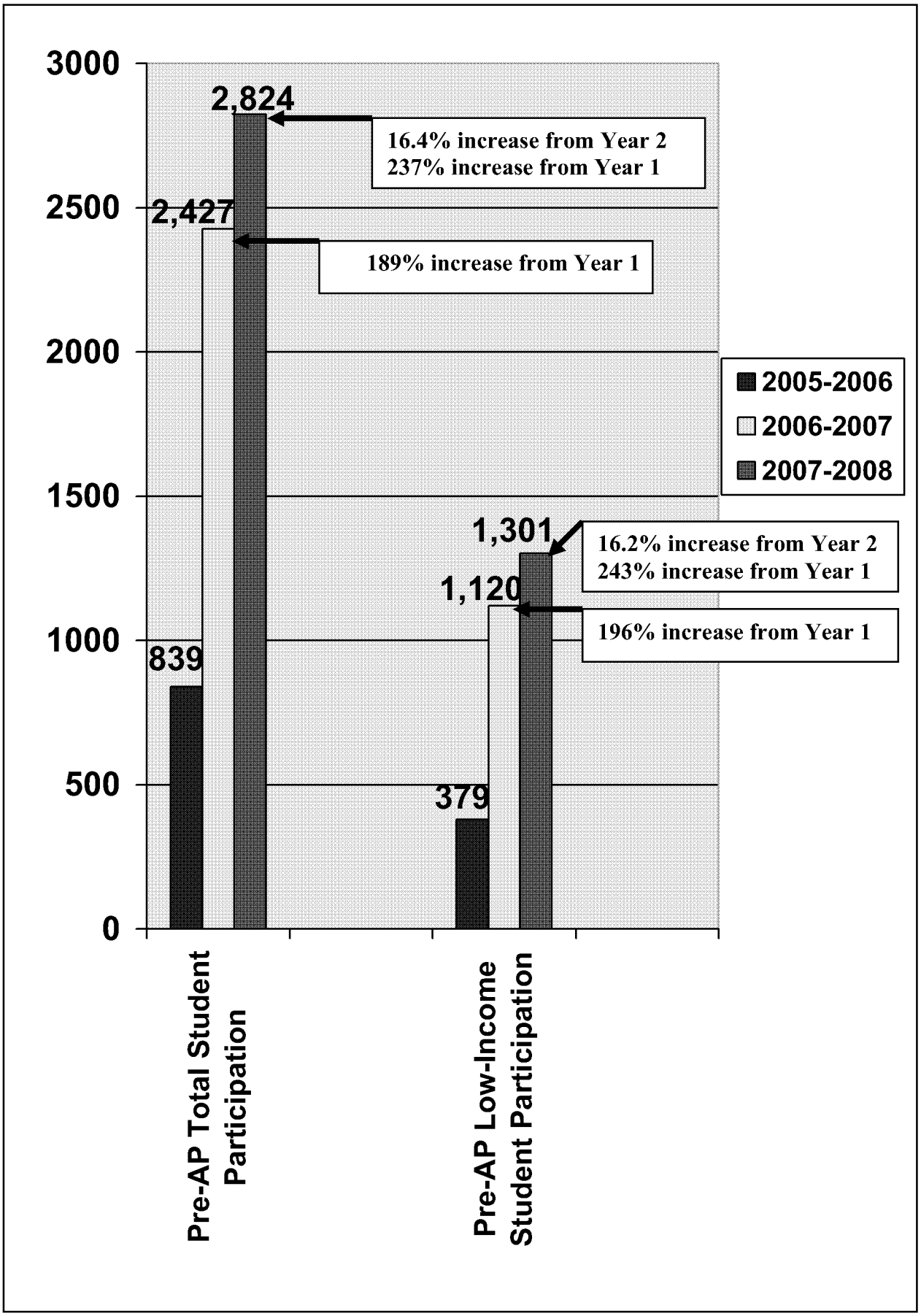
## DATA: YEARS 1-3(2005-2006, 2006-2007, 2007-2008)

*GOAL:* To increase the participation and success of Arizona's low-income students in both Pre-Advanced Placement and Advanced Placement courses and tests.

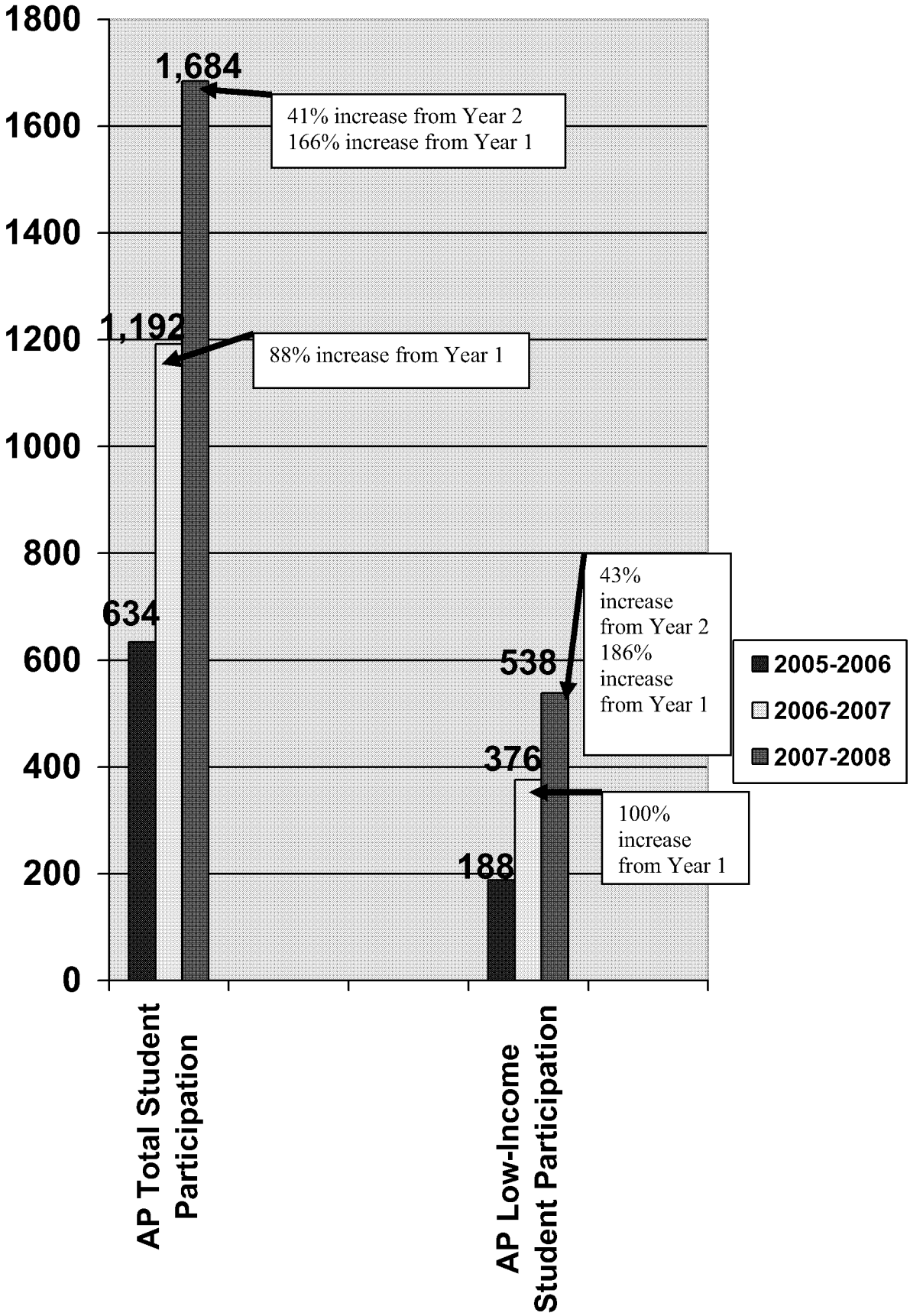
***SUBGRANTEES (13high schools and 14 feeder schools)***



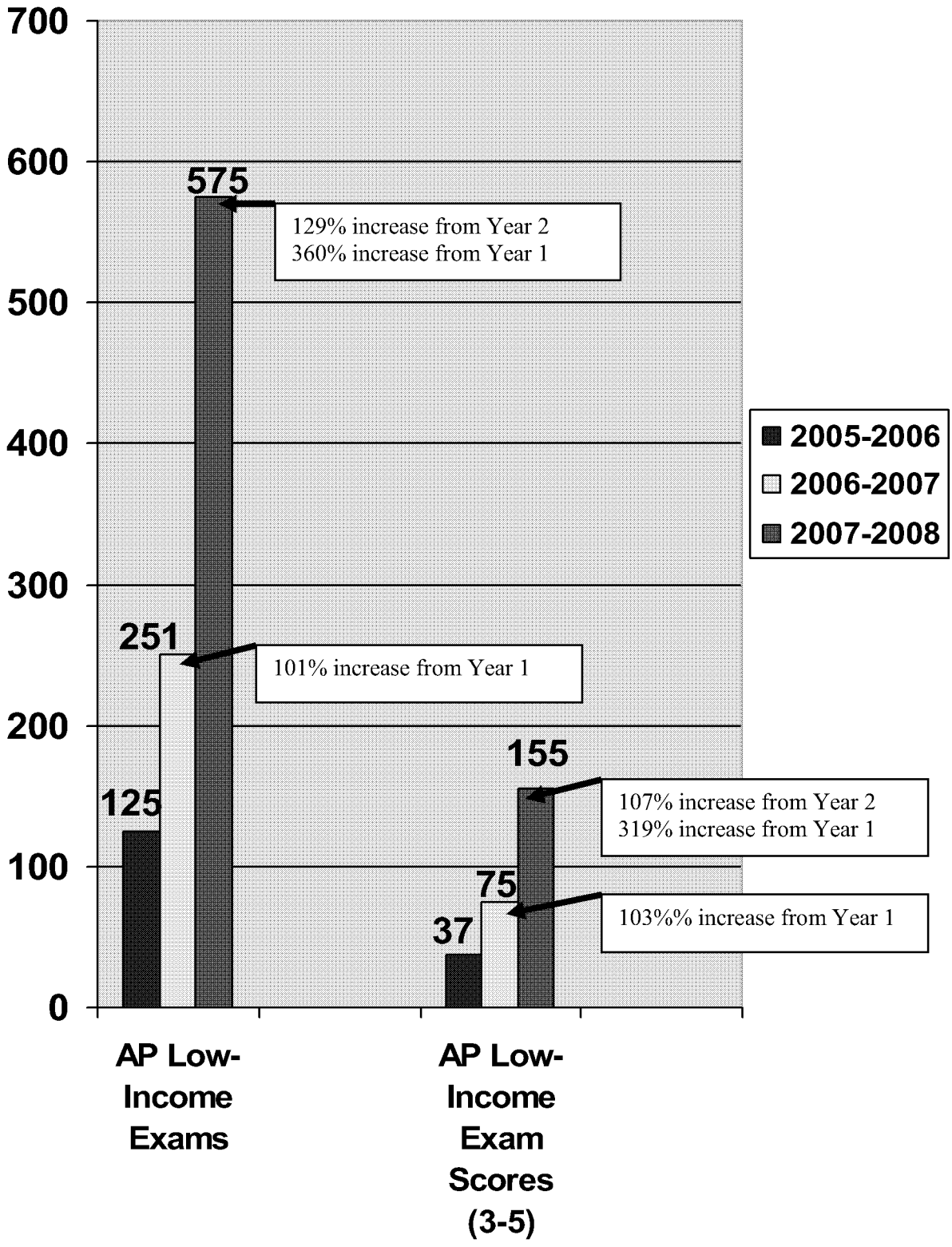
## TOTAL & LOW-INCOME STUDENT PRE-AP PARTICIPATION

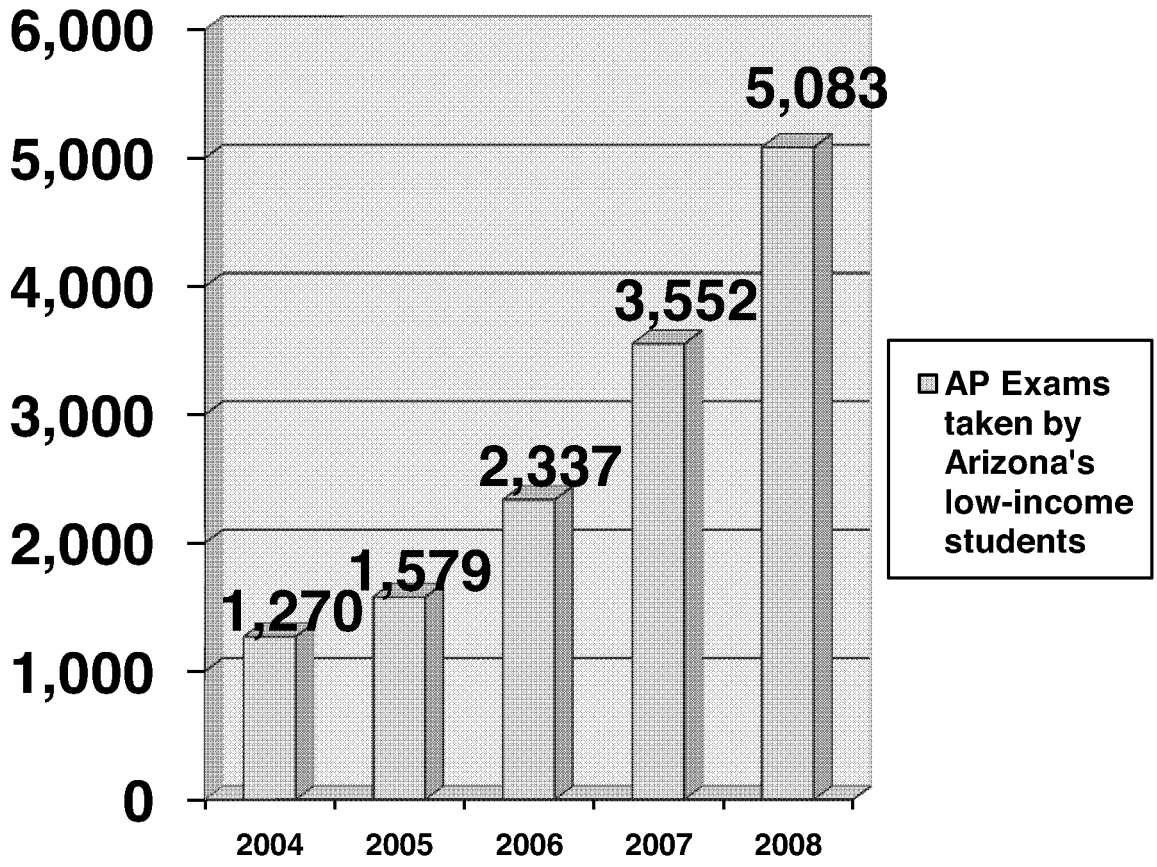


## TOTAL & LOW-INCOME STUDENT AP PARTICIPATION



## LOW-INCOME AP EXAMS & LOW-INCOME AP EXAM SCORES 3-5




6,000
5,000
4,000
3,000
2,000
1,000
0
1,270
1,579
2,337
3,552
5,083
2004
2005
2006
2007
2008
AP Exams taken by Arizona's low-income students

## Appendix STEM-2
## SCIENCE FOUNDATION ARIZONA BOARD OF DIRECTORS

The Science Foundation Arizona board of directors is comprised of distinguished, respected leaders from Arizona, as well as highly talented experts in academia, research and development, and business from the U.S. and abroad.

**Donald Budinger, Chair** (*Phoenix*) is founder and president of Rodel Inc., a startup that grew to become the world's largest manufacturer of the surface finishing chemicals used to make computer chips, rigid memory disks and specialty optics. He is chairman of the Rodel Foundations and chairman of the Arizona College Scholarship Foundation.

**Craig Barrett, Ph.D. (Vice Chair)** (*Phoenix*), a former chairman and CEO of Intel Corp., is a leading advocate for improving education in the U.S. and around the world. After retiring from Intel, Dr. Barrett joined the faculty of the Thunderbird School of Global Management. He is the first-ever chair of the United Nations Global Alliance for Information and Communications Technology, an elected member of the National Academy of Engineering, and a member of the Hong Kong Chief Executive's Council of International Advisors. Dr. Barrett and his wife Barbara established the Barrett Honors College at Arizona State University.

**Erich Bloch** (*Washington, D.C.*) is director of the Washington Advisory Group, where he advises on corporate R&D management and strategic planning for academically based research enterprises. He led the development of the IBM System 360 stretch supercomputer that revolutionized the computer industry and earned him the National Medal of Technology in 1985. President Reagan appointed him to be the director of the National Science Foundation. He is an elected member of the National Academy of Engineering.

**William Harris, Ph.D.** (*Phoenix*) is president and CEO of Science Foundation Arizona. He served as founding director general of Science Foundation Ireland; designed and led several industry/university R&D collaborative programs for the National Science Foundation; served as National Science Foundation director of Mathematical and Physical Sciences; and served as vice president of research at the University of South Carolina. Dr. Harris is an elected member of the Royal Irish Academy.

**Leroy Hood, Ph.D., M.D.** (*Seattle*) is president and co-founder of the Institute for Systems Biology. His current research focuses on cancer biology and Type I diabetes. He previously served as William Gates III Professor of Biomedical Sciences and as the founding chairman of the Department of Molecular Biotechnology at the University of Washington. He is a member of the National Academy of Sciences, the American Philosophical Society, the American Academy of Arts and Sciences, and the Institute of Medicine. Dr. Hood has received numerous awards for his research, inventions and innovations.

**Anita Jones, Ph.D.** (*Charlottesville, Virginia*) is a university professor in the Department of Computer Science and Lawrence R. Quarles Professor of Engineering and Applied Science in the School of Engineering and Applied Science at the University of Virginia. She served from

1993 to 1997 as director of Defense Research and Engineering for the Department of Defense and oversaw the science and technology program, research laboratories and the Defense Advanced Research Projects Agency. In addition, she served as vice chair of the National Science Board and is an elected member of the National Academy of Engineering.

**Ira Levin, Ph.D.** (Bethesda, Maryland) is a senior research leader and Scientific Director of Intramural Research of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health (NIH) in Bethesda. He earned a B.S. degree from the University of Virginia and his Ph.D. from Brown University and completed his post-doctoral training at the University of Washington. He is an expert in membrane dynamics, structural biology and spectroscopic imaging. Dr. Levin is internationally recognized for his spectroscopic accomplishments and has been honored with many awards.

**Frank McCabe** (*Dublin, Ireland*) is a leading figure in national and international business. He retired as general manager and vice president of technology and manufacturing for Intel Ireland. Formerly, he served as European director of G.E. Semiconductor Business and executive vice president of Digital Equipment Corp.

**Robert Millis, Ph.D.** (*Flagstaff, Arizona*) is a planetary astronomer and former director of the Lowell Observatory, one of the nation's largest privately managed astronomical research institutions. He is a renowned expert in studies of the outer solar system and serves on the board for the Associated Universities for Research in Astronomy; Arizona Arts, Science and Technology Academy; and Flagstaff Forty.

**Gary Jones** (*Tucson*) serves as chairman of ArkeX and Ingrain, startup geophysical/geological technology companies offering services to oil and gas companies. Formerly, Mr. Jones served as president of Schlumberger's WesternGeco Division and president of Baker Hughes Atlas Division. He has a lifelong interest in energy, particularly focused on solar energy, desalinization and geothermal energy. He is a member of the SFAz board, serving on the SFAz Audit Committee.

**Martina Newell-McGloughlin, Ph.D.** (*Davis, California*) directs the University of California's Biotechnology Research and Education Program (UCBREP), which includes all 10 campus sites and the national labs at Livermore and Berkeley and Los Alamos, New Mexico. She is an internationally recognized authority on biotechnology with a broad knowledge of biotech-related research in academia and industry.

SCIENCE foundation ARIZONA
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## Engineering Pathway

**Overall Impact:**
STEMAz has been working on the Engineering Pathway initiative with a Task Force of over 40 stakeholders from industry, philanthropy, universities, community colleges, schools, school districts, state agencies and STEM programs to design an engineering pathway for K-12 through college to motivate the next generation of Arizona students (2008-09 enrollment is comprised of 41% Hispanic students) into STEM fields and increase retention and graduation rates in engineering and related professions that meet the demands of our current and future economy.

Coordinating STEMAz activities around an engineering pathway brings focus to our efforts and a clear connection for stakeholders to initiate and model systemic and meaningful change in Arizona's education and the nation.

**Objective:**
STEMAz and the Task Force have defined a comprehensive engineering pathway that in three years can:

- Double the number and broaden the base of Arizona high school students taking AP Calculus from 3500 to 7000 students[1] each year, thereby doubling the pool of students who are adequately prepared for college engineering and STEM-related degrees.
- Simultaneously, double the number of AP Calculus students who pursue engineering from a current estimate of about 25% to 50% of the broadened pool each year, which is an increase from 875 to 3500 students each year.
- **Achieve a 400% increase in the number of well-prepared students who pursue engineering and related STEM certificates and degrees each year by the year 2012.**

The following components define the engineering pathway that when implemented combine to provide a systematic, robust and effective means of motivating *and preparing* the next generation of Arizona students into STEM fields.

- Rigor. Increase student math proficiency to Algebra I by the end of 8th grade and college-ready calculus (AP Calculus) by the end of high school to better prepare students for rigorous engineering and STEM majors in college. Increased math proficiency lends to increased opportunities for proficient and rigorous science.
- Relevance. Create and expand K12 engineering offerings in and out of the classroom to motivate students to pursue engineering and related STEM certificates and degrees
- Articulation. Promote and advance early-college opportunities for high school and community college courses that articulate and transfer readily toward an engineering or STEM-related degree.
- Outreach. Connect with parents, students and educators about existing education opportunities and the benefits of STEM as a foundation and a career.

**Approach:**
Engineering can be considered as the contextualization of math and science requiring a strong link between engineering and math and science. We believe that the long-term goal for significant and transformational K-12 STEM reform in Arizona would be the development of pervasive embedded K-12 engineering standards throughout the curriculum and particularly within math and science courses.

[1] State Integrated Summary: Supplement, Advanced Placement Possibilities, 2007-2008, Arizona Public Schools, CollegeBoard.

Step 1 will raise levels of math (and science) rigor while simultaneously increasing opportunities for relevance. Step 2 will embed engineering applications and relevance within math and science courses and in accordance with Arizona's new engineering standards.

Rigor. Engineering Task Force members recommend AP Calculus as the level of math that more students need to build a larger base of students who are well-prepared for rigorous engineering and STEM majors in college. CollegeBoard statistics show that students who test in AP Calculus, *regardless of their score,* demonstrate greater advanced mathematics proficiency than students from 16 other top countries in the world[2]. Moreover, in following 70,000 college freshman nationwide through their college experiences, students who took AP Calculus AB were twice as likely, and students who took AP Calculus BC were three times as likely, to major in Engineering, Applied Mathematics, and related STEM areas as students who had not taken AP Calculus.[3] College Board also found that based on 2007 PSAT/NMSQT testing in AZ, 9,124 of the 26,452 PSAT/NMSQT test takers had the propensity to succeed in an AP Calculus course and score high enough to earn college credit on the AP exam. However, only 1,167 of these students did so. This is strong evidence of the piercing need for encouragement to pursue higher levels of math and science. Of the Hispanic students who take the PSAT/NMSQT, 1,454 could have been identified for AP Calculus and been successful on the AP Calculus exam, but in fact only 127 actually participated in AP.[1]

We recommend the following components be in place to increase levels of *rigor*:

- Conduct early assessment of sophomores using, for example, PSAT/NMSQT, to identify and expand the pool of students (cohort) who have the propensity for success in AP Calculus.
- Enhance professional development for current AP Calculus teachers using modeling as a pedagogic platform for physics, chemistry and biology.
- Expand teacher training across all grade levels to support this cohort of students with improved study habits and time management skills at earlier grade levels.[4]
- Expand AP Calculus offerings, including AP Calculus in Spanish for underrepresented students.
- Provide distance learning/teaching capabilities for all access to students and teachers.

Relevance. To capture the attention of AP path students who are preparing for the rigorous courses in college but who are not yet aware of engineering, we are seeking to increase availability of college-level Introduction to Engineering, or similar courses, and give students hands-on, *relevant* engineering experience as well as early college credits that transfer toward STEM degrees.[5] Other project-based engineering programs will be incorporated into classrooms throughout the middle and high school to introduce *relevant* applications of math and science through a continuum of opportunities.

We recommend the following components be in place to provide *relevance*:

- Use Arizona's new Pre-Engineering Standard to identify appropriate engineering-relevant courses and programs
- Offer early college Introduction to Engineering to high school seniors. There are thriving models in Arizona:
  - High school teachers prepare and deliver college-level Introduction to Engineering courses.
  - Offer Arizona University Introduction to Engineering courses to high school seniors at college campuses.

---

[2] AP and American Competitiveness in Science, Technology, Engineering, and Mathematics (STEM), CollegeBoard.

[3] Morgan, Rick, and John Klaric, "AP Students in College: An Analysis of Five-Year Academic Careers," New York: The College Board, 2007. Twenty-seven colleges and universities participated in this study, ranging from large public institutions such as UCLA, the University of Florida, the University of Texas-Austin, and the University of Washington, to liberal arts colleges such as Barnard College and Williams College, to Ivy League institutions such as Cornell and Dartmouth.

[4] Using AVID (meaning Advancement Via Individual Determination, which is a college-preparatory program designed to aid economically disadvantaged, and academically average first-generation students of both elementary and high schools into college) or the AZ Department of Education's (ADE's) vertical teacher training model for AP in rural areas

[5] This model has the potential for replication at all 114 Arizona high schools that currently offer AP Calculus. CollegeBoard AP Course Ledger, https://apcourseaudit.epiconline.org

  - Use post-secondary faculty to teach introduction to engineering courses at the high schools.
- Give high school students who take university level introduction to engineering courses college credit toward an engineering degree
- Introduce engineering-relevant programming in or out of school at every high school grade level.[6]
- Offer informal education opportunities at all levels to raise engineering relevance and awareness.

**Implementation:**
With the necessary resources, we will provide challenge grants that provide the necessary tools to complete the Engineering Pathway to a combination of rural, urban, and suburban high schools with diverse student bodies and that have one or more or even none of these pathway components.[7] We will establish at least one school or school district pilot initiatives with a complete engineering pathway and measure its effectiveness on preparing students for the future.

**STEMAz ENGINEERING PATHWAY**
**Increase by 400% the number of *well-prepared* students entering engineering college to 3500 students each year over a period of 3 years = $6.9 Million**

1. **Algebra 1 completion by the end of 8th Grade (Rigor).**
2. **Ensure participation and success in rigorous academic courses leading to AP Calculus.**
    a. **Increase PSAT/NMSQT testing at the sophomore level and use appropriate tools to identify students who may be successful in AP Calculus and/or other AP science courses pertinent to the engineer pathway.**
3. **Calculus readiness by 12th Grade (Rigor).**
    a. **Expand AP student base through early assessment and improved teacher support.**
    b. **Expand AP Calculus offerings, including AP Calculus in Spanish for minority students.**
    c. **Enhance teacher instruction of AP Calculus.**
    d. **Increase math proficiency that will increase opportunities for rigorous science.**
4. **Engineering awareness (K-6th), exploration (7-9th) and preparation (10-12th) (Relevance).**
    a. **Offer ongoing engineering-relevant programs in or out of school.**
    b. **Implement personalized learning plans around engineering and STEM.**
    c. **Offer early college "Intro to Engineering" course in class.**
5. **College preparedness (Articulation).**
    a. **Grant credits toward engineering degree.**
    b. **Create clear, seamless transitions between community college and university.**
6. **Increase awareness and resources around STEM offerings and pathways.**

[6] We are examining these and other engineering-relevant programs that are currently being implemented in some schools: Peoria Unified School District's Engineering Pathways, Project Lead the Way, FIRST Robotics, Future City Competition, etc.,
[7] We are talking with Arizona districts interested in expanding all or portions of these components.

# First Things First - Arizona

(b)(6)

**Purpose:** To increase the quality of, and access to, the early childhood development and health system that ensures a child entering school comes healthy and ready to succeed.

**Background:** In November 2006, Arizona voters passed Proposition 203, a citizen's initiative to enhance early childhood development and health services for children from birth through age five. The initiative included a dedicated funding source – an 80-cent tax increase on tobacco products – to ensure that the future of this long-term early childhood investment was not subject to the annual state budget process and so funds would not have to be diverted from other state programs.

Proposition 203 was designed to create an early childhood development and health system with the following principles: local representatives come together to plan and administer what works best in their respective community; is flexible enough to accommodate the unique demographics of our state; and, it must be transparent and accountable for outcomes.

With its passage, the Proposition created a new state-level board known as the Arizona Early Childhood Development & Health Board. The Board subsequently adopted the name "First Things First" to reflect the importance of early childhood experiences as the foundation for future success.

**Structure:** The statewide First Things First Board is made up of nine members appointed by the Governor and confirmed by the state Senate. The Board has three non-voting *ex officio* members: the Director of the Department of Economic Security, the Director of the Department of Health Services and the Superintendent of Public Instruction, or their chosen designees. The Board's central focus is set policies, identify system priorities, and approve funding to add to, build on or improve the programs, services and resources already available to support young children and their families.

First Things First's 31 Regional Partnership Councils represent the richly diverse communities across Arizona. Members of each Regional Council are appointed by the Board and have direct responsibility to: collect information on the strengths and desires of their community; prioritize the specific needs of children from birth through age five; plan how to address those needs; choose who to partner and collaborate with to ensure success for the children in their area; and, allocate the funding necessary to carry out their plan.

Each Regional Partnership Council is comprised of 11 local volunteers and includes: a parent of a child five years or under; a child care provider; an early education provider; a health representative; a school administrator; a member of the faith-based community; a business representative; and, someone involved in philanthropy. There are three at-large seats with no specific background required, although if a tribal nation is part of a region, a public official or employee of the tribe will fill one of the Council seats.

**Funding:** State law sets aside 81 cents of every dollar collected from the initiative's tobacco revenues to fund local programs and services for children from birth through age 5 as identified by the 31 FTF Regional Partnership Councils. An additional 9 cents of each dollar is set aside to fund statewide early childhood development and health initiatives, as determined by the statewide Board. The remaining 10 percent of funding is set aside to fund operations, including staff to support the Regional Councils and statewide Board.

The nation's on-going economic crisis and several marketing campaigns aimed at reducing smoking have affected First Things First revenues. In FY 2010, FTF expects to receive $131.2 million from tobacco taxes – that's 11% less than the amount received in FY2009 and 20.4% less than the amount received in FY 2008.

**Funding Priorities**

(b)(6)

In Fiscal Year 2010, the distribution of designated program funding is as follows:

(b)(6)

- **$27.9 million - Supported Parents and Families:** First Things First supports parents and families by providing families with a free Arizona Parent Kit when they take their newborn baby home from the hospital. Arizona Parent Kits contain a Parent Guide, 6 DVDs/videos on child development, health and nutrition, safety, child care, early literacy and discipline, and a picture book for families to read to their baby. First Things First also supports parents and families in their local communities by providing education and resources on topics such as child development, early literacy, prenatal health, and parenting skills. Families may voluntarily access this information through home visiting programs (or home- -based child development coaches), or through other organizations and venues in their area.

- **$53.8 million – Quality Early Learning Opportunities:** First Things First supports quality early learning opportunities by helping early care and education providers obtain one-on-one coaching and financial resources to improve the quality in their early learning setting. This voluntary program, called Quality First, will also offer families information on quality early learning opportunities so they can make good choices for their children. Additionally, First Things First funds education and training for child care health consultants, who are experts in child health and are resources to child care providers to assure that children in their care are safe and healthy. First Things First also supports working parents and quality early learning for children in their local communities by providing early care and education scholarships for families, and by increasing enrollment capacity in quality programs.

- **$12.4 million – Educated Teachers and Caregivers:** First Things First supports educated teachers and caregivers by providing scholarships for specialized college coursework leading to certification and degrees in early childhood development and education. First Things First also supports quality early learning in local communities by rewarding teachers who obtain their certification or degree and stay in their position for longer periods of time. Additionally, First Things First funds high-quality training for child care providers, and supports recruitment efforts to increase the number of quality caregivers.

- **$19.9 million – Healthy Children**: First Things First supports healthy children by providing physicians and families with information and resources about child development. First Things First also funds specialized education and training for mental health consultants who are experts in the social and emotional development of young children, and speech language therapists who help children who need some assistance with feeding and language development. First Things First also supports healthy children in their local communities by identifying health insurance options, connecting families to consistent health care, and promoting the screening of children for medical or developmental issues that affect their ability to grow or learn. Families are also provided with information and resources on nutrition, healthy weight, physical activity, and injury prevention.

- **$3.8 million – Public Education and Awareness: First** Things First supports public education and awareness by providing accessible information and resources on early childhood development and health and the benefits of this investment for every citizen of Arizona.

Copy of State Collaboration Agreement on Longitudinal Data Systems

# State Collaboration: Longitudinal Data Systems, Data Visualization, Research and Development

## Agreement for Execution - Effective Date: November 2, 2009

The terms on these two pages outline the initial agreement for a collaborative effort to co-locate state longitudinal growth data sets for the purpose of creating common data visualizations that build upon the Colorado Growth Model.

1. ***Agreement to Participate***. Each Chief State School Officer signs on to the collaborative research and development effort and agrees to the participation of the Chief's designee, chief information officer, and state assessment director or director of research and evaluation.

2. ***Common Longitudinal Growth Measure***. Each state agrees to calculate growth percentiles in the same manner using R (programming language) to allow common cross-state comparisons and data visualization development related to normative and criterion-referenced growth.

3. ***Common Display Platform***. Each state agrees to use the Colorado Growth Model Version 1.0 or 1.5 display layer as an initial common visualization platform.

4. ***State Branding***. Each state may rebrand the display layer (e.g., "The Indiana Growth Model") and will provide mutually agreed upon attribution to Colorado and the National Center for the Improvement of Educational Assessment.

5. ***Common Development Environment***. To the extent pra ticable, each state agrees to load its longitudinal data set into a common, standardized data torage environme .t with appropriate security. This storage environment may be a cloud-based, virtual environment. The purpose is to permi common cross-state enhancement of the data visualization tools by the application developers. The application developers for Versions 1.5 and 2.0 will be the Colorado Department of Education, the National Center for the Improvement of Educational Assessment, and Universal Mind.

6. ***Enhancements to the Display Layer.*** Each state agrees to collaborate in the development of a common Version 2.0 of the Growth Model Display Layer. Such modifications will include, but not be limited to, postsecondary metrics, multi-year visualization and animation, inclusion of teacher identifiers, multiple axis selection, enhanced mapping functionality. Each state may fund the development of different enhancements of the display layer. For example, a state may fund development of displays incorporating unique teacher identifiers and interim assessment data. Enhancement priorities will be established through consensus among the participating states.

7. ***Modifications Shared***. Each state agrees to collaborate in, and contribute know-how and financial resources to, the development of modifications and enhancements, which will be shared freely among each participating state, subject to the Creative Commons Attribution-Non Commercial-Share Alike 3.0 Public License (
   ).

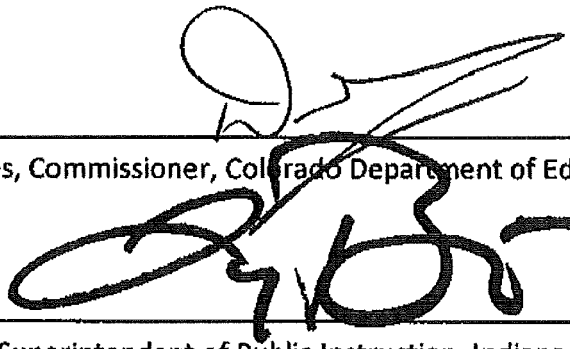
## State Collaboration: Longitudinal Data Systems, Data Visualization, Research and Development

8. ***Communications and Publicity***. Each state will collaborate on communications and publicity related to the collaborative effort, including an initial press release announcing the agreement.

9. ***Race to the Top and SLDS***. Pending each state's determination of the success and viability of the effort, each state agrees to include language in its Statewide Longitudinal Data Systems (SLDS) Grant and Race to the Top Proposal referencing the collaborative effort as part of the invitational priority related to enhancements of longitudinal data systems and include a budget item to support the collaborative.

10. ***Collaboration with CCSSO's LEARN Effort***. Pending each state's determination of the viability of the proposed CCSSO effort, each state agrees to associate this collaborative effort with the LEARN effort. In doing so, each state agrees to request that CCSSO make funding from the State Education Data Center available to maintain and enhance the initial collaboration, including funding for a common, standardized storage environment.

The undersigned parties agree to the terms outlined above.



Signature _____

Dwight D. Jones, Commissioner, Colorado Department of Education

Signature _____

Tony Bennett, Superintendent of Public Instruction, Indiana Department of Education

Signature

Tom Horne, Superintendent, Arizona Department of Education

## Executive Order 2009-10

## Executive Order Establishing "Governor's P-20 Coordinating Council of Arizona" (Amending and Superseding Executive Order 2009-07)

**Whereas**, Arizona's education system has strong governance structures in place with state and local boards, the P-20 Coordinating Council is necessary to provide a statewide forum for coordination and articulation; and

**Whereas**, the need to maximize the effectiveness of our educational systems at all levels of a student's experience has never been greater; and

**Whereas**, we recognize that the diverse marketplace of the Arizona educational landscape that includes private, charter, and home schools has enhanced the quality of all; and

**Whereas**, the American Recovery and Reinvestment Act (ARRA) of 2009 presents Arizona with unique opportunities for improvement that span our educational system; and;

**Whereas**, the ARRA funds are also subject to increased accountability and reporting responsibilities that will require all of the critical stakeholders in education to collaborate in new ways;

**NOW, THEREFORE**, I, Janice K Brewer, Governor of the State of Arizona, by virtue of the power vested in me by the Constitution and the laws of this State, do hereby establish the Governor's P-20 Coordinating Council of Arizona and order as follows:

- The Governor shall appoint all members unless otherwise indicated. Additional membership shall include but not be limited to the following:
- Superintendent of Public Instruction or designee
- The Executive Director of the Early Childhood Development and Health Board
- The Executive Director of the State Board of Education
- The Executive Director of the State Board of Charter Schools
- The Executive Director of the School Facilities Board
- One County School Superintendent
- One member of the Community College Council
- The Executive Director of the Arizona Board of Regents
- A representative of a Joint Technological Education District
- The Executive Director of the Commission for Postsecondary Education
- A tribal representative
- 6 business/citizen members

1) The P-20 Coordinating Council shall meet and make recommendations for achieving a more streamlined system of education while improving academic achievement as outlined by the Governor.

2) The P-20 Coordinating Council shall provide a forum and provide recommendations to the Governor on specific education reforms outlined in the American Recovery and Reinvestment Act (ARRA).

3) The Governor shall appoint a Chairperson.

4) Members shall serve at the pleasure of the Governor.

5) Members, unless otherwise indicated, may not send designees to represent them at the Council meetings. Members who miss more than three (3) consecutive Council meetings are subject to replacement at the sole discretion of the Governor.

6) The Chairperson may form an executive committee or other committees as necessary.

7) The Council shall meet to conduct its affairs at least four times each year.

8) The status of the Council shall be reviewed no later than December 31, 2010 to determine appropriate action for its continuance, modification or termination.

**IN WITNESS WHEREOF,** I have to set my hand and caused to be affixed the Great Seal of the State of Arizona.

Janice K. Brewer

**GOVERNOR**

**DONE** at the Capitol in Phoenix on the 3rd of December in the year Two Thousand and Nine and of the Independence of the United States of America the Two Hundred and Thirty-Fourth.

Ken Bennett

**SECRETARY OF STATE**

# 2020 VISION

The Arizona University System
Long-term Strategic Plan
2008-2020

Arizona Board of Regents

www.azregents.edu/2020.pdf

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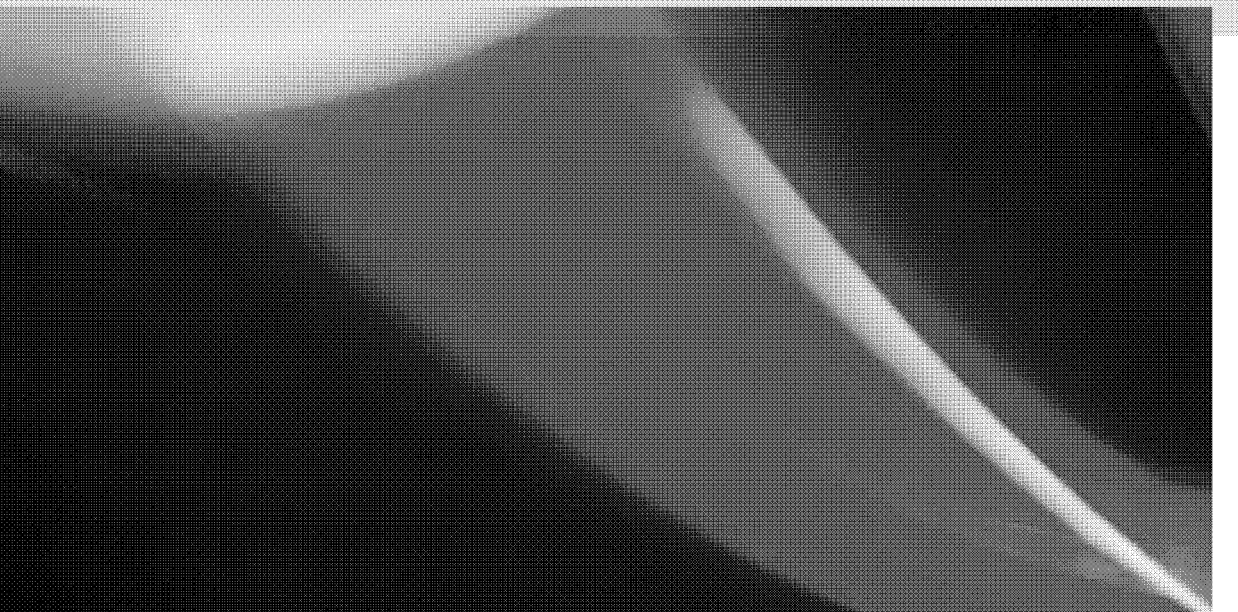
# ARIZONA'S UNIVERSITIES

"A top-performing state university system, nationally recognized for excellence in academic and research pursuits that support and stimulate a growing vibrant economy and a high quality of life for Arizonans."



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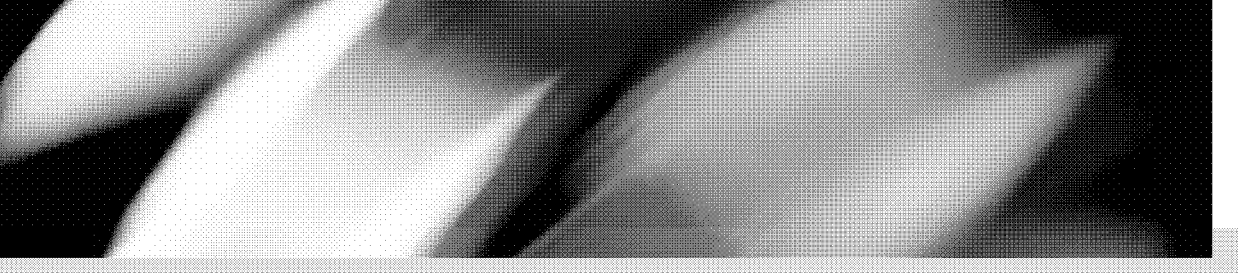
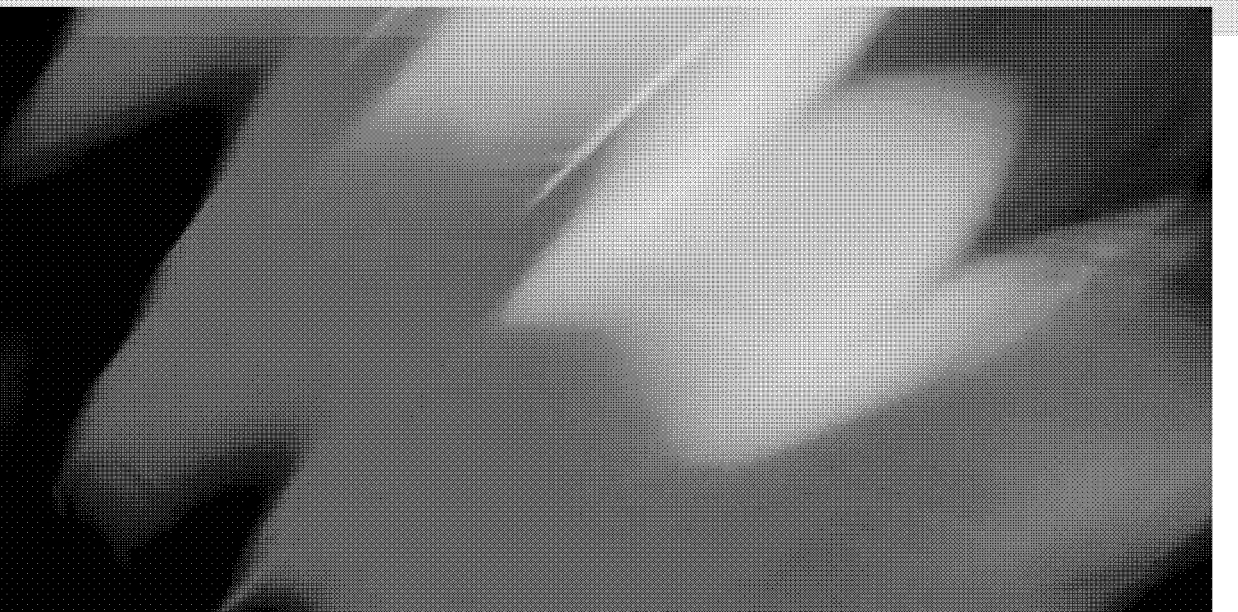


# INTRODUCTION TO THE STRATEGIC PLAN



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# INTRODUCTION TO THE PLAN

## The Mission

- To increase the educational attainment of Arizona citizens by producing enough high-quality university degrees for the state to be nationally competitive by the year 2020.
- To increase the prominence of the system's research enterprise so that it can contribute to the knowledge economy and improve the quality of life in Arizona.
- To provide the educated workforce needed to fill shortages and to stimulate demand for higher paying jobs in Arizona.

The Arizona Board of Regents presents in this 2020 Vision a framework for the Arizona University System to improve the economic strength of our state and quality of life for Arizonans over the next 12 years. This plan lays out a series of touchstones for this ambition organized around four key themes: Educational Excellence, Research Excellence, Community Engagement and Workforce Impact, and Productivity.

This plan builds on a foundation manifested in previous strategic planning efforts of the universities and the Board, including the establishment of a medical college in Phoenix, development of new health professions programs not offered by public institutions in the state, growth in the research enterprise, and increasingly intensive efforts to provide baccalaureate access to all regions of the state.

## Why the Plan is So Important

Educated Arizonans will enjoy greater economic prosperity

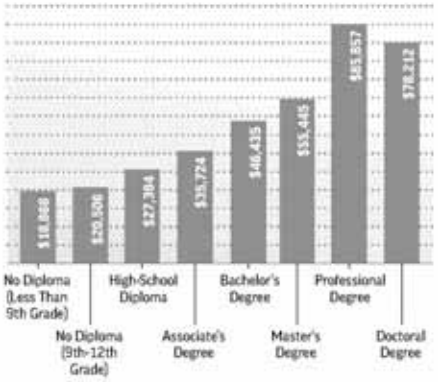
All Arizonans, not just those with a degree, will benefit as more become educated

Arizona will reap both economic and social rewards from university research

Moving Arizona's economy forward will demand higher paying, more economically diverse jobs that require a more highly educated workforce

Connecting the work and service of the universities to the communities will improve the quality of life in Arizona

### Median Earnings by Education: 2006




Source: U.S. Census Bureau, Current Population Survey, Educational Attainment in the U.S.: 2006

## MORE EDUCATION
# HIGHER LIFETIME EARNINGS

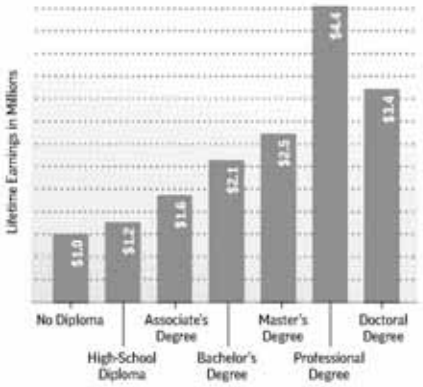
The more education a person attains, the higher that person's lifetime earnings. The financial impact over a person's working life is significant. Someone with a bachelor's degree can expect to earn, on average, over $1 million more than someone with only a high school education.[1]

Furthermore, this differential between the lifetime earnings of college graduates and high school graduates has increased over time. For example, full-time male workers between the ages of 35 and 44 experienced an increase in this differential from 38% between 1980-84 to 94% between 2000-2003.[2]

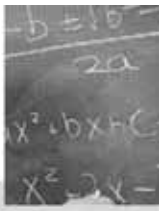
Additionally, people without a degree also benefit as others become more educated. A recent study found that a 1 percentage point increase in the proportion of a state's population with a bachelor's degree raises wages in all educational attainment groups, even those without a college degree. This benefit ranged from about 1.2% for workers with some college to almost 2% for those with less than a high school diploma.[3] [2]

2020 Vision calls for Arizona to add between 670,000 and 700,000 new bachelor's degree educated workers over the period between 2006 and 2020 which would increase the proportion of our adult population with a bachelor's degree between 3.7 and 4.1 percentage points.

### LIFETIME EARNINGS BY EDUCATION




[1] Census 2000
[2] Dennis Hoffman, March 2008, Quantitative examples of the financial and economic benefits of higher education
[3] Enrico Moretti, Journal of Econometrics, "Estimated Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Sectional Data," 2004



# RESEARCH ACTIVITY

## More Research Activity – Higher Economic Returns and Quality of Life

This plan focuses on increasing the number of college-educated citizens so we can reap the benefits just discussed; however, the universities also contribute a great benefit to Arizona through their research. University research expenditures flow down to private-sector activities, having significant effect on both the level of industrial research and development and the transfer of technology to the public. This in turn creates innovations and higher paying jobs in the same fields; the average real wage in urban areas with research universities is nearly $3,300 higher than the average wage in all urban areas, and the per capita income differential is about $2,800.

While most studies of the impact of research revolve around spending or money circulating in the economy–the creation of jobs, wages and sales–knowledge creation itself is important.[1] Significant knowledge is created by university research and can be measured by inventions, patents, and start-up companies, all of which fuel the private sector and translate into jobs–high paying, highly skilled jobs.

The full impact of research is hard to measure, but several studies suggest two impacts that contribute to the multiplier effect of research spending:

- Direct impact of university expenditure of research funds; and
- Indirect impact on private sector companies that license university technology and start-up and spinoff companies, including general corporate research and development operations.

These studies suggest that the university research multiplier could be as high as 7 or 8. Therefore, a $100 million research grant could have a total impact in Arizona of about $750 million.[2]

- More college-educated people produce benefits, but to achieve optimal impact it must be coupled with economic development strategies stimulating more higher quality jobs
- Financial benefits of research are important, but benefits to the quality of life include the infusion of well-trained graduates into the economy and services for our communities

[1] Council for Community and Economic Research Cost of Living Index
[2] Hoffman, 2008

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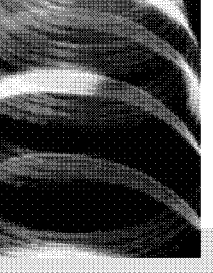

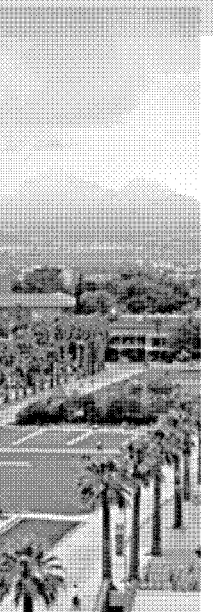

# PROFILE OF
# ARIZONA IN 2020

What will Arizona look like in 2020 if the plan is successful? The following chart illustrates specific outcomes of the plan ranging from the educational attainment rates to degree production and performance targets necessary to meet these objectives.

The outcomes and assumptions are displayed in a range. There are three standards referred to as Bronze, Silver, and Gold. Achieving any of the standards will result in increases in performance, but the magnitude of change is differentiated within a range. The differentiation reflects the extent to which success will depend on the performance of other sectors, not just the university sector.

**Profile of Arizona Now and Arizona in 2020**

| **Arizona Now** | **Arizona in 2020** | | |
|---|---|---|---|
| | **Bronze** Target | **Silver** Target | **Gold** Target |
| 25% Of Adults Have Bachelor's Degree 1 Million Adults | 26% | 29% | 30% |
| 19,100 Bachelor's Degrees Produced Annually In Arizona University System | 20,200 | 28,200 | 36,000 |
| 78% Freshman Retention Rate | 80% | 84% | 86% |
| 56% 6-Yr Graduation Rate | 57% | 59% | 65% |
| 45% College Going Rate (from K-12) | 50% | 52% | 53% |
| 8,400 Community College Transfers | 8,900 | 16,000 | 24,000 |
| 5,700 Community College Transfers Who Go On To Earn A Bachelor's Degree | 5,800 | 10,500 | 15,700 |
| 99,700 Undergraduate Enrollment | 105,400 | 128,300 | 155,800 |
| $783 Million Total Research Expenditures | $822 Million | $1.7 Billion | $1.8 Billion |

Achieving either the Silver or Gold standard will depend heavily on how well the K-12, Community College, and University sectors are able to attract more students through the pipeline and for more of them to be prepared to succeed.

In some ways, this plan extends beyond the ambition of our own university system, since a large part of the plan revolves around increasing the educational attainment rate of the entire state. Achieving either the Silver or Gold standard will depend heavily on how well the K-12, Community College, and University sectors are able to attract more students through the pipeline and for more of them to be prepared to succeed. In other words, the university system alone lacks the ability to reach either the Silver or Gold standard. These levels of increase in the system can be achieved only if significant change occurs throughout the entire educational pipeline. Universities also have a role in making sure the pipeline is strengthened and continue to share in this responsibility through collaborative programs and partnerships with both sectors.

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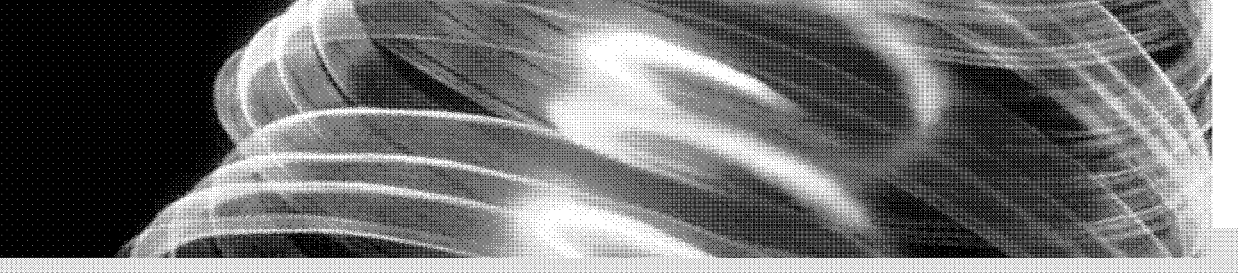
PROFILE OF
# ARIZONA IN 2020

Currently, just over 25% of our adult population, or just over 1 million Arizonans, have at least a bachelor's degree. This plan outlines a range of ambitious targets for improving this statistic so Arizona can enjoy all the rewards associated with an educated population.

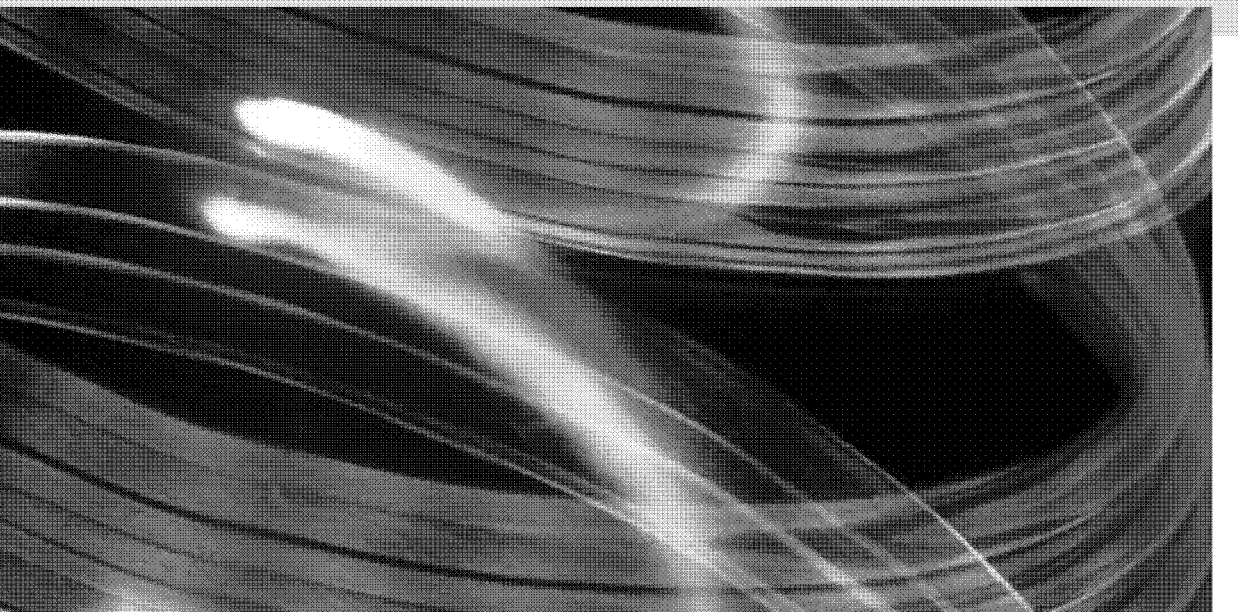
### THE CURRENT ECONOMIC CRISIS WILL IMPACT THIS PLAN

The current economic crisis has punished Arizona more deeply than any other state in the nation. Achieving the goals and objectives of this plan will depend on the ability of the system to minimize the impact of drastic reductions in state appropriations, not only to the higher education sector, but also to our K-12 and community college pipeline. In the worst-case scenario, achieving the gold targets could be put out of reach and the Silver targets very challenging.

The framework and the priorities of the long-term plan will drive strategies for managing the impact over the short term while the economy is recovering. In addition, the longer-term horizon of the plan allows for thoughtful planning in spite of short-term economic setbacks.



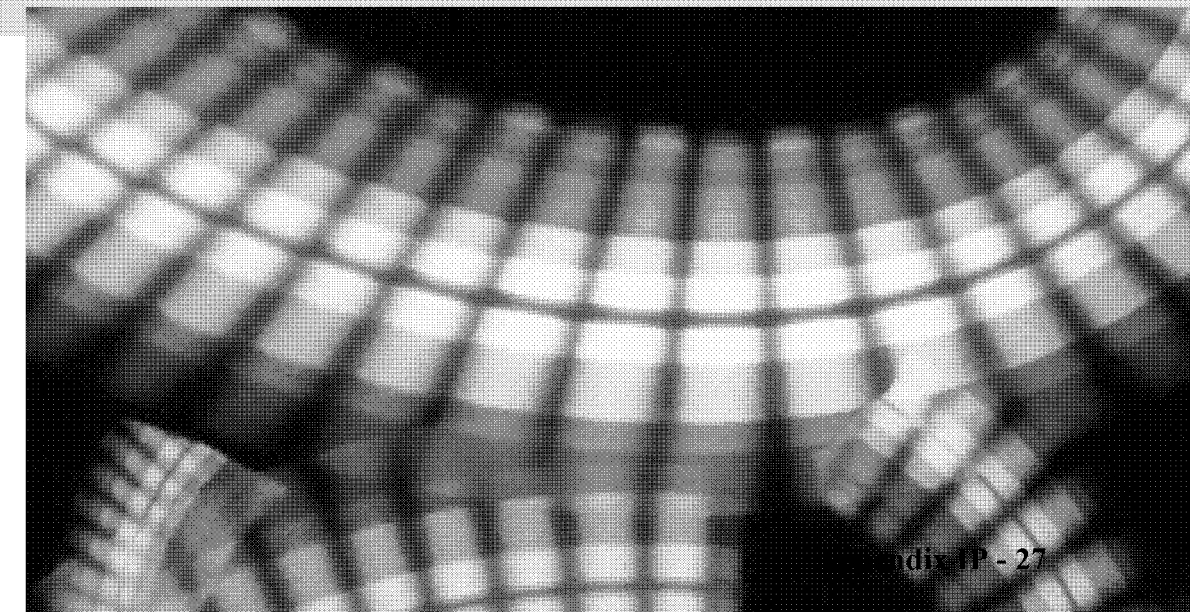
# GOALS AND METRICS OF THE PLAN

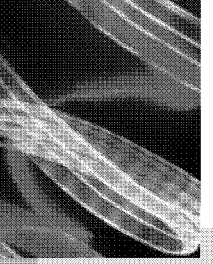


# 01 EDUCATIONAL EXCELLENCE

## GOAL ONE

"To be nationally competitive in the percentage of Arizona's citizens with a high-quality bachelor's degree by providing affordable access through a well-coordinated and aligned system."





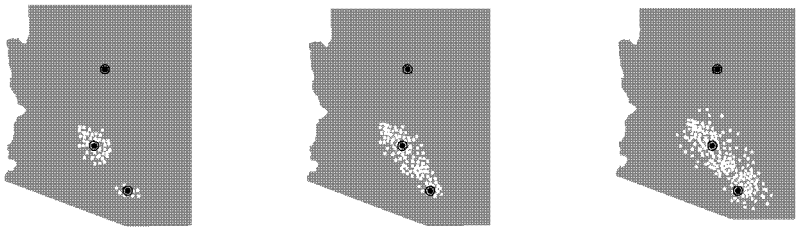
# 01 GOAL ONE BACKGROUND

In 2006, Arizona was the fastest-growing state in the nation and is regularly among the top growth states. As can be seen in the figure below, tremendous growth (shown in white) is predicted between 2000 and 2020, with even more dramatic growth between 2020 and 2040.

| Key Indicators of Progress |
|---|
| Number of bachelor's degrees awarded |
| Number of Master's degrees awarded |
| Number of Arizona community college students who transfer to a university |
| Number of Arizona community college transfer students awarded bachelor's degrees |
| Educational quality as reported in National Survey of Student Engagement (NSSE) |
| Cost of attendance as a percentage of Arizona median family income |

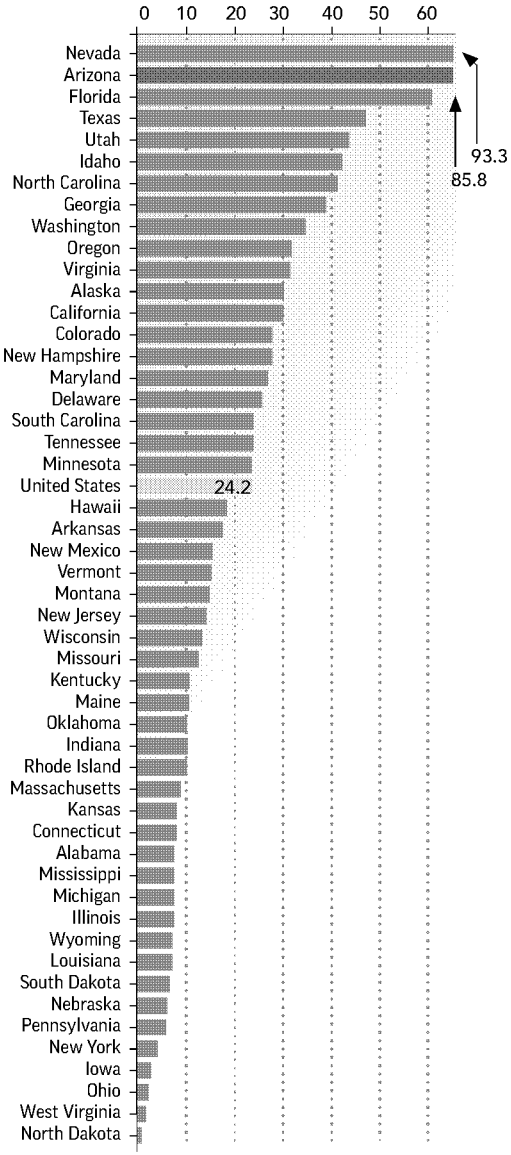
Only Nevada is expected to grow faster than Arizona between now and 2025. The national average expected growth rate is about 24%, with Arizona at just under 86%.

## Population Growth




Source: ASU Decision Theater

## Projected Percent Change in Total Population, 2000 – 2025




Source: U.S. Census Bureau

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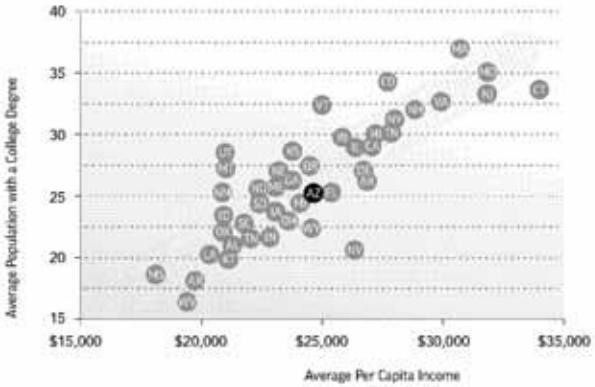
# AN EDUCATED POPULATION

Currently, just over 1 million Arizonans–barely 25% of our population, have at least a bachelor's degree. This plan outlines a range of ambitious targets for improving this statistic so that Arizona can enjoy all the rewards associated with an educated population.

## College Degrees vs. Per Capita Income



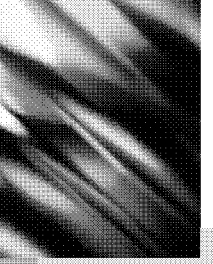

Numerous studies and data bear out a strong correlation between educational level and personal income, productivity, civic participation, life expectancy, employment status and community strength. The quickest way to increase the per capita income is to increase the percentage of Arizonans with a bachelor's degree, which is at the heart of this plan.

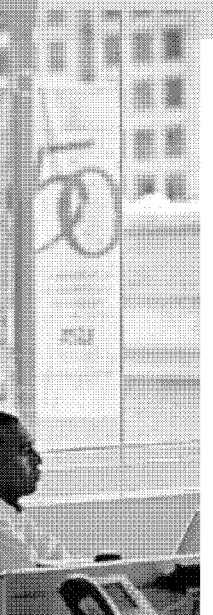
## Benefits of Higher Education

| | |
|---|---|
| Public economic benefits | Increased tax revenues, greater productivity, increased consumption, increased workforce flexibility, decreased reliance on government financial support |
| Individual economic benefits | Higher salaries and benefits, higher employment levels, higher savings levels, improved working conditions, personal/professional mobility |
| Public social benefits | Reduced crime rates, increased charitable giving and community service, increased quality of civic life, social cohesion, appreciation of diversity, improved ability to adapt and use technology |
| Individual social benefits | Improved health and life expectancy, improved quality of life for children, better consumer decision making, increased personal status, more hobbies and leisure activities |

"States with more college graduates have stronger economies... lower unemployment and poverty rates, higher ranking on measures of economic strength."

- The Information Technology and Innovation Foundation





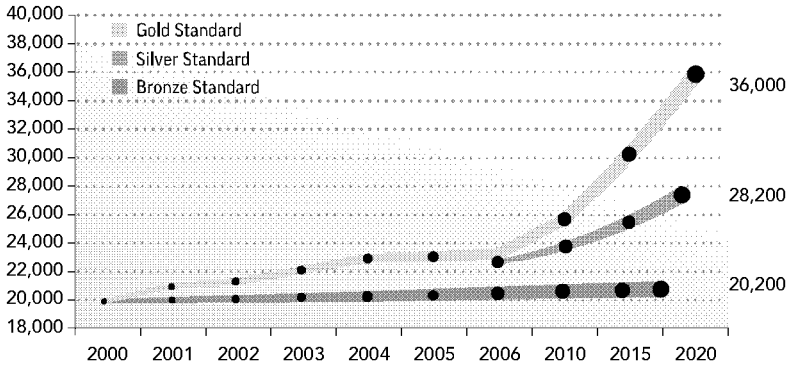
# ACHIEVING THE GOLD STANDARD

The 2020 Vision calls for Arizona to be nationally competitive in educational attainment by 2020. The plan defines this ambition within the following range:

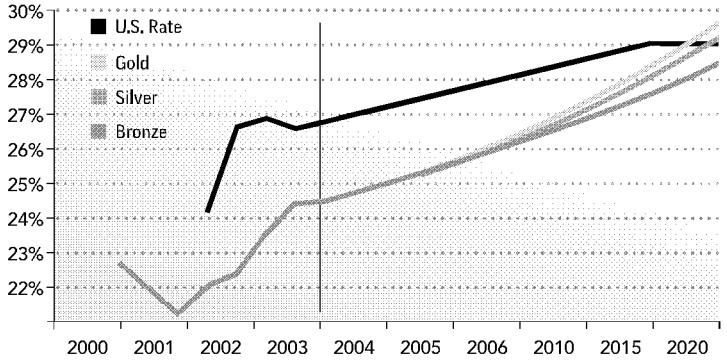
- **Bronze Standard** – the increase in educational attainment based mainly on changes in population, assuming some increases in performance rates, such as graduation and retention rates. It will be more difficult to maintain current performance levels as demographic changes require greater resources to serve a larger concentration of students who historically have lower college preparation and college-going rates.
- **Silver Standard** – the increase in educational attainment assuming modest improvements in performance from other educational sectors in the pipeline and ambitious improvements in performance from the Arizona University System necessary to achieve the national average by 2020.
- **Gold Standard** – the increase in educational attainment assuming very significant improvements in all sectors of the educational pipeline, including early education, K-12, community colleges, private colleges and universities, and our three public universities. This target represents what will be required of all sectors in order to achieve Governor Napolitano's call in her January 2008 State of the State address to double the number of bachelor's degrees produced in the Arizona University System.

Achieving the Gold Standard – doubling the number of bachelor's degrees produced – would take Arizona above the national average in educational attainment by 2020.

## Bachelor Degree Targets




## Moving Arizona to National Average



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# ACHIEVING THE GOLD STANDARD 01

Demographers predict that in 2020, about 1 of 3 Americans will have a bachelor's degree. In 2000, fewer than 1 in 4 Arizonans had a bachelor's degree. If past trends continue, Arizona will fall short of the national average by about 220,000 college graduates.

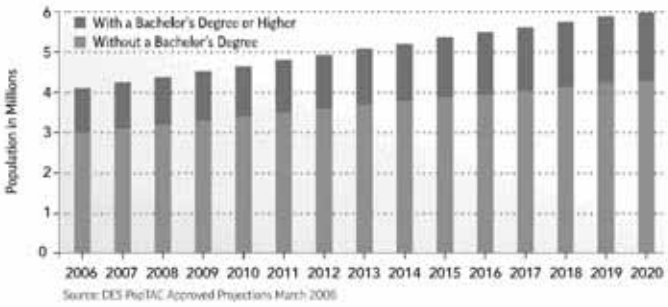
### What will it take for Arizona to achieve or exceed educational parity with the rest of the nation?

- Decision Theater models quantify the challenge through a dynamic decision support tool
- Assumptions concerning population projections crucial to the modeling was based on the most sophisticated projections available from the U.S. Census Bureau[1]
- Final analyses show that as much as 28.7% of the adult population in the U.S. will have a bachelor's degree by 2020–a full 3.7% higher than Arizona's current 25%
- Arizona must add more than 670,000 bachelor's degree holders to reach national parity

### So what will this mean for Arizona?

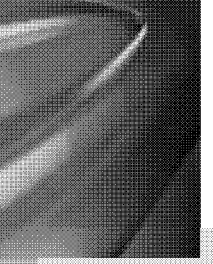
- Gold standard moves Arizona above the expected national average to 30% of adults with a bachelor's degree
- Silver standard would achieve national parity in adults with a bachelor's degree at 28.5%
- 2020 university graduates are already in the 5th grade – thus success will require immediate and concerted efforts from all sectors
- Rapid improvements and immediate investments to increase performance in K-12 and connections between community colleges and universities will be critical to achieving these goals

Moving Arizona Educational Attainment to National Average
Population 25 Years and Older



Source: DES PopTAC Approved Projections March 2006

[1] Day, Jennifer Cheesman and Bauman, Kurt J. Have we reached the top? Educational Attainment Projections of the U.S. Population Working Paper Series No. 43, Population Division, U.S. Census Bureau: Washington D.C. May 2000



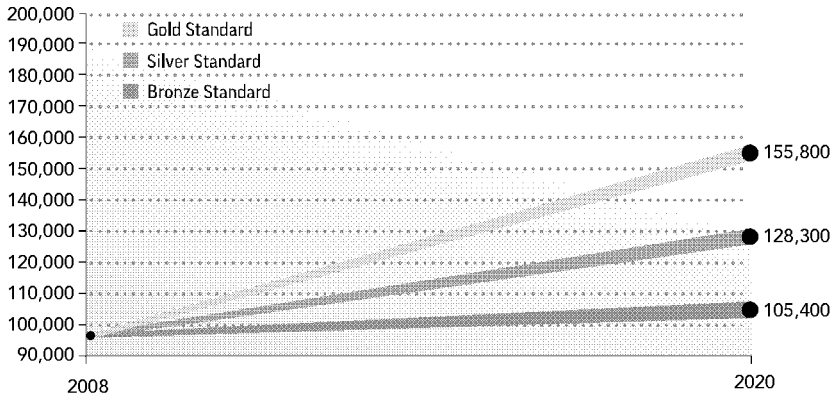
# 01 INCREASED CAPACITY

While degree production is the standard measure of the goals, achieving the degrees requires a substantial increase in enrollment capacity in the system. The chart below illustrates the level of capacity change that must be addressed by 2020 in order to achieve the degree targets. In 2008 the undergraduate enrollment in the Arizona University System was just under 100,000 students (about 130,000 in total enrollment). The Gold standard would require almost a 60% increase to just over 156,000. The Silver standard would require a 47% increase to about 128,000 undergraduates.

- Achieving the Gold standard would add about the same number of students in 12 years than currently attend Arizona State University (one of the largest universities in the nation)
- Achieving the Silver standard would add more students in 12 years than currently attend Northern Arizona University

Achieving these goals will require dramatic new investments to support larger numbers of students as well as changes in system design that may include the creation of new educational platforms and campuses, the expansion of on-line and distance education programs, more 2+2 programs, and other collaborative partnerships. In addition, the system would have to deliver academic programs by every means possible, to every corner of the state, and to students of all ages – this without reducing the value of an Arizona university diploma.

## Undergraduate Enrollment Targets

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# ALIGNMENT OF THE EDUCATIONAL PIPELINE 01

Achieving the 2020 Vision is attainable only to the extent we are successful in motivating more of our K-12 students to plan for, prepare for, and succeed in earning a bachelor's degree.

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Arizona ranks low in the percentage of students in our K-12 system that proceed on to a bachelor's degree. The U.S. average is just over 38% compared to about 30% in Arizona.

If Arizona is to achieve the aggressive degree production outlined in the 2020 Vision, more work will be needed to shore up this pipeline and encourage more of our K-12 students to plan, prepare, and succeed in obtaining a bachelor's degree. The chart below illustrates the pipeline issues by showing how many students out of every 100 students in the 9th grade make it through the system and how Arizona compares to the United States and to best-performing states.

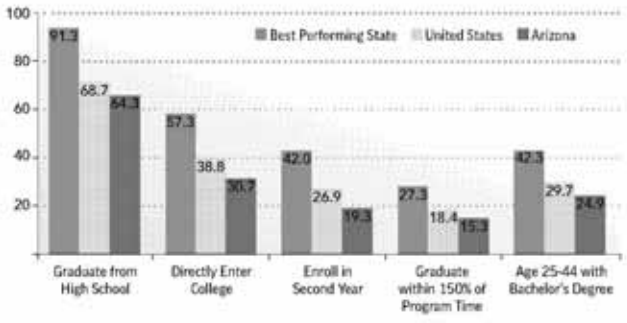
### STRENGTHENING THE PIPELINE WILL REQUIRE:

- Successful collaborative partnerships between and among all educational sectors with clearly articulated and aligned expectations
- Innovative methods to engage first-generation, rural, and non-traditional students in higher education
- Smooth transitions from one sector to the next
- Support for Governor's and P-20 policy changes aimed at ensuring that more students are prepared to succeed in college and careers

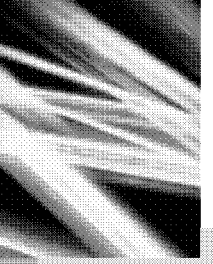
### INITIATIVES INCLUDE:

- Increasing high school graduation requirements
- Expanding early college options
- Improving rigor of academic standards
- Improving assessments
- Creating multiple pathways to earn a high school diploma

### EDUCATIONAL PERFORMANCE



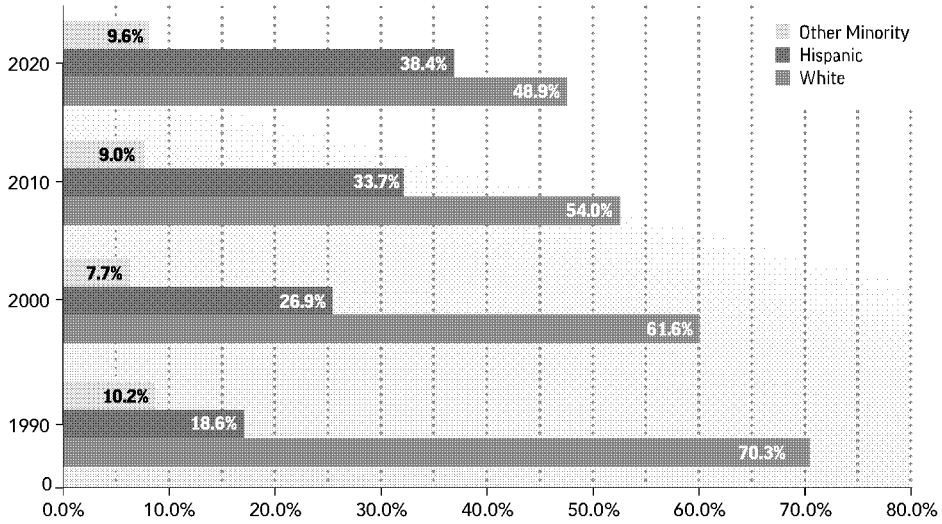

Source: Ben Mortenson



# 01 CLOSING THE GAPS

The 2020 Vision assumes that the opportunity to earn a bachelor's degree will be available to all Arizonans. In fact, the plan will not succeed without addressing the participation and achievement gaps of Arizona, especially those segments that have participated in college at lower rates. Of particular interest is the forecasted growth in the Hispanic population. The chart below details the shifts in demographics expected over the next 12 years. In 1990 over 70% of our population was white, which is expected to decline to less than 50% by 2020. By contrast, the Hispanic population is projected to move from less than 20% in 1990 to just under 40% by the year 2020.

## POPULATION DISTRIBUTION 1990-2020 BY RACE AND ETHNICITY




Evidence suggests that in order to achieve the 2020 Vision, we must address several college participation and success gaps in our system:

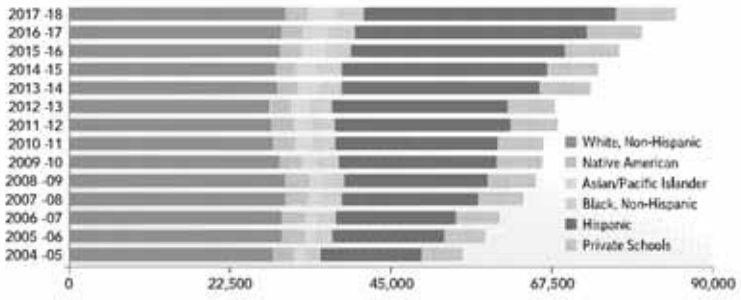
(1) Racial and ethnic gaps
(2) Low income families
(3) Younger generation in Arizona
(4) Students from rural areas
(5) Non-traditional students

(b)(6)

# CLOSING THE GAPS 01

Additionally, the chart below shows the pipeline of high school students necessary to achieve the degree production needed for the goals over the next 12 years to 2020. The university system must reach out to these underserved populations with resources and strategies so that more can be successful. Sufficient support services will be needed as well, to ensure smooth transitions from year to year. Without specific and effective strategies to close the gaps, parity with the national average by 2020 will be unattainable.

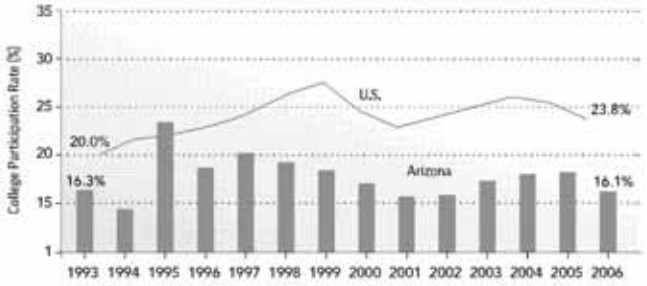
AVERAGE HIGH SCHOOL GRADUATES BY RACE AND ETHNICITY




College participation among Arizona's low income families is also well below the national average and likely to get even worse without policy intervention. In 2006 only 16% of children from low income families went to college compared to over 23% nationally.

# 01 COLLEGE PARTICIPATION IN LOW INCOME FAMILIES

## Arizona College Participation Rates for Students from Low income Families FY1993 to FY2006




Source: Arizona Postsecondary Commission - November 8, 2007 - Phoenix, AZ
www.postsecondary.org

Part of the 2020 Vision involves ensuring that financial barriers do not prevent students from low income families from participating in college. The chart above shows a significant gap between Arizona and the national average on participation in college for low income students. A key to success will be our ability to align the system's policies to balance the need for additional resources against the desire to maintain affordability for all students. This policy balance will incorporate tuition policy, state funding policies, and financial aid policies.

Three additional points of emphasis include the younger generation in Arizona, students in rural areas, and adult non-traditional students. Universities must recruit enrollments beyond traditional first time freshmen in order to meet the goals. Strategies to engage a diverse group of students will be important, especially since the predicted number of K-12 students in the pipeline over the next 12 years, even with increases in college going rates, will be insufficient to meet the enrollment and degree demands of the Silver and Gold standards.

The chart to the right illustrates how Arizona ranks in the proportionate difference between our college-educated younger and older generations. Furthermore, data suggest this gap may be widening.

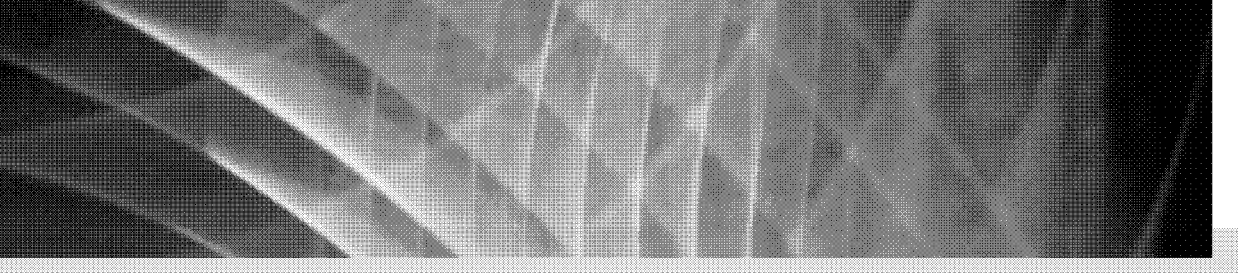
## Percentage Difference Between Younger (Age 25-34) and Older (45-54) Populations with College Degrees, Associate and Higher, 2005


Source: U.S. Census Bureau, 2005 ACS

# STRATEGIES FOR EXCELLENCE 01

## MACRO STRATEGIES FOR EDUCATIONAL EXCELLENCE:

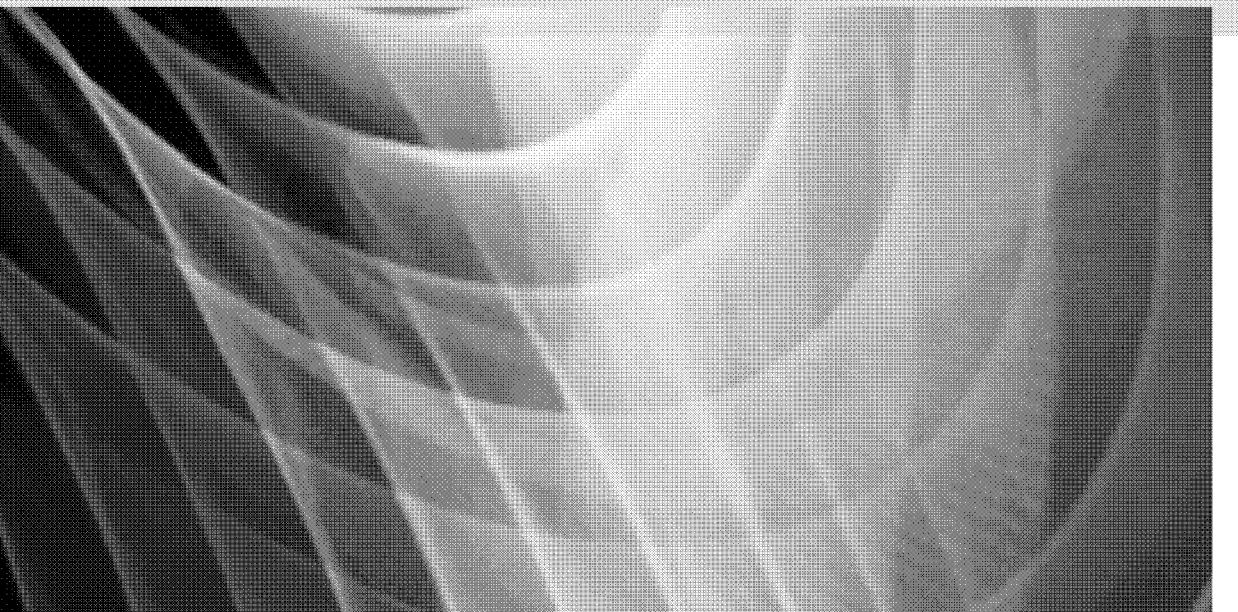
1. **Align the educational pipeline**
   a. Strengthen existing and support new partnerships with all educational sectors to facilitate and improve the pipeline to university education (enrollment initiatives, curricula alignment, teacher education improvements, etc.)
   b. Increase transfers and degree completions from the community colleges to the universities
2. **Close opportunity and success gaps**
   a. Increase opportunities for students from low income families and from rural areas with low educational attainment rates
   b. Increase the number of younger adults in the population with a bachelor's degree
   c. Close the opportunity and success gaps for underserved ethnic and racial groups of students
   d. Provide student support such as mentoring, tutoring, and advising
3. **Plan for and incentivize higher degree production**
   a. Provide incentives and rewards to increase the degree production and to serve additional students
   b. Expand the capacity to serve additional students (examine potential for creative solutions–joint admissions (hybrid) models, distance learning, technology, new branch campuses, 2+2 programs, and other collaborative partnerships, etc.)
4. **Minimize financial barriers for low income families**
   a. Improve tuition policies to ensure affordability for low income families, to balance state and student share of the costs, to increase predictability, and to ensure resources are available to achieve the plan



# RESEARCH EXCELLENCE 02

## GOAL TWO

"To increase the research capabilities and performance of the Arizona University System to a level of competitive prominence with peer rankings of top American research universities."



# BACKGROUND 02

"Greener" energy sources, crops that thrive in the desert, cheaper and faster communications devices, ways to secure international borders but still promote trade, personalized medicine, protecting our country and the world from pandemic disease--advances like these are the products of intense research and development and are needed now more than ever.

Much of the innovation that improves people's lives and drives societal change springs from research performed in universities, by researchers and scholars educated and trained in universities. Universities around the world serve as incubators for innovative activity and educate a populace that is creative and capable.

| KEY INDICATORS OF PROGRESS |
| --- |
| Total research expenditures |
| Number of doctoral degrees awarded |
| Number of invention disclosures transacted |

(b)(6)

"Twenty-nine of the top thirty high-technology metropolitan areas in the U.S. are home to, or adjacent to, major research universities. The presence, or absence, of high-technology enterprises explains most of the difference in economic growth across U.S. metropolitan areas."

- MILKEN INSTITUTE; AMERICA'S HIGH-TECH ECONOMY, JULY 13, 1999.

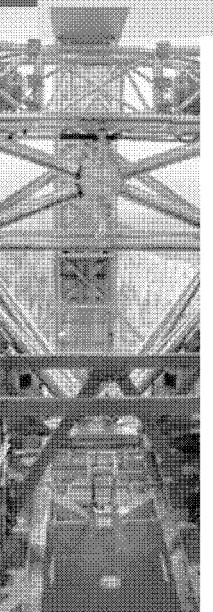
# 02 THE INTERNATIONAL MARKETPLACE

## U.S. Losing Position in International Market

U.S. universities have been international leaders in generating research and development and have helped to fuel the strongest economy, the greatest affluence, and among the most well-educated citizenry known.

Some fear that the U.S. may soon lose its position as the world's leader in science and technology. This trend is coupled, almost certainly causally, with a declining level of basic science literacy in the U. S.

The university enterprise, and research-enriched education it provides, constitute the essential foundation of a knowledge-based society. Yet today the maintenance of that foundation is seriously threatened.



"...the age of the global knowledge economy is firmly taking root... Of particular importance in today's super-charged technology world is the convergence of technology and the value it brings into new markets and technology advances... This new emphasis on technology convergence is most pronounced in academic research where scientific discoveries and advances are often found at the intersection of key fields..."

- Advancing Arizona's Innovation Economy, Arizona Economic Resource Organization, 2008.

(b)(6)

# RESEARCH FUNDING 02

## The Funding Challenge:

- In recent years federal support for university research has not kept pace with past growth – funding levels are basically flat
- Non-defense related support has decreased since 2004
- Private sector investment in research is high but not focused on the basic research that ultimately must form the basis for applications

## Return on Investment

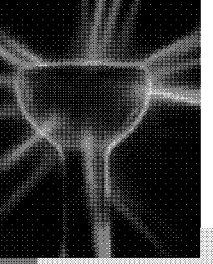
All three of Arizona's public universities can demonstrate through economic impact studies that the state gains a solid return on investment for funds that go into the research enterprises. Even though the Arizona Board of Regents' Technology and Research Initiative Fund (TRIF) is a small portion of the entire research enterprise, it provides a strong illustration of this point. TRIF includes a myriad of examples of strong returns on investments from the various programs at the three universities. In 2008 The University of Arizona's investments from TRIF yielded about $5.70 for every $1.00 invested. In the same year, Arizona State University will generate almost $4.00 in grant and contract expenditures for every dollar invested in research from returned overhead and TRIF. Northern Arizona University is generating $3.50 of competitive funding for every TRIF dollar invested.

## The Transfer of New Knowledge

The transfer of new knowledge is crucial to the quality of life in Arizona and the economy. Better solutions to difficult problems facing society make a profound and measurable impact on the well-being of Arizonans.

### Benefits of New Knowledge

| |
|---|
| More licenses, patents, spin-offs and venture capital investment in Arizona |
| Increased national and international recognition – improves competitiveness in the international marketplace |
| Better solutions to difficult problems facing society – makes a profound and measurable impact |
| Better researchers = better educators – brings innovation and discovery to the classroom, which will better prepare Arizona's workforce |



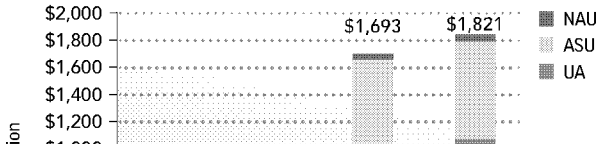
# 02 2020 TARGET FOR RESEARCH EXPENDITURES

The 2020 target for building the research enterprise is measured by total research expenditures in the three universities. Research expenditures, as defined by the National Science Foundation as a basis for national rankings of universities, are a measure of the total R&D activity of an institution, including that funded by extramural grants and contracts and that performed with institutional support.

The goals for the Arizona University System were generated by the Vice Presidents for Research at the three universities. Rather than a simple one-size-fits-all analysis, each university made estimates based on assumptions and goals consistent with its particular mission; and the goals for Gold, Silver, and Bronze levels of growth reflect the differences in each unique mission. While research is important at all three universities, the focus of research activities and the overall magnitude varies.

Collectively, the System's research expenditure levels were about $780 million in 2007. The Bronze level of research expenditures are predicted to reach $822 billion in 2020. The Gold scenario extends this to $1.8 billion in 2020.

## Projected FY 2020 Research Expenditures




| | FY 2007 ACTUAL | FY 2020 BRONZE | FY 2020 SILVER | FY 2020 GOLD |
|---|---|---|---|---|
| NAU | $27 | $28 | $40 | $50 |
| ASU | $224 | $236 | $655 | $730 |
| UA | $532 | $558 | $998 | $1,041 |

Actual annual research expenditures will be those reported to NSF

## Doctoral Degrees Produced

Increased doctoral degree production is essential for the creation and transfer of new knowledge. Doctoral students are a critical part of the university research workforce. If we can keep them in Arizona, the new Ph.Ds we produce will drive the research engine of tomorrow and help create new high wage jobs.

## Translating Research to Serve Arizona

Research leads to innovation that has the capacity to improve the human condition. Arizona's public universities do research that is responsive to community needs and push their discoveries and inventions into the community for practical and beneficial use in many ways. Formal technology transfer through the licensing of intellectual property is a key facet of a broader portfolio of knowledge transfer. Licensing provides a mechanism for entrepreneurial commercialization of products and generates revenues that can be reinvested in the universities' research enterprises. New knowledge also is transferred in many ways that are harder to measure but have critical impact. These mechanisms of dispersion include public lectures and workshops, county extension services, telemedicine, continuing education for working professionals, and diverse forms of public service.

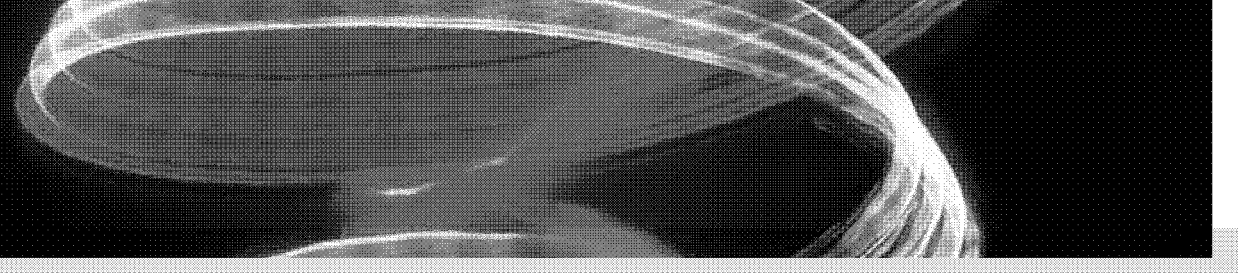
## MACRO STRATEGIES FOR ACHIEVING RESEARCH EXCELLENCE

1. **Increase access to new and existing sources of federal and state research support:**
   a. Strengthen information-gathering capacity at all three universities for the early identification of federal and state research opportunities and promote collaboration among the three universities
   b. Develop support for a powerful research infrastructure distributed across the universities as appropriate to their missions and opportunities to advance the larger research agenda; coordinate activities in areas most likely to provide future economic benefit to Arizona
   c. Create a long-term and sustainable research funding plan for Arizona that supports research and innovation and particularly the research agenda in areas key for Arizona
2. **Recruit, develop, and retain top research faculty and faculty teams**
   a. Increase support for top-quality faculty who can compete and succeed in the peer-reviewed granting environment
   b. Increase support for Master's and Ph.D.-level education, both as a faculty recruiting tool and as a tool for developing the workforce needed for a knowledge-based economy; provide incentives for Post-doctoral students and research scientists to locate in Arizona
3. **Promote the transfer of new knowledge into the Arizona and global communities**
   a. Support and provide incentives to facilitate technology transfer and commercialization of intellectual property, and to encourage entrepreneurship activities from research faculty
   b. Establish strong clinical and corporate partnerships both inside and outside Arizona to improve the translation of research into practice

# STRATEGIES FOR EXCELLENCE 02

"To compete in the global economy, the US depends on its ability to conduct basic and applied research and then translate that research into technological innovations. Economic growth results when the commercialization of technology takes place."

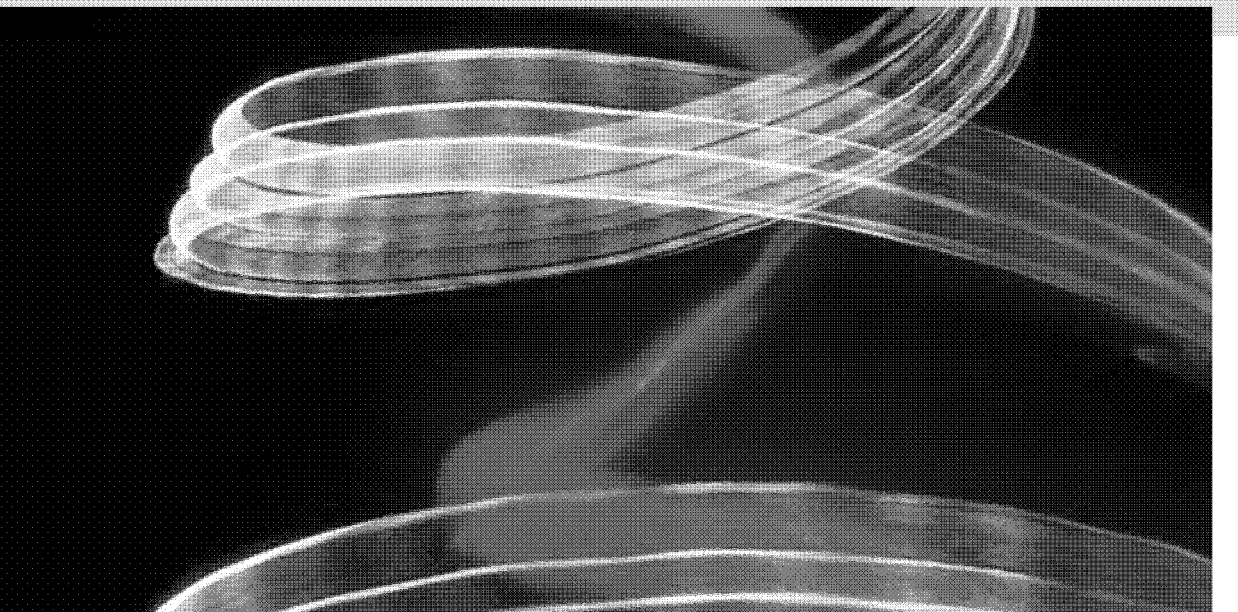
- NATIONAL GOVERNORS ASSOCIATION, 2007

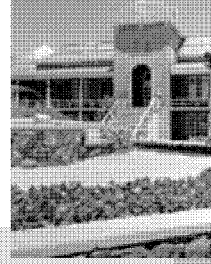


# WORKFORCE & COMMUNITY 03

## GOAL THREE

"To utilize research, economic development, community engagement, and service contributions of the universities to create and disseminate knowledge to strengthen Arizona's economy and improve Arizona's quality of life."





GOAL THREE

# BACKGROUND 03

## Community Engagement and the Arizona Economy

America's public university system is founded on three primary missions: teaching, research, and service or community engagement. Our communities benefit not only through formal technology transfer and infusion of well-trained graduates into our economy, but also through programs such as forest health and environmental sustainability efforts, mentoring and professional development of teachers, community planning or development efforts, Cooperative Extension programs and telemedicine.

Our universities also host extensive public access programs, whether through art or research museums or direct-participation outreach programs. Moreover, the universities are directly impacting the entire educational system in Arizona, providing extensive support to the state's K-12 system through training, curriculum development and the development of new teaching methodologies and technologies.

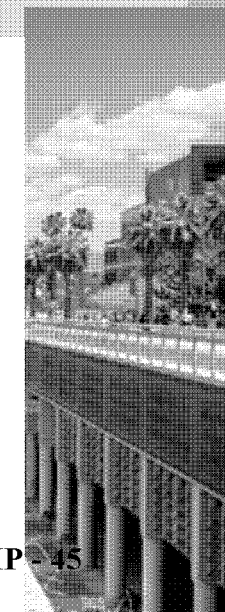
A recent report by the National Association of State University Land Grant Colleges (NASULGC)[1] noted that engagement is a fundamental and essential characteristic of public higher education equal with learning and discovery. The authors noted that while universities use learning and discovery to educate students and extend knowledge to communities, they must take this effort further by "fostering interaction with communities to assure that students and university-based knowledge provide more direct benefits to society."

| Key Indicators of Progress |
| --- |
| Impact of community engagement activities |
| Total income and expenditures related to service and engagement activities |
| Number of degrees awarded in high demand fields |

[1] NASULGC position paper dated Oct 26, 2007, "NASULGC on Engagement"

"...institutions do not engage in occasional community service, but rather make a sustained commitment to the economic, social, and cultural vitality of communities and regions through collaborative leadership on key issues."

- AASCU on Regional Stewardship, 2005



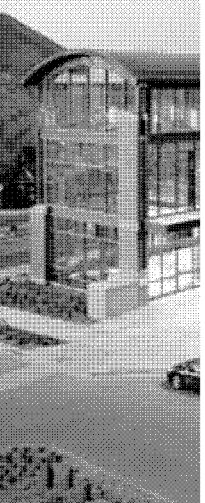
# 03 COMMUNITY ENGAGEMENT

Sharing knowledge through service mechanisms drives an economy through direct and early adoption of that knowledge. Further, community engagement often most directly expresses the fundamental public understanding of a university's role in developing and delivering that knowledge. Our universities must partner closely with our communities to assure economic success for Arizona, and our plan specifically encourages and evaluates that engagement.

In "The Rise of the Creative Class," Richard Florida notes the importance of livable and engaged communities in advancing an economy. Universities are a critical part of a successful community, not only through degrees granted and the resulting increase in earning capacity and tax revenue, but also through the exposure to arts, culture, new technology, cutting-edge information, and the provision of services uniquely suited to the capabilities of our universities. In addition, engagement has a direct impact on the nature of our students' educational experience.

"Public engagement is a fundamental and essential characteristic of public higher education... an equal with learning and discovery."

- NASULGC ON ENGAGEMENT, 2007



# WORKFORCE IMPACT 03

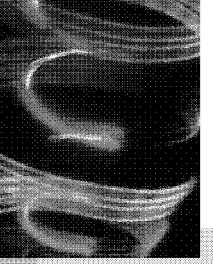
While this plan has at its core the goal to increase educational attainment of Arizonans, the types of degrees produced and their impact on Arizona's economy are critical measures of success in meeting workforce demands. Creating a stronger economy is not just about degree production; it also requires an increase in demand for greater numbers of high paying jobs. Universities play a role here by disseminating practical knowledge to help advance Arizona industry, spinning off and attracting new companies, and producing graduates with the engaged and relevant experience which allows them to have a more immediate impact in those companies and in our communities.

According to a recent study released by the National Center for Higher Education Management Systems (NCHEMS), the state's 12 industries of opportunity account for about 30% of Arizona's employment. Over the past 15 years, it has become more important to have a college degree in these major Arizona industries, as all but one have increased the percentage of their employees with college degrees over that time period. A recent study by Public Works shows that almost all of these occupational areas that pay a livable wage will require some postsecondary education.[1] Arizona's economy will advance only as we rise to meet the need for an educated population.

"High levels of 'educational capital' are key to the economic development of their states and the quality of life of their citizens."

- EWELL, 2003

[1] "Education to Work: Is Arizona Prepared, The Alignment Project Report." Public Works, 14, February 2006

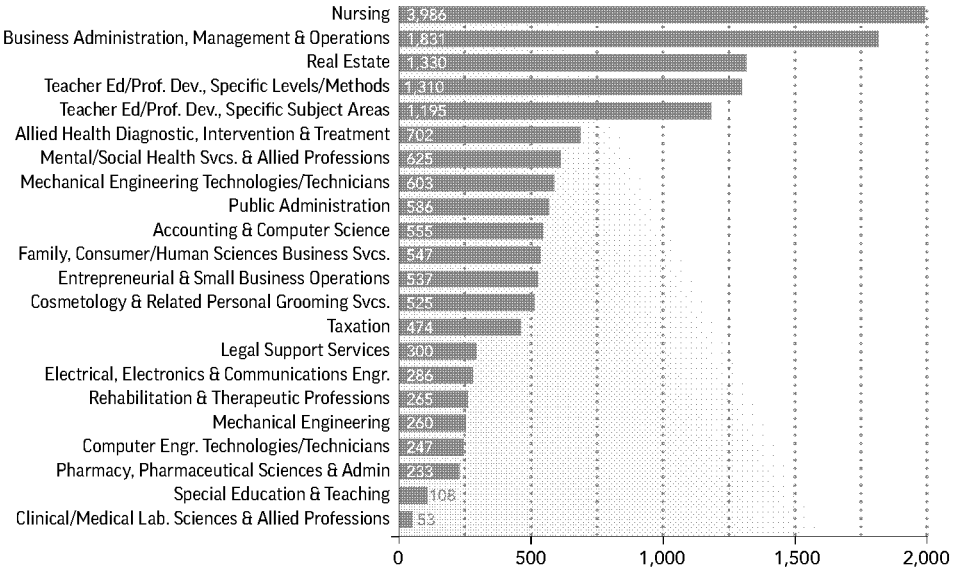


# 03 HIGH DEMAND FIELDS

The chart below illustrates the need to address high demand fields such as health-related occupations, teacher education, business, and science, technology, engineering, and mathematics (STEM) fields. Openings projected in these fields through 2025 will require a workforce enabled with a college education that goes beyond simply holding a high school diploma. Further, we will expect our universities to enhance the performance of Arizona's economy by embedding and engaging our universities in Arizona's communities and meeting the growing need of our state for relevant knowledge, whether disseminated through our graduates, through sharing that knowledge with Arizona industry and communities, or through other mechanisms of knowledge diffusion.

## Projected Annual Shortages in Arizona Occupations, 2005-2025

(Annual Openings Minus Annual Degree Production)




Source: Arizona Dept. of Economic Security;
NCES, IPEDS Completions Surveys (2003-04 to 2005-06)

The 2020 Vision calls for increases in the kinds of degree production that will benefit the workforce and support the economy of Arizona in 2020. These fields include education, science, technology, engineering and math (STEM), health professions, medicine, and other high demand fields to be identified as further analyses become available.

(b)(6)

# STRATEGIES FOR EXCELLENCE 03

## MACRO STRATEGIES FOR COMMUNITY ENGAGEMENT AND WORKFORCE IMPACT

1. **Expand partnerships with business and community**
   a. Increase the number of partnerships with business, industry, government, community, and educational entities to stimulate Arizona's economic vitality

   b. Develop mechanisms for incentivizing partnership opportunities which have a direct impact on Arizona's economy, with direct and measurable benefits to Arizona industry and communities through the sharing of new knowledge, processes and technologies

2. **Advance Arizona's communities through more extensive service and engagement**
   a. Develop comprehensive system-level survey tools to evaluate community support for university-based service activities

   b. Advance Arizona's quality of life through measurable knowledge dissemination and public programs aimed at health, environmental and regional stewardship, community and economic development, life-long learning, and access to arts and culture

   c. Evaluate federal, state and community investment in engagement activities and create processes for leveraging those investments for increased service output

3. **Prepare Arizona's workforce for the knowledge economy**
   a. Identify high demand fields and increase the production of degrees in these fields in collaboration with educational and community partners

   b. Develop new pathways for workforce training and degree attainment for non-traditional and adult populations

# PRODUCTIVITY 04

## GOAL FOUR

"To maximize the use of existing resources so that the system can produce greater numbers of degrees and with greater efficiency of resources per degree without sacrificing quality."

GOAL FOUR

# BACKGROUND 04

This strategic plan calls for aggressive increases in the production of degrees at the three public universities, which could require adding into the system as many as 80,000 undergraduate students by 2020. The reality of finite state resources combined with the magnitude of funding needed to serve such a large increase in student population illustrates why productivity will be so important. The system will need to assure effective and efficient expenditures per degree while finding ways to maintain quality. The strategies incorporated in the plan seek to provide this crucial balance.

The productivity component of the plan encompasses three important policy issues:

(1) Producing more degrees more efficiently without sacrificing quality (includes maximizing use of current resources)

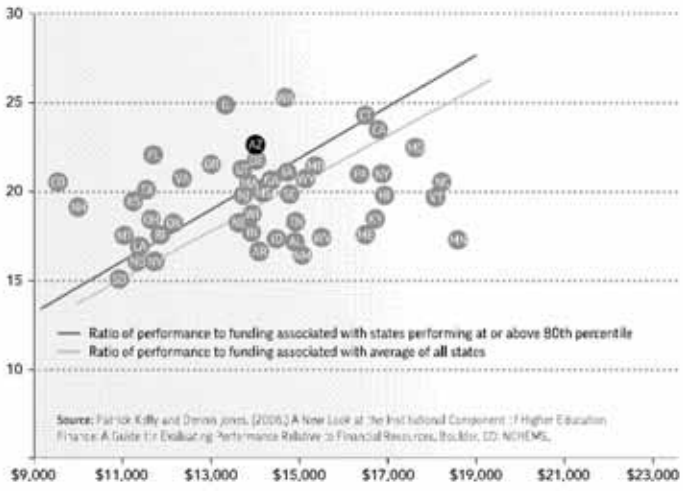
(2) Determining adequate funding levels to achieve the plan while factoring in appropriate levels of increased productivity

(3) Evaluating our financial strength and productivity

According to research completed by the National Center for Educational Management Systems (NCHEMS), Arizona ranks high on the metric used to evaluate productivity. In bachelor's degrees awarded per 100 FTE, and total funding per FTE, Arizona ranks above the 80th percentile.

| Key Indicators of Progress |
| --- |
| Number of bachelor's degrees awarded per 100 FTE students |
| Total educational expenditures per degree awarded |
| Composite financial index (CFI) |

Performance Relative to Resources: Degree-to-Enrollment Ratio

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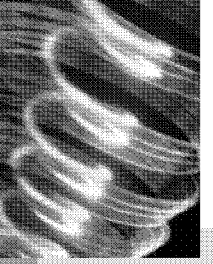


# 04 EDUCATION COSTS

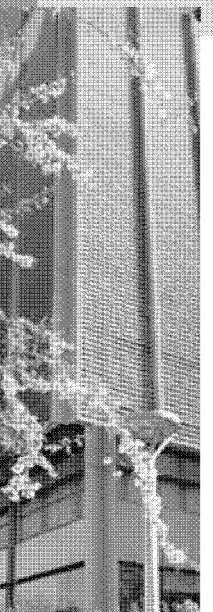
## Delta Cost Project

Significant research into university costs, productivity, and accountability is currently underway by the Delta Project on Postsecondary Education Costs, Productivity, and Accountability (Delta Cost Project). ABOR is following this work closely and will retain best practices, strategies and metrics that follow from this national initiative.

According to Dr. Jane Wellman of the Delta Cost Project[1], measuring productivity will require considering total costs and how resources are used to produce outcomes, which include graduates, trained workers, and new knowledge. In addition, examining the relationships among the quality of entering students, costs, and learning outcomes will allow institutions, boards, and state policymakers to better understand the consequences of a change in any one of these variables on total productivity.

## Productivity Initiatives

- Board initiative utilizing the best practices of national policy analyses through the Delta Cost Project
- Facilitate deeper understanding of college costs, the role of tuition, state subsidies, net price, and financial aid impact
- Utilize performance metrics with national comparability
- Identify cost-saving, cost containment, and cost avoidance measures
- Examine university cost drivers
- Advance innovative qualitative changes that will lead to more effective and efficient educational programs



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# EVALUATING PROGRESS 04

Additional analyses and background measures will be employed to evaluate and track progress related to productivity such as:

- Number of bachelor's degrees awarded per 100 FTE students
- Average number of years to graduation for students who began as freshmen
- Average cumulative hours at graduation for students who began as transfer students
- Full educational costs per FTE student enrolled and per degree awarded
- Student share of costs (discounted price, or net tuition)
- Average subsidy portion of costs (average dollar amount of full educational costs covered by institutional resources, endowment, or state funding) per FTE student

This work will enable ABOR to make informed decisions about where resources can be deployed more effectively in order to produce more outcomes--degrees--while maintaining access for students with financial need and educational quality.

### Evaluating Financial Strength:

Effective management of financial resources is critical to achieving the goals of this strategic plan. Four financial ratios will be calculated using data in the universities' audited annual financial statements:

- Primary Reserve Ratio
- Viability Ratio
- Return on Net Assets Ratio
- Net Operating Revenues Ratio

These four ratios will then be used to calculate a composite financial index (CFI), one overall measurement of each institution's financial health. The CFI is useful in helping governing boards and senior management understand the financial position that the institution enjoys in the marketplace. "Moreover, this measurement will also prove valuable in assessing future prospects of the institution, functioning as an 'affordability index' of a strategic plan"[1] Such an index will help the system maximize its strengths while adopting strategies to mitigate any weaknesses.

[1] Strategic Financial Analysis for Higher Education, 6th edition, KPMG

### Funding the Vision:

The ability of the system to fully articulate and integrate all sources of revenue with methods and best practices for spending those resources more effectively will be crucial to achieving the plan. Strategic planning efforts in this regard include:

- Comprehensive funding review – to define funding adequacy for the system in light of specific goals and targets of the 2020 Vision
- Budget recommendations – to articulate more explicitly the link between resources needed to fuel the 2020 Vision and outcomes the state can expect for the funding
- Long-term financial projections – to articulate funding necessary for the next 12 years to successfully achieve the 2020 Vision including capital and operating needs
- Tuition policy – to align the tuition setting process more closely to resource adequacy related to the 2020 Vision balanced with the policy goal to ensure affordability and predictability for students with financial need

# 04 STRATEGIES FOR EXCELLENCE

## MACRO STRATEGIES FOR PRODUCTIVITY

1. **Productivity initiatives**
   a. Productivity initiatives to identify strengths and weaknesses and to develop recommendations for better utilization of resources in the future including, among others, policies that encourage students to improve predictable and efficient time-to-degree and increased university access for rural students

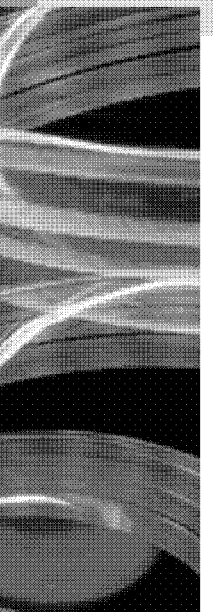
2. **Comprehensive funding review**
   a. Complete a comprehensive funding policy review:
      (1) determine adequate funding levels for the system to achieve 2020 goals; and
      (2) examine allocation of current resources and appropriate incentives to meet priorities of the plan

   b. Consistent with the funding review, complete a long-term financial projection model that identifies resources needed in both operations and capital, aligned to system and state priorities in the 2020 Vision

   c. Incorporate the use of peer and national benchmark data to assess productivity and new initiatives in the system and at the universities

3. **Track the financial strength of the universities**

4. **Improve tuition and financial aid policies to align with affordability needs, funding adequacy and share of responsibility for educational costs**



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