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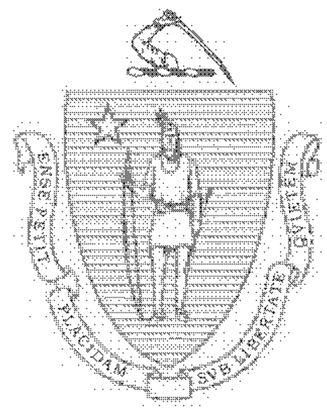

MARTHA COAKLEY
ATTORNEY GENERAL

THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL
ONE ASHBURTON PLACE
BOSTON, MASSACHUSETTS 02108

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January 14, 2010

Rhoda E. Schneider, General Counsel
Massachusetts Department of Elementary & Secondary Education
75 Pleasant Street
Malden, MA 02148

Re: Authorization to Make State Attorney General's Certification in Federal "Race to the Top Fund" Grant Application

Dear Ms. Schneider:

I hereby designate you as my authorized representative to make the State Attorney General certification required by the United States Department of Education in state applications for grants from the federal Race to the Top Fund. That certification is required by Application Requirement (f) as set forth in 34 CFR Subtitle B, Chapter II, appearing in the Federal Register, v. 74, no. 221, p. 59800 (Nov. 18, 2009), which provides:

> (f) The State must submit a certification from the State Attorney General that—
>
> > (1) The State's description of, and statements and conclusions concerning State law, statute, and regulation in its application are complete, accurate, and constitute a reasonable interpretation of State law, statute, and regulation; and
> >
> > (2) At the time the State submits its application, the State does not have any legal, statutory, or regulatory barriers at the State level to linking data on student achievement or student growth to teachers and principals for the purpose of teacher and principal evaluation.

It is my understanding that the Application Form issued by the Department of Education, and referenced at page 59722 of the Federal Register edition cited above, expressly envisions the certification being made by a State Attorney General or her authorized representative. This letter confirms that you are authorized to make the required certification.

Cordially,

Martha Coakley

Martha Coakley

General Appendix 2:
Glossary of Massachusetts Education Terminology

Adequate Yearly Progress (AYP): As required by the federal No Child Left Behind Act (NCLB), all schools and districts are expected to meet or exceed specific student performance standards in ELA and mathematics by the year 2014. AYP determinations are issued yearly based on the performance of all students and for student subgroups to monitor the interim progress toward attainment of those performance goals.

AFT–MA: The American Federation of Teachers–Massachusetts is the second largest teacher's union in Massachusetts.

Chapter 70: State distributed education aid is referred to as Chapter 70 and is distributed using a progressive funding formula. The formula establishes an adequate spending level for each district and ensures that every district reaches this spending goal annually through a combination of state aid and local resources. These dollars can be used to fund a variety of district operating costs, with the exception of transportation and capital expenditures.

Competency Determination: Students who meet the state high school graduation requirements have earned their "competency determination." The requirement is to score *Proficient* on the on the grade 10 English language arts and mathematics and high school science MCAS exams or to score *Needs Improvement* and complete an Educational Proficiency Plan in the subject(s) in which the student is not proficient before the end of high school.

COP: The Certificate of Occupational Proficiency (COP) was first proposed as part of the Education Reform Act of 1993. The COP will be awarded to students who successfully complete a comprehensive education and training program in a particular trade or professional skill area.

Composite Performance Index (CPI): A 100-point index that combines the scores of students who take standard MCAS tests (the Proficiency Index) with the scores of those who take the MCAS-Alternate Assessment (the MCAS-Alt Index) and is a measure of the extent to which students are progressing toward proficiency in English Language Arts and mathematics, respectively. CPI is the measure the state uses to determine whether schools and districts have made Adequate Yearly Progress.

A school or district's CPI is calculated by determining, in each subject for each student group, the following:

1. the number of students who took standard MCAS tests who performed at each of the five proficiency levels (low *Warning/Failing*, high *Warning/Failing*, low *Needs Improvement*, high *Needs Improvement*, and *Proficient* and above) and multiplying the number at each level times the proficiency index points associated with that level (0, 25, 50, 75, and 100, respectively);
2. the same calculation with the number of students who participated in the MCAS-Alt for reasons other than significant cognitive impairments

3. the number of students with significant cognitive impairments who demonstrated performance at each of the five MCAS-Alt levels and multiplying the number at each level times the MCAS-Alt index points associated with that level.

The point totals from steps one, two and three above are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100, which constitutes the district, school, or subgroup's CPI for that subject and student group.

DHE: The Massachusetts Department of Higher Education (DHE) oversees the state's 15 community colleges, nine state colleges, and the five campuses of the University of Massachusetts.

DSAC: District and School Assistance Centers (DSACs) operate within Readiness Centers to help districts and their schools strategically access and use professional development and targeted assistance to improve instruction and raise achievement for all students. First priority is given to districts in corrective action or to schools in corrective action or restructuring.

Educational Proficiency Plan (EPP): An EPP is an educational planning tool to be developed for the subject area(s) in which students did not score at least 240 (*Proficient* or above) on the MCAS exam. Each individual EPP includes a review of the student's strengths and weaknesses in that subject, the courses the student will be required to take and successfully complete in grades 11 and 12 in the relevant content area(s); and a description of the assessments the school will administer to the student annually to determine whether the student is progressing toward proficiency.

EDW: The Education Data Warehouse (EDW) is a collaborative effort of the ESE and LEAs to centralize K–12 educational performance data into one state coordinated data repository hosted by the Department. The data warehouse contains SIMS and MCAS data for every district and provides several dozen reports, each with many views and variations, are available, and more technically adept users can generate their own reports.

EEC: The Department of Early Education and Care (EEC) was created in 2005, making Massachusetts the first state in the nation to establish one agency to oversee early education and care and after school services for families. The agency today administers financial assistance to approximately 60,000 children from low income families and licenses nearly 12,000 early education and care and out-of-school-time programs statewide.

ELAR: The Educator Licensing and Recruitment (ELAR) system is an online tool that allows current and prospective Massachusetts educators to complete most licensure related transactions on the Internet. ELAR allow individuals to, among other things, apply for new licenses, renew Professional licenses, check licensure status, edit personal information, post resumes, and locate job openings.

EOE: The Executive Office of Education (EOE) was proposed by Gov. Patrick in 2007, and overwhelmingly supported by the Legislature and established in 2008 to work in partnership with the Departments of Early Education and Care, Elementary and Secondary Education,

Higher Education and the University of Massachusetts system to create a seamless system of education for the Commonwealth's students.

EPIMS: The Education Personnel Information Management System (EPIMS) is a data collection tool developed by the Department of Elementary and Secondary education to collect individual educator data from all public school districts and charter schools. Eventually the data collected through EPIMS will be linked with the licensure data maintained in ELAR.

ESE: The Massachusetts Department of Elementary and Secondary Education oversees the state's more than 1,800 K–12 public schools, serving nearly 1 million students.

Foundation budget: The amount that each district is required to spend to ensure every student requires an adequate education. The foundation budget is calculated using a set of assumptions about how much districts should spend per pupil across expenditure categories and for a variety of student groups, assigning higher rates to students whose resource needs are assumed to be greater, such as vocational students, English language learners, and low-income students. Rates are adjusted for inflation each year.

Gateway for Educators in Massachusetts (GEM): An online tool for aspiring educators to learn more about the career and determine if education is the right career path for them to pursue. This site is available on the Department of Elementary and Secondary Education's website.

John and Abigail Adams Scholarship: Recipients receive a tuition waiver for eight semesters of undergraduate education at a Massachusetts state college or university. Public high school students are eligible for the merit-based scholarship when they score Advanced on either the English Language Arts or the Mathematics test and Proficient or Advanced on the other, **and** have a combined score that places them in the top 25 percent of the graduating class in their district.

LEA: The Local Education Agency (LEA) is the central office that oversees the public schools in every city and town in the Commonwealth. Charter schools are independent LEAs.

The Massachusetts Association of School Committees (MASC): The state association for local school committees.

The Massachusetts Association of School Superintendents (MASS): The state association for district superintendents.

Massachusetts Educator Careers Center (MECC): An online job posting center available through the Department of Elementary and Secondary Education's website.

MassCore: The Massachusetts High School Program of Studies (MassCore) is intended to ensure all students graduate ready to succeed at college or in the workplace. The recommended program of studies includes: four years of English, four years of mathematics, three years of a lab-based science, three years of history, two years of the same foreign language, one year of an arts program and five additional "core" courses such as business education, health, and/or

technology. MassCore also includes additional learning opportunities including AP classes, dual enrollment, a senior project, online courses for high school or college credit, and service or work-based learning.

Mass TeLLS: The Massachusetts Teaching, Learning and Leading Survey (Mass TeLLS) was taken by more than 40,000 educators in 2008. Participants provided their views about teaching and learning conditions, leadership, empowerment, facilities and resources, professional development and time in their schools.

MCAS: The Massachusetts Comprehensive Assessment System (MCAS) was designed to meet the requirements of the Education Reform Law of 1993, which specified that the program test all public school students, measure performance based on the state's curriculum frameworks and report on the performance of students, schools and districts. Students in grades 3–8 and 10 are tested in English language arts and mathematics, and MCAS also includes end-of-course high school science tests. Students are required to pass the grade 10 English language arts and mathematics and high school science exams as one condition of eligibility for a high school diploma, in addition to meeting local requirements. (See Competency Determination.) MCAS results are also used to hold schools and districts accountable for the progress they have made in meeting the No Child Left Behind goal of bringing all students to proficiency in reading and mathematics by 2014.

MCAS-Alternate Assessment (MCAS-Alt): While the majority of students with disabilities take standard paper and pencil MCAS tests, either with or without accommodations, the MCAS-Alt is used to assess the attainment of students who, by reason of severe and complex disabilities, are not able to participate in the standard MCAS testing program. According to federal rules, up to 1% of the student population assessed using the MCAS-Alt may be included in AYP determinations using the MCAS-Alt Index.

MEPID: Every educator receives a Massachusetts Education Personnel ID (MEPID), a unique identifier assigned to all education personnel and linked to their individual data.

MESPA: The Massachusetts Elementary School Principals' Association (MESPA) is the statewide association for elementary school principals.

MSSAA: The Massachusetts Secondary School Administrators' Association (MSSAA) is the statewide association for middle and high school principals.

MTA: The Massachusetts Teachers Association is the state's largest teacher's union.

MTEL: The Massachusetts Tests for Educator Licensure (MTEL) program includes a test of communication and literacy skills as well as tests of subject matter knowledge. The tests are designed to ensure that Massachusetts educators can communicate adequately with students, parents/guardians, and other educators and that they are knowledgeable in the subject matter of the license sought.

NISL: The National Institute for School Leadership (NISL) is a research-based professional development program offered to principals in the lowest performing districts to provide them with the knowledge and skills they need to be instructional leaders and improve student achievement in their schools.

Pilot schools: District-based schools with autonomy over staffing, budget, curriculum and assessment, governance, policies, and school calendar and with greater accountability for results.

Readiness Centers: Six regional Readiness Centers were established across the Commonwealth in 2009 in an effort to improve teacher quality. The centers will provide educators with greater access to proven instructional practices, proven practices in the use of student data to inform instruction, and focused professional development opportunities. Their development was first proposed as a key initiative in Governor Patrick's Education Action Agenda.

SASID: A State Assigned Student Identifier (SASID) is a unique number given to each student receiving a publicly-funded education in Massachusetts. The SASID remains with the student in grades preK–12, even as the student transfers from one district or school to another.

Security Portal: The Department's secure, online data transmittal application used by authorized school and district personnel to submit and review data, (e.g., MCAS, SIMS, AYP, NCLB Report Cards, etc.).

SIMS: The Student Information Management System (SIMS) is a student-level data collection system that allows the ESE to collect and analyze accurate and comprehensive information in order to meet federal and state reporting requirements and inform policy and programmatic decisions. Student data is transmitted to the Department from districts via the state's web-based security portal.

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A3: State Memorandum of Understanding	(A)(1)	A-6
A4: Map of Participating LEAs	(A)(1)	A-10
A5: Massachusetts' Race to the Top Goals	(A)(1)	A-11
A6: Resumes of leadership team	(A)(2)	A-17
A7: Race to the Top Program Management Structure	(A)(2)	A-47
A8: Job Descriptions for Program Management Staff	(A)(2)	A-48
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A12: Historic Data on Massachusetts *(includes exclusion rates and NAEP accommodations policy)*	(A)(3)	A-236

THE PATRICK ADMINISTRATION ACTION AGENDA

Massachusetts is ready for the next phase of education reform. We value our strengths. We understand our challenges. We know what we want to achieve. And now we present an agenda developed with broad-based input from education, government, business, civic leaders and citizens.

Four broad goals, all integrally linked, shape the specific steps in our action agenda:

First, we must raise the achievement of all students. That involves not only improvements in teaching and curriculum, but also addressing the external factors that impede success, teaching 21st century skills, and introducing learning opportunities and a heightened attention to quality care beginning in the earliest years of life.

Second, fulfilling the new promise of public education demands that we genuinely and deliberately elevate teaching to a recognized profession capable of attracting the most highly qualified candidates to the field. Teachers deserve the opportunity to build their own content knowledge and skills. They, along with administrators, need high-quality mentoring, professional development, supervision and evaluation.

Third, we must broaden and deepen our commitment to public education so that every student is prepared to take advantage of higher education, employment and lifelong learning opportunities. That means extending our definition of a basic public education to include at least two years of postsecondary learning. And it means aligning the curriculum with 21st century knowledge and skills.

Finally, we must unleash innovation broadly, allowing the power of new ideas and new approaches to transform the system. We have to muster the collective courage to ask provocative questions and answer them honestly. Do our students and teachers have enough time during the day and during the year to meet the necessarily high expectations that we have set? Does our system of district governance allow us to maximize resources and generate the best possible results? How can we improve our record of recruiting, hiring and retaining educators? Are we maximizing the use of our vocational and technical infrastructure and facilities? Are we leveraging technology well? What best practices from successful charter and other schools here in the Commonwealth and across the country and the world can we bring to *all* Massachusetts schools?

To move forward, we must confront old constraints and move innovations from the margin to the mainstream. Effectiveness must trump ideology. Mission must triumph over tradition. Children's learning needs must be paramount, notwithstanding any inconvenience to adults inside and outside of our schools.

(b)(6)

As always, the network of people invested in our long tradition of excellence in education will drive this critical effort. Parents, policymakers, educators, business people and citizens must join forces and resources — human and financial — to keep pushing us forward. We are off to a strong start. Over the past 18 months, the Commonwealth has:

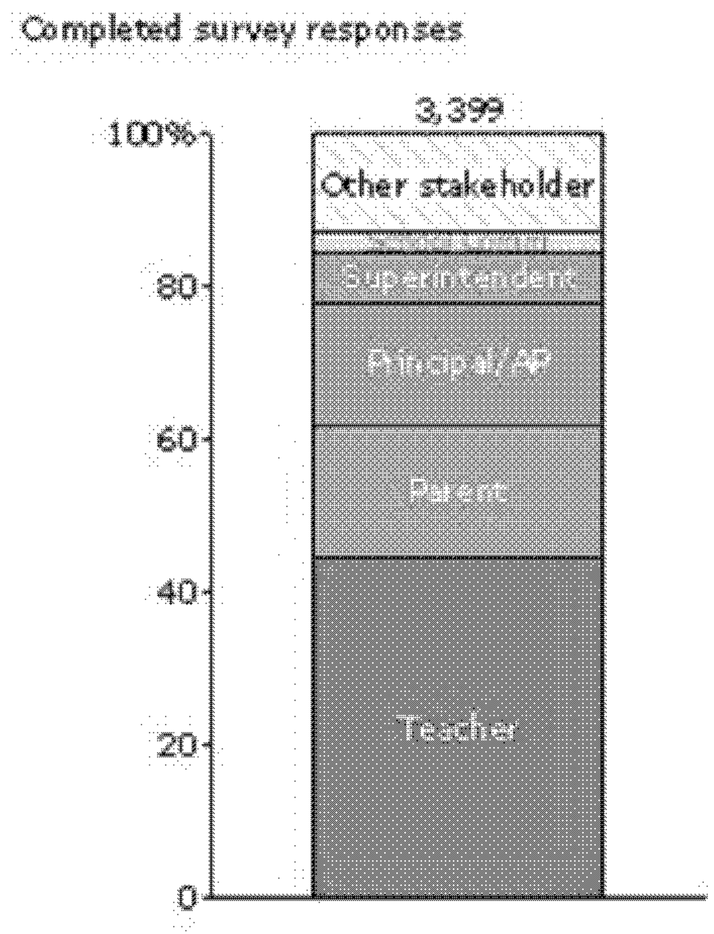
- Made strategic investments in early education and care, full-day kindergarten, expanded time for teaching and learning, and higher education facilities;
- Increased Chapter 70 funding to record levels, including targeted increases for special education students and English language learners;
- Created a new Executive Office of Education — a single point of access and coordination for statewide education policy;
- Initiated the first comprehensive survey of the state's teachers;
- Invested historic levels of funding in youth and workforce development;
- Passed a $1 billion life sciences bill; and
- Inaugurated the Commonwealth Corps and the Statewide Youth Council, two new initiatives that will give youth in our state a voice in their government and opportunities to actively engage in projects and service to address challenges in our communities.

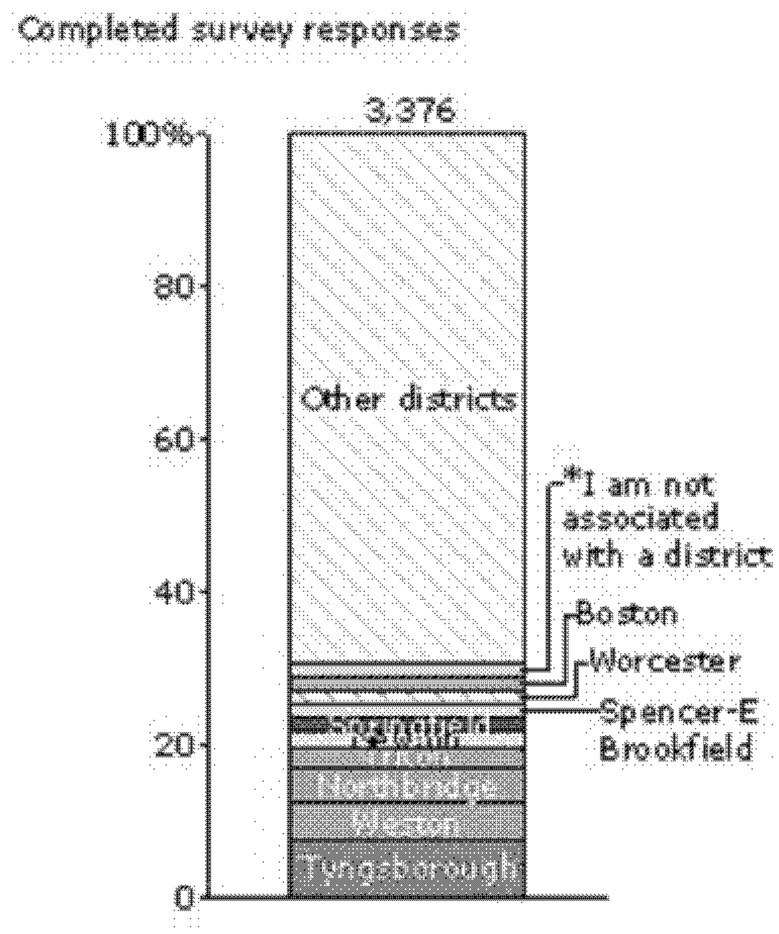
The following action agenda, rooted in the good work of the past 15 years and the groundbreaking partnership that is the Commonwealth Readiness Project, outlines actions and strategies that will allow students, teachers, communities and Massachusetts to achieve more than ever before. While we offer detail on several signature initiatives in the following pages, let the release of this action agenda mark the beginning of an unprecedented decade of collaborative policymaking in education.

No single actor can generate the scale of reform required, and no single action included here will yield the scope of advancement needed. Working together, however, we can press ahead, implementing actions and strategies that will help get us all ready for success in the 21st century.

Appendix A2: Statewide Survey Results

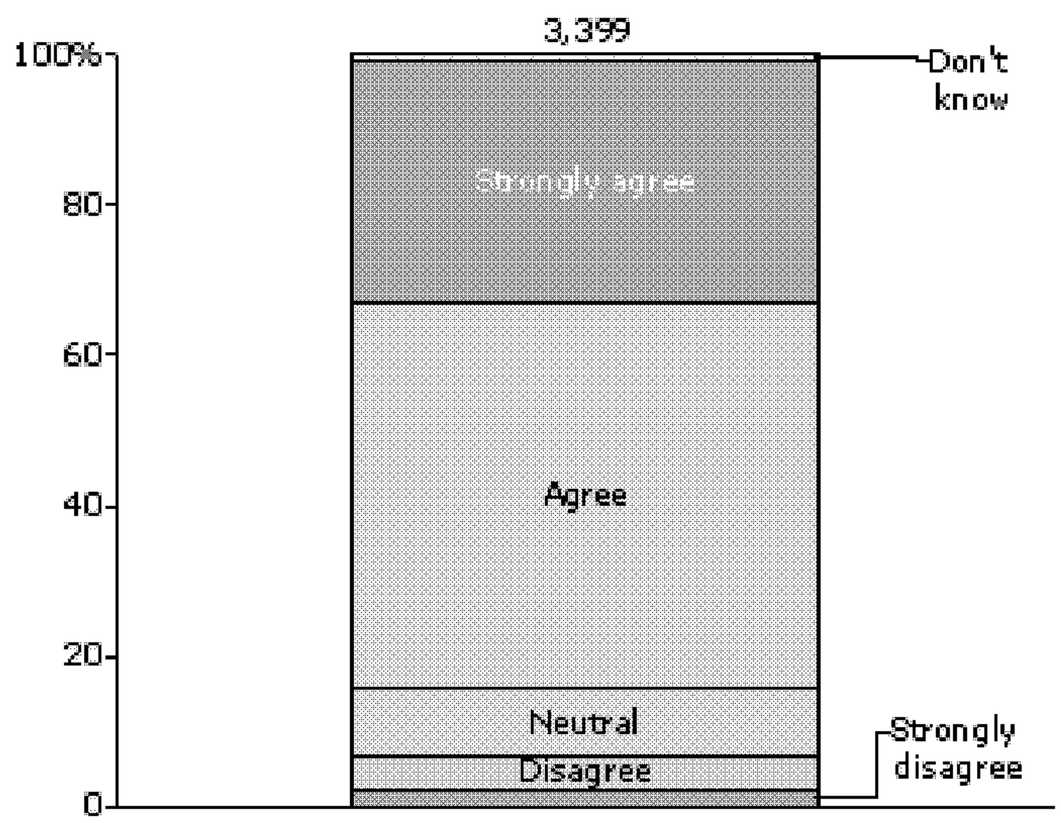
We received nearly 3,400 survey responses with 45% from teachers





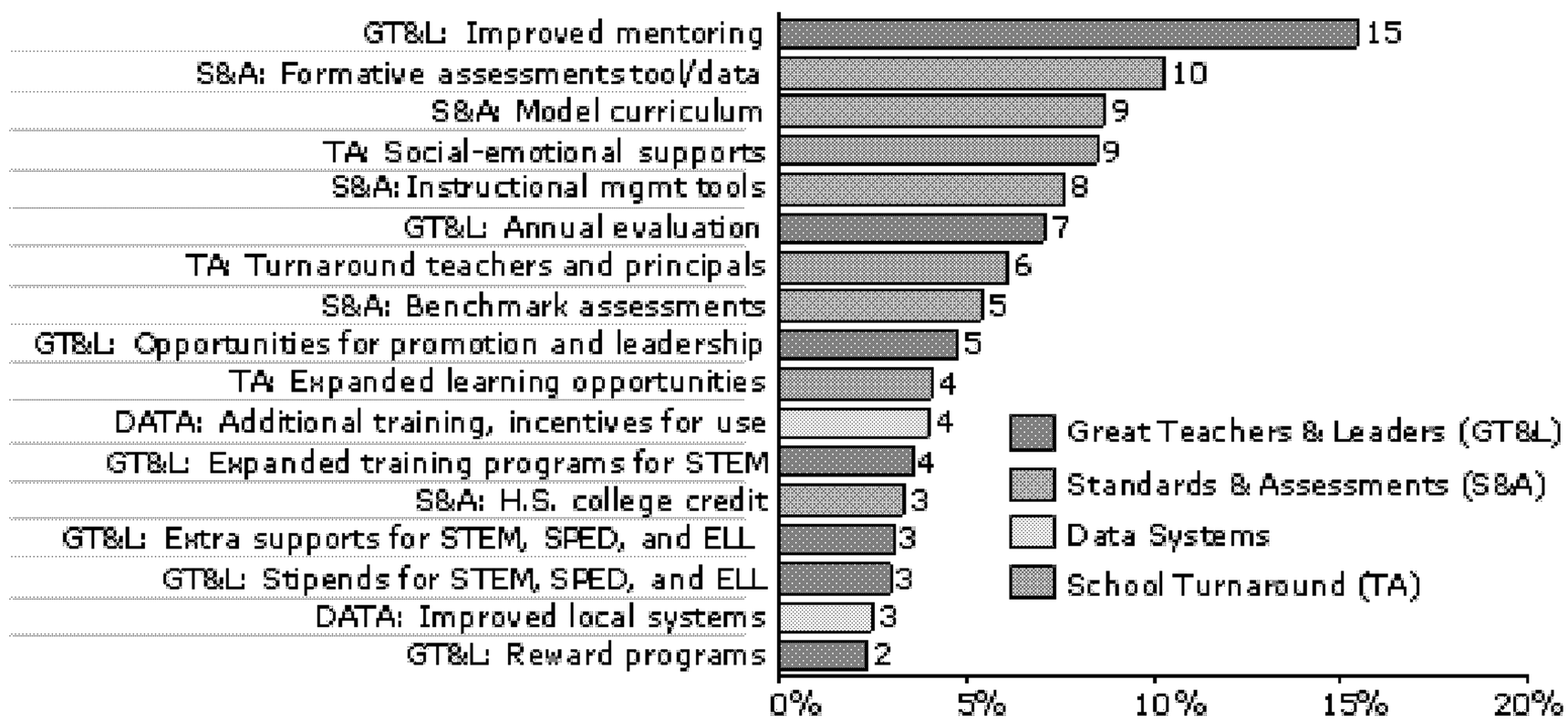
Most found the vision compelling, but noted it was 'vague' and should be more focused on the student

These goals capture a compelling vision for the future



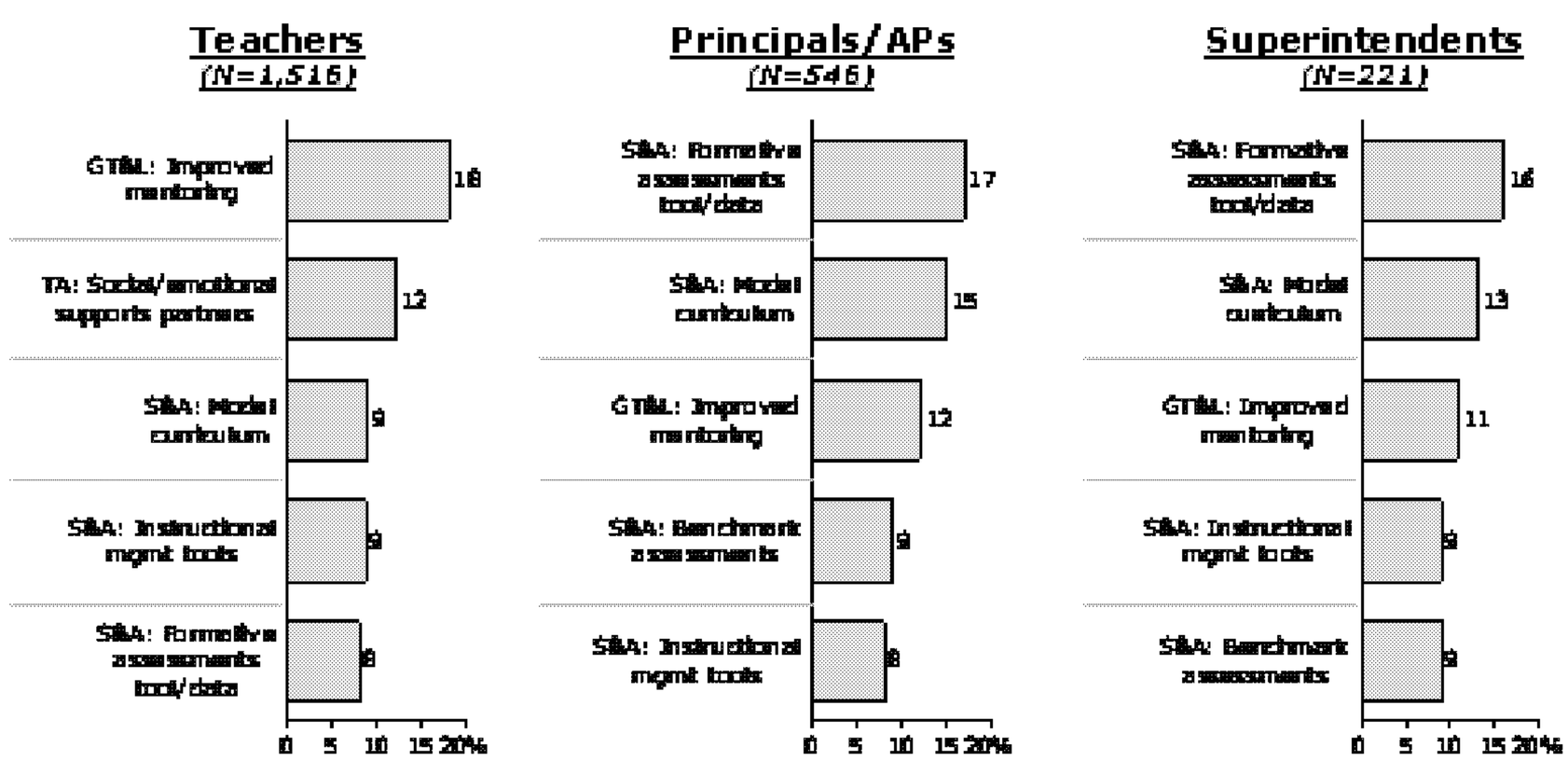
With teachers accounting for 45% of responses, improved mentoring selected as most important

What do you consider to be the most important initiative? (% of respondents)



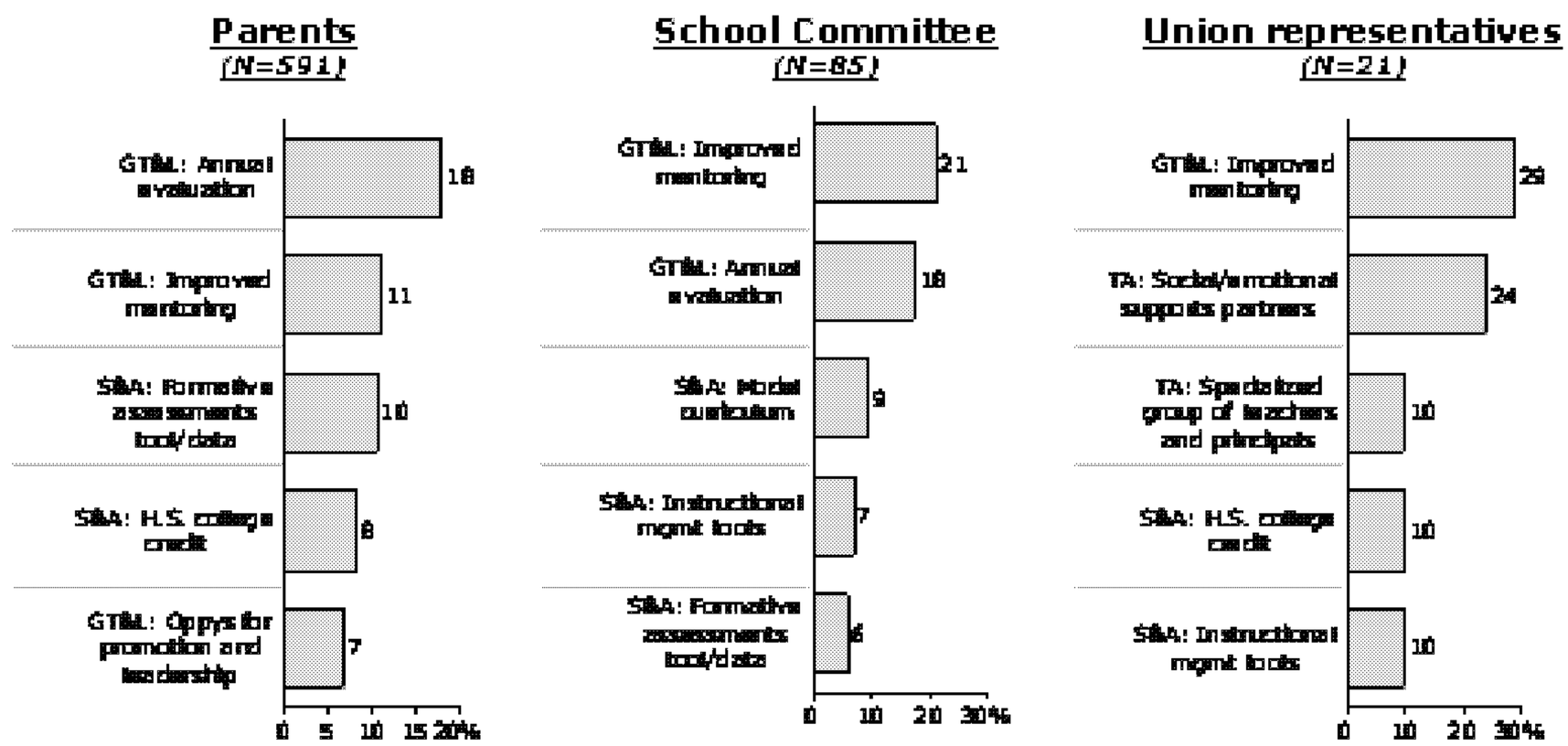
Improved mentoring and S&A tools rated highly among school and district leaders

What do you consider to be the most important initiative? (% of respondents)



Slightly less consistency among parents, school committees and unions

What do you consider to be the most important initiative? (% of respondents)



Appendix A3: State Memorandum of Understanding

The standard MOU for a Participating LEA begins on the next page. The 3 required signatories on the standard MOU for districts are the superintendent, the teachers' union leader, and the school committee leader.

Two variations of this MOU are:

- Horace Mann and unionized Commonwealth charter schools
  - The 3 required signatories are the charter school leader, the teachers' union leader, and the chair of the board of trustees.
- Other Commonwealth charter schools
  - The 2 required signatories are the charter school leader and the chair of the board of trustees.

These variations account for differences in governance across traditional districts, Commonwealth charter schools, and Horace Mann charter schools. (See section (F)(2) for an explanation of the types of charter schools in Massachusetts.)

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into by and between The Massachusetts Department of Elementary and Secondary Education ("Massachusetts" or the "state") and _____ ("participating LEA"). This agreement establishes a framework of collaboration, roles and responsibilities in support of Massachusetts in its implementation of an approved Race to the Top grant project.

I. PRELIMINARY SCOPE OF WORK

This Preliminary Scope of Work indicates which portions of Massachusetts' proposed reform plans the participating LEA is agreeing to implement. The initiatives listed below track to the criteria in the federal RFP. See Attachment 1 for a draft summary of MA's proposal for each of these initiatives, including the role of the LEA in each initiative.

The participating LEA is committing to implementing Massachusetts' plan to:

- Improve teacher and principal effectiveness based on performance: **LEAs will:**
  - In collaboration with ESE, design and implement evaluation systems that incorporate multiple measures of effectiveness including significant attention to student growth (see Attachment 3 for definition)
  - Conduct annual evaluations and use evaluations to inform professional development and decisions around compensation, promotion, retention, professional teaching status (tenure) and removal
  - Provide effective support to teachers and principals in the form of high-quality professional development, and measure the effectiveness of that professional development
  - Collect and report aggregate effectiveness data and submit to the state annually
- Ensure effective teachers and leaders in every school and classroom: **The state will** expand and strengthen a pipeline of diverse and highly effective teachers and leaders, particularly in science, technology, engineering, and mathematics; special education, and English language learners. **LEAs will** work with the state to access this pipeline to help them achieve an equitable distribution of effective teachers and leaders across their schools.
- Turn around the lowest-achieving schools (only for LEAs with level 4 or 5 schools): With support provided by the state, **LEAs will** implement one of four school intervention models:
  - Turnaround model (replace up to 50% of staff)
  - Restart model
  - School closure
  - Transformation model (provided that an LEA with more than nine level 4 or 5 schools may not use the transformation model for more than 50 percent of its schools)
- Use data to improve instruction: Integral to implementing all the initiatives in Massachusetts' plan successfully, **LEAs will:**
  - Support educator access to timely data about student learning and professional development on use of that data to improve instruction
  - Cooperate with the state to make available appropriate data for research and program evaluation

The state also strongly encourages the participating LEA to commit to participating in Massachusetts' plan to:

	LEA participation (Y/N)
• Roll out statewide P-12 Teaching and Learning System: **LEAs are encouraged to** partner with the state to develop and implement a new P-12 Teaching and Learning System aligned to the Common Core of standards, including: o Summative, benchmark, formative assessments and curriculum-embedded performance tasks o Exemplar curricula and instructional units o Educator professional development o Innovative technology solutions	
• Increase college and career readiness: **LEAs are encouraged to** partner with the state to develop and implement new programs, supports or incentives (such as International Baccalaureate middle and high schools, early college/dual enrollment programs, and an enhanced Adams Scholarship) to improve students' preparation for college and careers	

II. PROJECT ADMINISTRATION

A. PARTICIPATING LEA RESPONSIBILITIES

To assist Massachusetts in implementing the initiatives and achieving the goals described in Massachusetts' Race to the Top application, the participating LEA will:

1. Implement the initiatives according to a Final Scope of Work proposed by the LEA in a manner that is consistent with the Preliminary Scope of Work above and with Massachusetts' Plan
2. 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");
3. 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;
4. Participate, as requested, in any evaluations of this grant conducted by the state or ED;
5. 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;
6. 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

To support and collaborate with participating LEAs in implementing their tasks and activities described in Massachusetts' Race to the Top application, the state will:

1. Work collaboratively with and support the participating LEA in carrying out the Final Scope of Work;
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.
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 Massachusetts' Race to the Top grant, even when Massachusetts' Plan requires modifications that affect the participating LEA, or when the LEA Plan requires modifications.

D. STATE RECOURSE FOR LEA NON-PERFORMANCE

If Massachusetts determines that the LEA is not meeting its goals, timelines, budget, or annual targets or is not fulfilling other applicable requirements, the state 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 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 Massachusetts' Race to the Top grant application and is supportive of and committed to working on all or significant portions of Massachusetts' Plan;
3. Agrees to be a participating LEA and, if the application is funded, the signatories agree to work together in good faith to implement those portions of Massachusetts' Plan indicated in the Preliminary Scope of Work. Nothing in this MOU shall be construed to override any rights or duties as provided by collective bargaining law or collective bargaining agreements. The LEA and the local collective bargaining agent agree to negotiate in good faith, and those portions subject to collective bargaining shall be implemented only upon the agreement of the LEA and local collective bargaining agent.
4. Will provide a Final Scope of Work to be attached to this MOU only if Massachusetts' application is funded; will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe

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 and with Massachusetts' Plan; and

5. Will comply with all of the terms of the Grant, the State 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

Signed MOUs must be submitted to the Massachusetts Department of Elementary and Secondary Education by no later than January 13, 2010.

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

_____
Signature/Date

_____
Print Name/Title

Chair of the Local School Committee (or equivalent, if applicable)**:**

_____
Signature/Date

_____
Print Name/Title

Local Teachers' Union Leader (if applicable)**:**

_____
Signature/Date

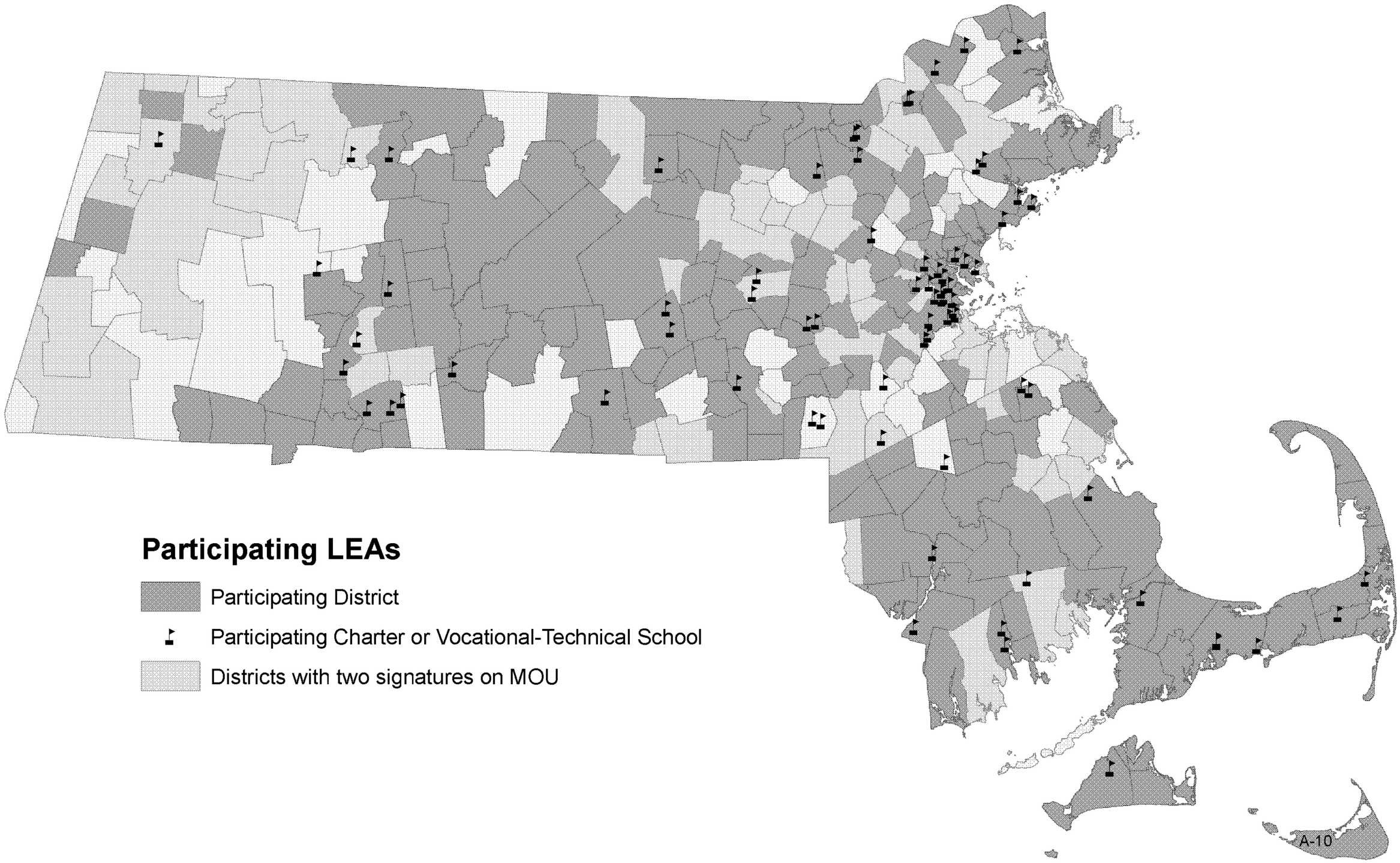
_____
Print Name/Title

Authorized State Official - required**:**
By its signature below, the State hereby accepts the LEA as a Participating LEA.

_____
Signature/Date

_____
Print Name/Title

Appendix A4: Map of Participating LEAs in Massachusetts



Appendix A5: Massachusetts' Race to the Top Goals

Massachusetts is known for setting and achieving high, yet attainable, standards for student performance. Our goals for Race to the Top are no less ambitious. We will build on our past successes and accelerate gains among our lowest performing subgroups, so that we both improve overall performance and narrow our achievement gaps.

Our strategy with our RTTT proposal has been to make investments in knowledge, expertise, systems, protocols, tools, and resources that will continue to pay off well after the grant ends. We will see some immediate payoff from these investments, but we expect their full impact to begin later in the grant period. We also anticipate that student achievement will pick up pace faster than high school graduation and college enrollment because these latter measures represent cumulative impacts over several years of intervention, not just a change in one grade or classroom. Finally, because Massachusetts must focus first on achievement gaps rather than overall performance, we have set particularly ambitious targets for narrowing our gaps. Not only are our anticipated rates of improvement aggressive, but we are measuring them with our Composite Performance Index (see General Appendix A2 for an explanation of how CPI is calculated), which increases only when performance among students scoring below *Proficient* increases—which means we are measuring our achievement gap on MCAS by the gaps among our lowest performing students.

We anticipate that we will make important near-term gains during the grant period and accelerate these improvements in the two years following. Specifically, we intend to:

1) Increase historic rates of gain in student performance on NAEP and MCAS (our ESEA assessment) by 15% between 2010 and 2014 and another 25% between 2014 and 2016. This will increase the share of students scoring in *Advanced* and *Proficient* and reduce the share scoring in *Warning* or *Failing*.

2) Reduce achievement gaps in student performance on NAEP and MCAS by 25% between 2010 and 2014, and another 25% between 2014 and 2016.

3) Maintain our first-in-the-nation standing on all four NAEP assessments in 2010, 2012, and 2014.

4) Improve overall high school graduation and college enrollment rates by 5% between 2010 and 2014 and an additional 5% between 2014 and 2016.

5) Reduce achievement gaps in high school graduation, college enrollment, and college course completion rates by 15% between 2010 and 2014 and another 15% between 2014 and 2016.

If we attain these goals, by 2014, 13 percentage points more students will score *Advanced* or *Proficient* on the mathematics MCAS. We will no longer have some of the largest achievement gaps on NAEP, and we will cut our MCAS achievement gap almost in half in just six years. About 3,000 more students will graduate from high school by 2014, and an additional 2,000 students in the class of 2014 will enroll in college. And we will accomplish this without lowering our standards—standards that are among the strongest nationally and internationally. Tables detailing the specific outcomes we are targeting overall and by subgroup follow on subsequent pages.

The work we have set forth for ourselves in our Race to the Top proposal is the work of this agency. Our governor's education agenda and our Board's priorities are closely aligned with our proposal, and we are committed to moving forward with them. If we do not receive funding, we will continue down the same path, but necessarily at a slower pace and with fewer resources and levers to bring to bear. We will still implement the Common Core standards and develop assessment and curriculum supports to go with them, but with a lighter touch. We will still pursue a state longitudinal data system, but with less statewide capacity and more variability across districts in terms of data quality, data access, and data use. We will still revise our teacher and principal evaluation system and coordinate it more fully with our licensure requirements, but we will not have the resources needed to pilot-test options with the field and to financially support transitional costs. We will still invest in school supports, but with only Title I G dollars and our limited state targeted assistance dollars to bring to bear. And we will still continue to transform our relationship with the field to one that is more collaborative, but we will not have a strong coalition of more than 250 willing participants with whom to craft policy nor the fiscal support to build new tools and test out ideas as aggressively as we would like. In short, we expect to reach the same goals, but on a slower pace—more likely in the 2018 to 2020 timeframe.

NAEP achievement goals

Note: We will recalculate our 2014 and 2016 English language arts NAEP goals once 2009 data are available.

NAEP Achievement Goals

Grade 4 Mathematics				
Subgroup	**2003**	**2009**	**2014**	**2016**
All students	242	252	265	271
Male	244	253	266	272
Female	239	251	265	271
Asian/Pacific Island	248	264	278	284
Black	222	236	255	265
Hispanic	222	232	252	263
White	247	258	271	277
ELL	217	221	243	255
Free & reduced lunch eligible	226	237	256	266
Students with disabilities	224	237	255	264

Grade 4 Reading				
Subgroup	**2003**	**2009***	**2014**	**2016**
All students	228	239	248	251
Male	225	237	247	251
Female	231	241	250	254
Asian/Pacific Island	229	249	258	262
Black	207	213	230	240
Hispanic	202	213	230	240
White	234	245	254	258
ELL	193	210	227	236
Free & reduced lunch eligible	210	217	234	243
Students with disabilities	200	218	233	241

Grade 8 Mathematics				
Subgroup	**2003**	**2009**	**2014**	**2016**
All students	287	299	312	318
Male	289	300	314	320
Female	284	298	312	318
Asian/Pacific Island	304	314	328	335
Black	260	272	294	306
Hispanic	255	271	293	306
White	292	305	319	325
ELL	242	238	267	285
Free & reduced lunch eligible	261	278	299	311
Students with disabilities	254	271	293	305

Grade 8 Reading				
Subgroup	**2003**	**2009***	**2014**	**2016**
All students	273	274	277	278
Male	268	270	275	278
Female	278	279	282	283
Asian/Pacific Island	281	284	286	288
Black	252	255	263	269
Hispanic	246	253	262	268
White	278	279	282	283
ELL	222	237	249	258
Free & reduced lunch eligible	251	258	266	272
Students with disabilities	239	247	257	264

Methodology: Goal for overall students based on achieving a 15% increase over historical gains (2003-2009) during the life of the RTTT grant (2010-2014) and a 25% increase over historical trends 2014-2016 once the RTTT initiatives are underway. For all lower performing subgroups, scaled score goals assume a 25% reduction in the 2009 achievement gap by 2014 and a 25% reduction in the 2014 gap by 2016. We assumed the overall student growth goals and calculated the scaled scores required to achieve the gap goals.
Notes: *2009 Reading scores unavailable, so have assumed average historical gains for 2009; data from the NAEP website and Massachusetts Department of Elementary and Secondary Education

MCAS achievement goals

MCAS Achievement Goals, All Grades (3-8, 10)

Students overall -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	16%	27%	34%	23%
2009	23%	34%	28%	15%
2014	30%	40%	23%	6%
2016	33%	43%	21%	3%

Students overall -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	9%	52%	30%	8%
2009	16%	52%	25%	6%
2014	19%	56%	20%	5%
2016	21%	57%	18%	4%

African American/Black -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	4%	14%	36%	47%
2009	8%	25%	37%	30%
2014	20%	35%	27%	18%
2016	26%	40%	22%	11%

African American/Black -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	34%	47%	17%
2009	6%	43%	38%	13%
2014	12%	49%	29%	10%
2016	16%	53%	24%	8%

Asian -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	30%	27%	26%	16%
2009	42%	32%	19%	8%
2014	50%	39%	11%	0%
2016	53%	43%	4%	0%

Asian -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	13%	50%	29%	8%
2009	26%	49%	21%	5%
2014	32%	55%	12%	1%
2016	34%	57%	9%	0%

Hispanic -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	3%	13%	34%	50%
2009	8%	24%	35%	32%
2014	20%	34%	26%	20%
2016	26%	40%	22%	13%

Hispanic -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	29%	46%	23%
2009	5%	39%	40%	17%
2014	11%	46%	30%	13%
2016	15%	50%	25%	10%

Native American -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	8%	24%	36%	32%
2009	13%	30%	34%	22%
2014	24%	39%	25%	12%
2016	29%	43%	21%	7%

Native American -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	5%	45%	39%	11%
2009	9%	49%	33%	9%
2014	15%	54%	25%	7%
2016	18%	57%	21%	5%

White -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	18%	31%	34%	17%
2009	27%	37%	27%	10%
2014	34%	44%	20%	3%
2016	37%	47%	17%	0%

White -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	11%	58%	26%	5%
2009	19%	56%	21%	4%
2014	22%	59%	16%	3%
2016	23%	60%	14%	2%

Lim. English Prof. -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	6%	13%	30%	51%
2009	9%	23%	33%	36%
2014	20%	33%	26%	22%
2016	26%	38%	22%	14%

Lim English Prof. -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	23%	44%	32%
2009	3%	29%	43%	24%
2014	10%	39%	33%	18%
2016	14%	45%	27%	14%

Low Income -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	5%	16%	36%	43%
2009	9%	26%	36%	28%
2014	22%	37%	26%	16%
2016	29%	42%	18%	11%

Low Income -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	34%	46%	18%
2009	5%	42%	39%	14%
2014	12%	49%	28%	10%
2016	17%	53%	22%	7%

Special Education -- Math				
Year	Adv.	Prof.	N.I.	W/F
2003	2%	14%	31%	53%
2009	4%	23%	34%	39%
2014	17%	34%	25%	24%
2016	25%	39%	19%	17%

Special Education -- ELA				
Year	Adv.	Prof.	N.I.	W/F
2003	1%	28%	47%	24%
2009	2%	34%	43%	21%
2014	10%	43%	32%	15%
2016	15%	49%	26%	11%

Methodology: Goal for overall students based on increasing the percent of students scoring advanced and/or proficient (with at least half of the gains coming from advanced) by 15% more than the historical gains (2003-2009) and decreasing the percent of students scoring warning/failing by 15% more than historical gains (2003-2009) by 2014. We then aim to grow scores by 25% over the historical trends 2014-2016. For all subgroups, goals assume a 25% reduction in the 2009 achievement gap by 2014 and a 25% reduction in the 2014 gap by 2016.

Notes: Massachusetts Department of Elementary and Secondary Education

NAEP and MCAS achievement gap goals

Achievement Gap Goals -- NAEP and MCAS

Grade 4 Math -- NAEP Scaled Score				
Subgroup	2003	2009	2014	2016
Gender *(Males outperform females currently)*	5	2	2	1
Black/White	26	21	16	12
Hispanic/White	25	26	19	14
Students with disabilities/without	21	18	14	10
ELL/Non-ELL	26	33	25	19
Free & reduced lunch eligible/not	22	23	17	13

Grade 4 Reading -- NAEP Scaled Score				
Subgroup	2003	2009*	2014	2016
Gender *(Females outperform males currently)*	5	4	3	2
Black/White	27	32	24	18
Hispanic/White	32	32	24	18
Students with disabilities/without	33	25	18	14
ELL/Non-ELL	36	30	22	17
Free & reduced lunch eligible/not	26	29	22	17

Grade 8 Math -- NAEP Scaled Score				
Subgroup	2003	2009	2014	2016
Gender *(Males outperform females currently)*	6	2	2	1
Black/White	33	33	25	19
Hispanic/White	37	34	25	19
Free & reduced lunch eligible/not	34	29	22	16
ELL/Non-ELL	45	63	47	35
Students with disabilities/without	38	33	25	19

Grade 8 Reading -- NAEP Scaled Score				
Subgroup	2003	2009*	2014	2016
Gender *(Females outperform males currently)*	10	10	7	5
Black/White	26	24	18	14
Hispanic/White	32	26	20	15
Free & reduced lunch eligible/not	29	22	17	13
ELL/Non-ELL	52	38	28	21
Students with disabilities/without	39	32	24	18

Math -- MCAS Composite Performance Index (Grades 3-8,10)				
Subgroup	2003	2009	2014	2016
Hispanic/White	27	22	16	12
Black/White	25	20	15	11
Native American/White	13	13	10	7
LEP/Non-LEP	23	21	16	12
Low Income/Non-Low Income	24	20	15	12
SPED/Non-SPED	28	26	20	15

English Language Arts -- MCAS Composite Performance Index (Grades 3-8,10)				
Subgroup	2003	2009	2014	2016
Hispanic/White	23	18	13	10
Black/White	18	14	11	8
Native American/White	10	9	6	5
LEP/Non-LEP	27	23	18	13
Low Income/Non-Low Income	19	16	12	9
SPED/Non-SPED	24	23	17	13

Methodology: For all subgroups, the goal is to reduce the 2009 achievement gap by 25% by 2014 and then reduce the 2014 gap by 25% by 2016. For NAEP tests, we used the gap in scaled scores for Grade 4 and Grade 8 Reading and Mathematics tests, for MCAS we used the overall student Composite Performance Index scores.

Notes: *2009 Reading scores unavailable, so we have assumed average historical gains for 2009; data from the NAEP website and Massachusetts Department of Elementary and Secondary Education. MCAS data from the official accountability results, except for the subgroups non-Low Income, non-SPED and non-LEP/FLEP which were calculated by using performance level data for all students minus the relevant subgroup. The Composite Performance Index (CPI) is a 100-point index that combines the scores of students; scores correspond to one of six performance rating categories: Very High (90 - 100); High (80 - 89.9); Moderate (70 - 79.9); Low (60 - 69.9); Very Low (40 - 59.9); and Critically Low (0 - 39.9).

High school graduation, college enrollment, and college course completion goals

4-year high school graduation rate				
Subgroup	2007	2008	2014	2016
All Students	81%	81%	85%	90%
Asian	84%	87%	91%	96%
Black	65%	68%	75%	82%
Hispanic	59%	58%	67%	75%
Native American	68%	67%	74%	81%
Pacific Islander	64%	70%	77%	84%
White	86%	87%	91%	95%
Limited English Proficiency	53%	56%	64%	72%
Low-Income	65%	65%	71%	78%
Special Education	63%	64%	72%	80%

Methodology: Goal for overall students is to improve the 4-year high school graduation rate by 5% by 2014 (going from 81% in 2008 to 85% in 2014) and by another 5% from 2014-2016 (arriving at 90% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: Data from the Massachusetts Department of Elementary and Secondary Education

College enrollment				
Subgroup	2003	2009*	2014	2016
All students	68%	72%	75%	79%
Asian	67%	78%	82%	86%
Black	57%	65%	70%	75%
Hispanic	47%	55%	62%	68%
Native American	56%	59%	65%	71%
White	70%	75%	78%	82%
Limited English Proficient in High School	46%	47%	54%	61%
Low Income in High School	50%	57%	64%	70%
Special Education in High School	46%	50%	57%	64%

Methodology: Goal for overall students is to improve the college enrollment rate by 5% by 2014 (going from 72% in 2009 to 75% in 2014) and by another 5% from 2014-2016 (arriving at 79% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: *2009 college enrollment rates unavailable; 2009 figures assume historical gains achieved 2008-2009; Data from the National Student Clearinghouse

College credit				
Subgroup	2004	2009*	2014	2016
All students	52%	51%	53%	56%
Racial/Ethnic Minority	34%	35%	41%	46%
Free & reduced eligible	35%	37%	44%	50%
Limited English Proficiency	38%	35%	40%	45%
Special Education in High School	35%	37%	42%	47%

Methodology: Goal for overall students is to improve the college degree earning rate by 5% by 2014 (going from 51% in 2009 to 53% in 2014) and by another 5% from 2014-2016 (arriving at 56% by 2016). For all subgroups, the goal is to reduce the 2009 performance gap by 15% by 2014 and then the 2014 gap by 15% by 2016.
Notes: *2009 data unavailable; 2009 figures assume historical gains achieved 2008-2009; Data from Massachusetts Department of Higher Education and subgroup data is limited. As data systems are improved, we plan to revise goals. Two specific notes on the data: (1) Cohort is limited to students graduating from high school and enrolling in a state or community college in the same year and who enrolled as first-time, degree-seeking students (which represents 14,247 students in the 2008 cohort). (2) A typical full-time student enrolls in 15 credits per semester, so the equivalent of an academic year of credits is 30 credits. The credits used for this analysis exclude developmental/remedial credits which are earned in pre-college level courses and do not count towards degree or certificate completion.

Appendix A6: Resumes of leadership team

Resumes included:

- Mitchell D. Chester, Commissioner of Elementary and Secondary Education: **accountability and oversight**
- Carrie Conaway, Director of Planning, Research, and Evaluation: **project implementation and management**
- Jeff Nellhaus, Deputy Commissioner: **Standards and Assessments**
- Robert Bickerton, Senior Associate Commissioner: **Data Systems to Support Instruction**
- David Haselkorn, Associate Commissioner: **Great Teachers and Leaders**
- Karla Baehr, Deputy Commissioner: **Turning Around the Lowest Achieving Schools**

Mitchell Dan Chester

(b)(6)

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EDUCATIONAL BACKGROUND

Doctorate in Education
June 1991

Harvard University, Cambridge, Massachusetts
- Concentration in Administration, Planning, and Social Policy
- Dissertation: *Changes in Attitudes Toward Teaching and Self-Efficacy Beliefs Within First-Year Teachers in Urban Schools*

Masters in Education
June 1988

Harvard University, Cambridge, Massachusetts
- Concentration in Administration, Planning, and Social Policy

Sixth-Year Diploma
August 1982

The University of Connecticut, Storrs, Connecticut
- Concentration in Educational Administration

Masters in Education
September 1975

University of Hartford, West Hartford, Connecticut
- Dual concentration in Reading and Early Childhood Education

Bachelor of Science
May 1974

The University of Connecticut, Storrs, Connecticut
- Major in Elementary Education
- Minor in English

PROFESSIONAL EXPERIENCE

Commissioner of Elementary and Secondary Education (2008 to present)
Massachusetts Department of Elementary and Secondary Education, Malden, Massachusetts

Senior Associate (2006 to 2008), **Associate** (2005-06), and **Assistant** (2001-05) **State Superintendent**
Ohio Department of Education, Columbus, Ohio

Responsibilities included:
- education policy development
- statewide accountability systems
- alignment of federal and state policy
- strategic planning and agency performance measures

Executive Director of Accountability and Assessment (1997 to 2001)
School District of Philadelphia, Philadelphia, Pennsylvania

Oversight of:
- student assessment
- accountability programs
- research and evaluation
- pupil information management

PROFESSIONAL EXPERIENCE (continued)

Education Bureau Chief, Bureau of Curriculum and Instructional Programs (1993 to 1997)
Connecticut State Department of Education, Hartford, Connecticut

Oversight of:
- programs and staff for mandated curriculum areas
- Title I, Migratory Education, Eisenhower, and Title IV programs and staff
- programs and staff for students from limited English backgrounds
- comprehensive health education programs and staff
- technology education programs
- state and federal grants

Commissioner's liaison for urban reform initiative

Senior Assessment Associate, Bureau of Research and Teacher Assessment (1988 to 1993)
Connecticut State Department of Education, Hartford, Connecticut

- Developed performance assessments for beginning (Connecticut Competency Instrument) and experienced teachers (Early Adolescence/English Language Arts Assessment Development Laboratory of the National Board for Professional Teaching Standards)
- Developed performance assessments for beginning and experienced school administrators
- Conducted studies of teacher recruitment, induction, and retention in urban school districts

Associate Principal, Timothy Edwards Middle School (1986 to 1987)
South Windsor Public Schools, South Windsor, Connecticut

Interim Assistant Principal, Resource Teacher, 2nd Grade Teacher (1985 to 1986)
Farmington Public Schools, Farmington, Connecticut

Mathematics Coordinator, 1st, 2nd, & 4th Grade Classroom Teacher (1975 to 1985)
Suffield Public Schools, Suffield, Connecticut

4th-5th Grade Classroom Teacher (summers 1973 to 1978)
Connecticut Migratory Children's Program, Hartford, Connecticut

RELATED EXPERIENCE

NAEP Contextual Data Panel Member, National Assessment of Educational Progress, *U. S. Department of Education* (2005 to 2007)

Developing recommendations for a framework and specifications for the National Assessment of Educational Progress (NAEP) in Reading for the 2007 assessment

Growth Model Peer Review Panel Member, *U. S. Department of Education* (2006)

Developed recommendations to the Secretary of Education for the employment of growth models for *No Child Left Behind Act* accountability purposes

Planning Committee Member, NAEP Reading Framework Project, *National Assessment Governing Board* (2003-2005)

Developed the framework and specifications for the National Assessment of Educational Progress (NAEP) in Reading for the 2009 and beyond assessment

Technical Work Group Member, Evaluation of Title I Accountability Systems and School Improvement Efforts, *SRI International* under contract to U.S. Department of Education (2000 to 2004)

RELATED EXPERIENCE (continued)

Acting Chief Information Officer (July 1998 to July 1999)
School District of Philadelphia, Philadelphia, Pennsylvania

Oversight of:
- mainframe computing
- management information systems
- instructional technology
- telecommunications
- records management
- Year 2000 readiness

Member, Reading Advisory Panel, Voluntary National Test (1997 to 1998)
U. S. Department of Education

Curriculum Consultant, *Window Rock Unified School District* (1995 to 1997)
Fort Defiance, Arizona

Facilitated development of K-12 district goals and curriculum

Development Team Member (1990 to 1993)
Early Adolescence/English Language Arts Assessment Development Laboratory
National Board for Professional Teaching Standards

- Developed performance assessments of accomplished teaching
- Coordinated practitioner involvement and review
- Coordinated sensitivity review

Consultant, School of Professional Studies, *Central Connecticut State University* (1989)
New Britain, Connecticut

- Advised the Dean regarding recruitment of minority teachers and programs to prepare teachers for urban schools
- Developed urban/multicultural education resources for the faculty

Assistant Editor, *Harvard Education Letter* (1988 to 1990)
Harvard Graduate School of Education, Cambridge, Massachusetts

Teaching Fellow, *Harvard Graduate School of Education* (1988 to 1989)
Cambridge, Massachusetts

- Sara Lawrence Lightfoot (Sociology of Education)
- Judith Singer (Data Analysis and Research Design)

Curriculum Council Chairperson, *Suffield Public Schools* (1978 to 1980, 1982 to 1985)
Suffield, Connecticut

- Developed and implemented new curriculum
- Instituted faculty professional development programs

PUBLICATIONS

Chester, M. D., & Zelman, S. T. (2009). Approximations of Teacher Quality and Effectiveness: View From the State Education Agency. In D. H. Gitomer (Ed.). *Measurement Issues and Assessment for Teaching Qualilty* (pp. 131-149). Thousand Oaks, CA: Sage Publications.

Chester, M. D. (2005). Making Valid and Consistent Inferences about School Effectiveness from Multiple Measures. *Educational Measurement: Issues and Practices*, 24(*4*), 40-52.

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Porter, A. C., Chester, M. D., & Schlesinger, M. D. (2004). Framework for an Effective Assessment and Accountability Program: The Philadelphia Example. *Teachers College Record*, *106*(6) 1358-1400.

Chester, M. D. (2003). Multiple Measures and High-Stakes Decisions: A Framework for Combining Measures. *Educational Measurement: Issues and Practices*, *22*(2), 32-41.

Porter, A., & Chester, M. D. (2002). Building a High-Quality Assessment and Accountability Program: The Philadelphia Example. In D. Ravitch (Ed.), *Brookings Papers on Education Policy 2002* (pp. 285-337). Washington, DC: The Brookings Institution.

Chester, M. D., & Beaudin, B. Q. (1996). Efficacy Beliefs of Newly Hired Teachers in Urban Schools. *American Education Research Journal*, *33*(1), 233-257.

Chester, M. D., & Pecheone, R. L. (1992). Assessment-Based Licensing of School Principals. *The International Journal of Educational Management*, *6*(3), 31-39.

Chester, M. D. (1990). The Acid Test of Black Dominance. In D. Bell, T. Higgins, & S-H. Suh (Eds.), Racial Reflections: Dialogues in the Direction of Liberation. *U.C.L.A. Law Review*, *37*(6).

Teamwork in the Middle Grades: Learning to Fly. (1990). *The Harvard Education Letter*, *6*(5).

Good Teaching: Do You Know It When You See It? (1989). *The Harvard Education Letter*, *5*(3).

Inside Good High Schools: A Sense of Community. (1989). *The Harvard Education Letter*, *5*(4).

A License to Teach in Connecticut. (1989). *The Harvard Education Letter*, *5*(3).

Chester, M. D. (1984). Curriculum Improvement: Theory into Practice. *Connecticut Association of Boards of Education Journal*.

SELECTED PAPERS and PRESENTATIONS

Chester, M. D. (2008). *The Role of Evidence in Developing State Compliance Practices for No Child Left Behind*. Presentation to the National Academies Standing Committee on Social Science Evidence for Use, Washington, DC.

Chester, M. D. (2007). *Achievement and Engagement in Secondary Education.* Symposium discussant at the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *College and Work Readiness: Raising Standards and Improving Assessments.* Panel presentation at the Alliance for Excellent Education's Fourth Annual High School Policy Conference: From No Child Left Behind to Every Child a Graduate, Washington, DC.

Chester, M. D. (2007). *Crosscutting Principles for the Use of Growth Models for Adequate Yearly Progress*. Presentation to the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *Do States Really Have Different Proficiency Standards? And If So, Why Do We Care?* Symposium discussant at the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2007). *Policy Considerations for Implementing a Value-Added Model.* Presentation at the Minnesota Value-Added Symposium, Roseville, Minnesota.

Chester, M. D. (2007). *Which Schools Tend to Make Stronger Gains? Exploring the Relationship between Status and Growth*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Nashville.

Chester, M. D. (2007). *State Perspectives on Multiple Measures*. Presentation to the National Academies Board on Testing and Assessment Workshop on Multiple Measures, Washington, DC.

Chester, M. D. (2006). *Consequential Validity of NCLB: Research and Practice*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Francisco.

Chester, M. D. (2006). *Employing Growth for School Accountability*. Presentation to the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D. (2006). *Toward a Theory of Action for State Education Policy in the Context of School Improvement*. Presentation to the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D. (2006). *Value-Added and Growth Models: Promises and Precautions*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Francisco.

Chester, M. D. (2005). *Challenges, Contributions, and Consequences of State Accountability Systems*. Presentation to the Annual Meeting of the National Council on Measurement in Education, Monteal, Canada.

Chester, M. D. (2005). *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2005). *Documenting the Validity of Accountability Systems*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (2005). *NCLB and Decision Consistency – Contributions of State Design Features*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2005). *Using Student Growth Data for School Accountability*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2004). *Impact of NCLB Accountability Requirements: Were the First-Year Results as Dire as Predicted?* Presentation to the Annual Meeting of the American Educational Research Association, San Diego.

Chester, M. D. (2004). *State Lessons from NCLB-AYP Year One: How Can Accountability Decisions Be Improved*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Boston.

Chester, M. D. (2004). *The State of State Implementation*. Discussant at the Leaving No Child Behind? Option for Kids in Failing Schools conference of the American Enterprise Institute and the Thomas B. Fordham Institute, Washington, DC.

Chester, M. D. (2003). *Benchmarking NCLB Standards*. Presentation to the Annual Meeting of Education Reporters, Writers and Editors, Chicago.

Chester, M. D. (2003). *Implementing School Accountability and AYP Requirements under No Child Left Behind*. Presentation to the Annual Meeting of the American Educational Research Association, Chicago.

Chester, M. D. (2003). *Ohio's Statewide Accountability Plan: Three Challenges*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, San Antonio.

Chester, M. D. (2003). *Opportunities and Challenges: Accountability for Students with Disabilities*. Presentation to the Council for Exceptional Children Annual Convention, Seattle.

Chester, M. D. (2002). *Assessments that Illuminate Instruction: Important, But Maybe Not Enough*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2002). *Effective Use of Technical Advisory Committees in Large-Scale Assessment Programs*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2002). *Fourth grade promotion decisions in Philadelphia: Face, construct, consequential, and predictive validity of multiple measures*. Presentation to the Annual Meeting of the National Council on Measurement in Education, New Orleans.

Chester, M. D. (2002). *Overcoming the New Assessment Challenges of Title I*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Palm Desert, California.

Chester, M. D. (2001). *Accountability Growth Expectations: Can Schools Meet Them?* Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Houston.

Chester, M. D. (2001). *Access and Achievement for Urban Students*. Symposium discussant at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D. (2001). *The Impact of State Accountability Systems on Districts and Schools: Are the Results What Policymakers Intended*? Presentation to the Education Commission of the States' National Forum on Education Policy, Philadelphia.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (2001). *Innovations in Testing: Reliable and Valid Identification of K-3 Student Literacy Achievement – Toward a Theory-Based, Data-Driven Continuum*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Houston.

Chester, M. D. (2001). *Interaction Among Standards, Assessments, and Accountability: Implications for Publishers*. Presentation to the Association of American Publishers School Division, Washington, DC.

Chester, M. D. (2001). *Promoting Higher Achievement: Incorporating Standards, Assessments, and Accountability in State Policy*. Presentation at the Best Practices Boot Camp of the Idaho State Board of Education and Legislature, Boise, Idaho.

Chester, M. D. (2001). *Tracing the Impact on Instructional Reform and Achievement of Ending Social Promotion*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D. (2001). *Using Data to Promote School and District Growth: Making the Most of Your Accountability Results*. Presentation at the Raising Standards and Performance for Low-Achieving Students conference of the Comprehensive Center Region VI, Minneapolis, Minnesota.

Chester, M. D., Offenberg, R., & Denge Xu, M. (2001). *Urban Teacher Transfer: A Four-Year Cohort Study of the School District of Philadelphia Faculty*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Chester, M. D., Orr, M., & Christman, J. (2001). *Consequential Validity of Philadelphia's Accountability System: Triangulating Four Years of Multiple Sources of Evidence*. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle.

Porter, A., & Chester, M. D. (2001). *Doing Education Accountability Right*. Paper presented at the Brown Center on Education Policy Conference on Accountability and Its Consequences for Students: Are Children Hurt or Helped by Standards-Based Reform. The Brookings Institution, Washington, DC.

Chester, M. D. (2000). *Follow-Up Study to 1998-99 Promotion/Retention Decisions and 1999 Summer Programs*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (2000). *The Impact of Summer Programs on Promotion/Retention Decisions and Subsequent Achievement*. Paper presented at the Summer Learning and the Achievement Gap: First National Conference, Johns Hopkins University, Baltimore, Maryland.

Chester, M. D. (2000). *Standards, Assessment, and Accountability: Making it Work for All Students*. Presentation to the United States Department of Education conference on Improving America's Schools, Washington, DC.

Chester, M. D. (2000). *Using Research-Based Knowledge to Guide Educational Practice: Examples from Two Districts*. Symposium discussant at the Annual Meeting of the American Educational Research Association, New Orleans.

Salinger, T., Chester, M. D., & Maraschiello, R. (2000). *K-3 Assessments in Philadelphia: Innovation and Realities*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (1999). *Aligning School-Based Reforms with State (and District) Standards and Assessments*. Presentation to the United States Department of Education Office of Elementary and Secondary Education Summer Institute on Comprehensive School Reform and Schoolwide Programs, Washington, DC.

Chester, M. D. (1999). *Assessment and Accountability in the Early Grades*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Snowbird, Utah.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (1999). *Philadelphia's Accountability System*. Presentation to the United States Department of Education Office of Elementary and Secondary Education Region VI Comprehensive Regional Assistance Center – Madison, Wisconsin.

Chester, M. D. (1999). *To What Extent are Districts Interested in District-Level NAEP Reporting*. Presentation to the National Research Council / National Academy of Sciences Board on Testing and Assessment, Washington, DC.

Chester, M. D. (1999). *Urban Student Performance and Course-Taking Patterns*. Symposium discussant at the Annual Meeting of the National Council on Measurement in Education, Montreal, Canada.

Council of Great City Schools (1999). *Strengthening the Milwaukee Public Schools: Interim Report of the External Team on Research and Assessment*. Submitted to the Milwaukee Public Schools.

Chester, M. D. (1998). *Philadelphia Perspective on Title I Testing and Assessment*. Presentation to the National Research Council/National Academy of Sciences Board on Testing and Assessment, Washington, DC.

Chester, M. D. (1998). *Retention and High Stakes Testing: Will They Result in Improvements in Urban Student Achievement?* Presentation to the American Youth Policy Forum, Washington, DC.

Chester, M. D. (1998). *Revisiting the Issue of Measuring and Reporting Student Growth in an Era of Standards-Based Reform*. Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Diego.

Chester, M. D., & Simmons, W. (1998). *School Practice Review in an Accountability Context*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego.

Chester, M. D. (1997). *Applied Literacy in National Standards in the Other Content Areas*. Presentation to the Annual Conference of the International Reading Association, Atlanta.

Chester, M. D. (1997). *Consequential Aspects of State Assessments vis a vis Instructional Practices*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Colorado Springs.

Chester, M. D. (1996). *Other Forms of State Incentives for Professional Development: Connecticut's Incentive Program*. Presentation to the Council of Chief State School Officers' IASA Implementation Project Professional Development Conference, San Diego.

Chester, M. D. (1996). *Determining English Language Arts and Reading Standards: If Someone's Gonna Do It, It Might as Well Be Us*. Presentation to the annual convention of the International Reading Association, New Orleans.

Chester, M. D. (1995). *Benchmarking State Standards and Teacher Education and Certification*. Presentation at the National Association of State Directors of Teacher Education and Certification conference on the Impact of National Standards on Teacher Education and Certification, Baltimore.

Beaudin, B. Q., & Chester, M. D. (1994). *Effect of Teacher Beliefs on Persistence in Urban Schools.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Chester, M. D. (1994). *Interstate New Teacher Assessment and Support Consortium (INTASC)*. Presentation to the Council of Chief State School Officers' National Conference on Large Scale Assessment, Albuquerque.

Chester, M. D., & Jacobson, L. (1994). *Toward a Content-Specific Approach to the Assessment of Leadership.* Paper presented to the International Congress on the Assessment Center Method, San Francisco.

PAPERS and PRESENTATIONS (continued)

Chester, M. D. (1993). *Alternatives to Traditional Principal Preparation and Licensing: Exploring the Roles of the Stakeholders*. Presentation to Convention '93 of the University Council for Educational Administration, Houston.

Chester, M. D. (1993). *Exploring Teacher and Administrator Assessment in the Context of Delaware's New Curriculum Reforms*. Presentation to the Delaware Principals' Academy, Dover, Delaware.

Chester, M. D. (1992). *Alterable Factors that Mediate the Induction-Year Experience of Teachers in Urban Schools*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Chester, M. D., & Pecheone, R. L. (1992). *Proposal for an Outcome-Based School Administrator License*. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco. (ERIC Document Reproduction Service No. ED 345 360)

Chester, M. D. (1991). *Changes in Attitudes Within First-Year Teachers in Urban Schools*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago. (ERIC Document Reproduction Service No. ED 331 804)

CARRIE L. CONAWAY

Massachusetts Department of Elementary and Secondary Education
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WORK EXPERIENCE

Director of Planning, Research, and Evaluation
Massachusetts Department of Elementary and Secondary Education, 2007 to present

- Direct a unit providing research, analysis, and planning support to the state K–12 education agency.
- Develop a policy research agenda linked to the Department's strategic priorities: educator development, curriculum and instruction, accountability and assistance, and supports for students and families.
- Manage a team of analysts who write policy briefs, memoranda, and reports; analyze data to evaluate program effectiveness; advise on research and evaluation projects and on survey design; and review Department reports. Projects assigned to the group include:
    - Developing a public website displaying trends in district and school performance, as a means of district self-assessment and the first step in the state's new school accountability system.
    - Leading a cross-agency team to pilot-test and implement a growth model: a new way of measuring individual student progress over time on the statewide MCAS tests.
    - Developing a public, searchable database of all teacher union contracts statewide.
    - Analyzing the disproportionate representation of minority students in special education.
    - Writing and managing a $2.9 million federal research grant to support a rigorous four-year evaluation of the state Expanded Learning Time initiative.
    - Managing a Harvard-based research team that evaluated the academic impact of charter and pilot schools in the city of Boston.
- Work with senior staff to strengthen and update the Department's strategic plan. Produce analysis on progress toward the agency's vision, mission, and goals.
- Coordinated the agency's application for the federal Race to the Top grant program.

Deputy Director, New England Public Policy Center
Federal Reserve Bank of Boston, 2004 to 2007

- Proposed, developed, and served as second-in-command of a policy analysis research group whose mission was to increase policymakers' access to high-quality, timely, objective information on the economic and policy issues that affect New England.
- Developed a communication and research strategy to maximize the impact of the Center's work based on input from legislators, policy researchers, and thought leaders throughout New England.
- Conducted analyses of policy issues, led teams of research assistants, and produced reports and presentations for general and technical audiences.
- Handled most day-to-day aspects of Center operations. Managed the Center's publication series and produced conferences and special events.

Associate Editor, *Regional Review*
Federal Reserve Bank of Boston, 2001 to 2004

- Researched and wrote feature-length analytical articles and edited two regular columns for a quarterly economics magazine aimed at New England's business leaders and decision-makers.
- Hired and supervised research assistants and college interns.

Research Analyst
Case Western Reserve University, University of Minnesota, Minnesota Department of Economic Security, Kennedy School of Government, and Harvard University, 1994 to 2001

- Held progressively responsible analyst positions after college and during graduate school.
- Designed research studies, managed data collection, analyzed data, and wrote research reports and articles for general and technical audiences.

Other Contributions and Recognition

- Serve on research advisory committees for the Massachusetts Department of Elementary and Secondary Education, the Department of Higher Education, The Education Resources Institute, and the Lincoln Institute of Land Policy.
- Selected to participate in the Boston-area Education Policy Fellowship Program, 2009–2010.
- Created an interdepartmental task force to increase the number of minority applicants to economics research positions at the Federal Reserve Bank of Boston. Served on the Bank's Diversity Committee.
- Selected for the Federal Reserve Bank of Boston's leadership development program. Received the Bank's top staff award three out of five years.

Selected Publications

Massachusetts Department of Elementary and Secondary Education

- Preliminary Report on Current Fiscal Conditions in Massachusetts Public Schools. January 2008.
- Supply and Demand of STEM Workers in Massachusetts. October 2007.

New England Public Policy Center, Federal Reserve Bank of Boston

- Ensuring Adequate Electrical Capacity for New England. Policy Brief 06-2, July 2006.
- Population Growth and Migration in New England. Preliminary memo, June 2006.
- The Challenge of Energy Policy in New England. Research Report 06-2, April 2006 and Working Paper 05-2, December 2005.

Regional Review, Federal Reserve Bank of Boston

- Paying the price: How family choices affect career outcomes, Q1 2005.
- Where does the time go? The division of household labor, Q1 2005.
- Objects of desire: Creating legacies, one collection at a time, Q4 2003/Q1 2004.
- Accidents will happen. So what improves workplace safety? Q3 2003.
- The pros and cons of pharmaceutical patents, Q1 2003.
- Doing well by doing time? Q4 2002.
- Preserving our past: Who should bear the cost of history? Q2 2002.
- Virtual university: Is online learning changing higher education? Q1 2002.
- The past, present, and future of the registered nurse workforce, Q3 2001.

Other publications

- College Readiness: Massachusetts Compiles the Data. *Communities and Banking*, Spring 2009.
- From Uncertainty to Optimism: Minnesota's Rural Workforce in the 1990s. *Minnesota Economic Trends*, December 1998.
- Women in the Workforce Factsheet. *Minnesota Economic Trends*, July 1998.

Education

M.A. in sociology and social policy, Harvard University, 2001.

M.A. in public affairs with concentrations in policy analysis and labor policy, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, 1998.

B.A. in sociology (with high honors), Oberlin College, 1994.

Jeffrey M. Nellhaus

jnellhaus@doe.mass.edu

OBJECTIVE

My objective is to partner with others to lead improvements in the public education system so every child can achieve proficiency at each grade level and graduate from high school prepared for post-secondary education or a skilled job.

QUALIFICATIONS

- Nationally recognized for expertise in student assessment and accountability systems
- Strong advocate for all children to get the support they need to meet high educational standards
- Extensive experience developing and leading the implementation of standards-based education reforms
- Ability to work collaboratively and effectively with local educators, policymakers, governors, legislators, advocacy groups, business and community leaders.
- Demonstrated ability to lead and manage a large state agency, including strategic and operational planning
- In-depth knowledge of Massachusetts and national educational laws and regulations

SELECTED ACCOMPISHMENTS

- Led the design, development and implementation of the Massachusetts Comprehensive Assessment System, including policies related to implementation of the state's high school graduation standard and exams
- Served as Acting Commissioner of the Massachusetts Department of Elementary and Secondary Education which includes over 550 employees and a budget of over $4 billion annually serving nearly 1 million students in over 1,800 schools and 350 school districts
- Increased the Massachusetts Department of Education capacity in the areas of information management systems, targeted assistance, student assessment, and planning, research and evaluation.
- Led the refinement of the Massachusetts English Language Arts, Mathematics, and Science and Technology/Engineering Curriculum Frameworks
- Served on the U.S. Department of Education's Growth Model Peer Review Committee
- Co-authored with the Chancellor of the Massachusetts Board of Higher Education proposal to the National Governor's Association, which resulted in an award of $2 million. The award led to the development of a recommended course of studies for high school (MassCore), a school-to-college information management system, and the initial development of a comprehensive web-based tool for educational planning.

EMPLOYMENT HISTORY

Massachusetts Department of Education, Malden, MA	
Deputy Commissioner of Education	Present
Acting Commissioner of Education	2007-2008
Deputy Commissioner of Education	2005- 2007
Associate Commissioner for Curriculum and Assessment	1999-2004
Director of Student Assessment	1994-1998
Policy and Planning Specialist	1986-1993
Metropolitan Indochinese Children and Adolescent Services, Boston, MA	
Project Coordinator	1984-1985
The Experiment in International Living, Phanat Nikom, Thailand	
Program Manager and Teacher Trainer	1982-1984
Common Ground Restaurant, Brattleboro, Vermont	
Manager	1979-1982
Leland and Grey Union High School, Townshend, Vermont	
Chemistry and Mathematics Teacher	1974-1978
The Peace Corps, India	
Science Teacher Trainer	1970-1972

SELECTED CONSULTENCIES

- NAEP Validity Studies Panel, American Institutes for Research
- NAEP Technical Advisory Committee on Standard Setting, ACT, Inc.
- Growth Model Peer Review Committee, U.S. Department of Education
- Technical Advisory Committee, Student Assessment, Maine Department of Education
- Technical Advisory Committee, Student Assessment, Rhode Island Department of Elementary and Secondary Education
- National Technical Advisory Panel on Assessment and Accountability, Kentucky Legislative Research Commission
- Provincial Expert Panel, Student Assessment, Ontario, Canada
- Maryland, Alaska, Connecticut, and South Carolina Departments of Education

EDUCATION

- Harvard Graduate School of Education, M.Ed., 1986
- Antioch New England Graduate School, M.S. in Science Teaching, 1974
- University of Massachusetts, B.S., Chemistry, 1970

RECOGNITIONS

- Manuel Carballo Award for Excellence in Public Service, Governor Jane Swift, 2004
- Friend of Education Award, Massachusetts Secondary School Administrators Association, 2004
- Distinguished Community Service Award, Jobs for Youth, 2006

ROBERT "BOB" BICKERTON

PROFESSIONAL EXPERIENCE:

Massachusetts Department of Education, Malden 2/88 – present

Sr. Associate Commissioner of Education
Center for Lifelong Learning, Assessment, Educator Quality & Technology

Provide statewide strategic and policy leadership for:

- Adult & Community Learning Services
- Student Assessment,
- Educator Preparation, Quality and Licensure
- Information Services & Technology.

These offices manage a combined $135 million, including high stakes and formative student assessments, the approval of 1,000 educator preparation programs in 70 Massachusetts colleges and universities, the licensure and license renewal of over 80,000 preK-12 and adult education teachers, all department information and instructional technologies, data collections and analysis (including development and implementation of an enterprise wide education data warehouse) and over 200 adult learning centers, family literacy, transitions to higher education, and workplace education programs.

Director, Adult & Community Learning Services

First director of this office, established in 1988 by the Board of Education to meet its priority for more effective and expanded adult basic education services. Starting with $7 million in total state and federal funding and a "patchwork quilt" of services, this office has made extraordinary progress restructuring and building a fully integrated ABE service delivery system of more than 200 adult literacy, adult secondary, English for speakers of other languages, family literacy, workplace education, transitions to higher education and distance learning programs staffed by over 2,500 adult educators and supported with $43 million in total resources. Key characteristics of the system we have developed include standards based design, content and performance criteria, fully WEB/Internet based assessment, data and program management systems, a very successful/ entrepreneurial approach to fund raising and program development, and increased policy integration with several other state agencies. Initiated, supported and/or led several interagency initiatives including the "Massachusetts Family Literacy Consortium" (memoranda of agreements across 14 state education, employment & training, health & human service agencies), served on the executive committee of the MA Workforce Investment Board, helped craft our state's WIA Unified Plan, and brought all major pK-12 education associations together to forge common ground in pursuit of higher levels of educator effectiveness.

City of Boston Transportation Department, Boston 2/86 - 1/88

Deputy Commissioner

Responsible for overall management of three divisions within the Transportation Department: Traffic Management & Engineering, Operations and Enforcement, which together comprise over 85% of the BTD's 518 employees. I also played an integral role in planning for, securing required personnel and fiscal resources (+55%), and negotiating

contracts to implement a number of innovative programs. My role required extensive coordination with other City and State agencies, the Mayor and City Council, formulating policy and development of implementation plans.

ADULT EDUCATION TEACHING, DIRECTING,COMMUNITY LEADERSHIP:

Jamaica Plain Community Schools, City of Boston 10/84 - 2/86

Regional Director in this racially/ethnically/linguistically diverse community

Quincy School Community Council, Inc., Boston C.B.O. 9/81 - 10/84

Executive Director in a changing Boston Chinatown neighborhood

Community Learning Center, Cambridge P.S. & City of Cambridge 9/74 - 8/81

Administrator/ABE Math Teacher

Boston State College, Flexible Admissions Program, Boston 12/74 - 6/76

Math Coordinator/Teacher

Education Warehouse, Cambridge C.B.O. 10/72 - 8/74

ABE Volunteers Supervisor & Trainer

College of Public & Community Service, Univ. of Mass., Boston 2/74 - 8/74

Curriculum Developer and Math Instructor

Tutoring Plus, Inc., Cambridge C.B.O. 12/70 - 6/72

Youth Activities Coordinator & Tutor

EDUCATION & CERTIFICATION:

Antioch University/Cambridge College, Cambridge, MA	M.Ed	8/78
Massachusetts Institute of Technology, Cambridge, MA	Architecture	6/73
MA Teachers Certification in Secondary Math	#0231745	9/78

APPOINTMENTS:

Commissioner, National Commission on Adult Literacy	6/06 – 6/08
National Council of State Directors of Adult Education, and National Adult Education Professional Development Consortium, President, Executive Committee, and	11/91 – 6/06
National Legislative Chair (represented field in negotiations with Congress)	11/93 - 10/97
Jamaica Plain Community Programs, member, Governing Board	9/86 - 2/88
Jamaica Plain Neighborhood Council, by appointment of Mayor Flynn	10/85 - 2/86
Massachusetts Committee on Adult Education, Co-Chair	6/82 - 6/85
Coalition For Cambridge, by appointment of Mayor Frances Duehay	12/80 - 8/81
Forest Hill Neighbors, a Jamaica Plain, Boston Neighborhood Association	2/80 - 11/81
KLH Child Development Center, member, Board of Directors	3/75 - 4/76

David Haselkorn
(b)(6)
(b)(6) **(781)338-3562(w)**
dhaselkorn@doe.mass.edu (b)(6)

Qualifications Summary

Innovative national education and non-profit leader with highly successful program development, research, policy, advocacy, public service marketing, and national media track record. Substantial policy, research, strategic planning, fundraising, polling, and philanthropic experience at the national, regional, state, and institutional levels. Strong conceptual and creative abilities with significant experience in education reform at the national level. Senior-level college administrative experience, as change agent

Experience

4/2009-Present **Associate Commissioner**
Educator Policy, Preparation, Licensure, and Leadership Development
Massachusetts Department of Elementary and Secondary Education

Oversee the Center for Educator Policy, Preparation, Licensure, and Leadership Development for Massachusetts Department of Elementary and Secondary Education. Provide policy direction and leadership for all phases of the educator career continuum for the Commonwealth of Massachusetts. Lead/supervise three units and a staff of more than 50. Member of the strategic leadership team (senior staff) for the Department, recognized as one of the most effective and forward-looking SEA's in the nation.

4/07-3/2009 **Senior Fellow**
Director of Policy Studies
Woodrow Wilson National Fellowship Foundation

Direct Foundation's new national teaching fellowship program, a national, state, and locally based strategy to establish the equivalent of a "Rhodes Scholarship" for high school teaching. Lead Annenberg National Teaching Fellowship and Ohio STEM Teaching Fellowship work. Oversee the Foundation's policy research and policy-related studies, public opinion and focus group research, and outreach. Maintain contacts with key state and national policy leaders.

Implement comprehensive strategies for growing the Fellowship at the state and national levels. Work with key state and university leaders to establish high quality clinically based Master's programs at leading national universities. Develop key policies and processes for outreach, recruitment, admissions, program development, mentoring, and induction. Direct evaluation strategies. Represent the Foundation before a variety of external audiences. Serve as a member of the Foundation's Senior Staff. Help raise more than $6 million in supporting funds for the Fellowship from leading national and regional grant makers.

1/05-3/07 **Vice President, Strategic and Policy Initiatives**
Lesley University

Advise University President on national policies, strategic positioning, advocacy, public relations, development, and strategic planning. Identify new business opportunities and nurture partnerships with states, districts, and national organizations. Represent the University before national audiences. Provide strategic guidance on foundations, federal relations, and communications. Oversee development of revised mission, University strategic vision, and a variety of new programs. Direct University initiatives related to Leadership for Social Change. Supervise Office of Public Affairs. Co-direct TEAC accreditation team. Help develop new PhD program in Leadership and Social Change. Advise/draft articles, op-eds/speeches for University President.

5/02 – 1/05 **Dean, National Education Programs and Policies/**
Associate Director, Center for Distance and Online Learning
Lesley University

Create an enhanced national presence for the Center and the University, oversee quality assurance processes for off-campus programs serving 8000 teachers in 23 states. Work closely with on and off-campus faculty and administration to help Lesley identify and meet the evolving teacher education and development needs of individuals, school districts, and states. Help guide new state entry and develop new partnerships.
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1/91 – 4/02 **President, Recruiting New Teachers, Inc.**

9/88 - 1/91 **Executive Director, Recruiting New Teachers, Inc.**

Lead unique national public service campaign designed to raise esteem for teaching; encourage individuals (particularly prospective candidates of color) to enter pathways into teaching; and foster improved local, state, and national policies and practices towards teacher recruitment, development, and diversity. Establish RNT as a leading voice for these issues in the national school reform arena.

Direct award-winning national public service advertising campaign designed to increase participation in the teacher profession. Oversee all aspects of most successful response campaign in the history of the Advertising Council (1,400,000 calls in eight years, $200-plus million in donated advertising placements).

Grow organization from one to twenty-two employees. Increase budget from $350,000 to $2.5 million annually. Oversee all RNT publications, PSAs, research/policy initiatives, national conferences, technical assistance efforts, and other program development. Establish RNT Urban Helpline, career counseling hotline serving the nations 50 largest urban school systems. Create RNT National Center for Precollegiate Teacher Recruitment, and the National Center for Teacher Recruitment, a unique federally funded national online clearinghouse and job bank portal.

Initiate networks, coalitions, and partnerships with major national education organizations. Represent RNT before national groups, U.S. Congress, and state legislatures advocating improved educational human resource development, school reform, and educational equity. Consult with a variety of organizations, states,

foundations, school districts, and the federal government on teacher development and diversity issues. Develop successful 5-city AmeriCorps project: The Urban Education Service Corps (securing $1,000,000 in funding from the National Corporation for National and Community Service). Lead statewide strategic planning task force for teacher recruitment in California resulting in more than $100 million in new state funding for teacher recruitment and induction in the Golden State. Assist in drafting major teacher quality and recruitment provisions of federal Title II Post-Secondary Education Reauthorization.

Raise over $20 million to fund the RNT campaign from leading national foundations, corporations, states, and the federal government. Work with prominent national board members to sustain and extend the reach of the organization via board development, fundraising, strategic planning, fiscal oversight, and board advocacy.

4/88-6/97 **Senior Advisor for Education Policy and Initiatives to David Rockefeller, Jr.**

Advise the Chairman of the Rockefeller Financial Services, Inc. (and former Chair, Rockefeller Brothers Fund) on strategies and issues related to education policy, philanthropy, the arts, and the environment. Represent Mr. Rockefeller on boards and committees; provide staff assistance for his ongoing work in education, collaborate on articles, speeches, etc. Maintain contacts with national, state, and local leaders involved in educational reform and philanthropy. Assist Mr. Rockefeller in administering his personal philanthropy.

1995-1997 **Senior Policy Advisor, National Commission on Teaching & America's Future (NCTAF).**

Provide strategic counsel to NCTAF's Executive Director and staff on national reform, communications, public engagement, and key advocacy issues. Help in shaping the Commission's policy, public outreach, and funding activities. Help in shaping the Commission's policy, public outreach, and funding activities. Author background drafts on teacher recruitment, selection/hiring, and induction.

11/85-4/88 **Director of Communications/Assistant to the President**
Lesley College (Cambridge, Massachusetts)

Advise President on policies relating to institutional quality and coherence, national affairs, educational policy, affirmative action, marketing, strategic planning, and advancement.
Draft major speeches, policies, and position papers on teacher education, undergraduate curriculum reform, national education and labor policies, and the future of higher education.
Member of College Senior Management and Planning Teams, responsible for developing three-year strategic and operating plans for the institution. Co-chair academic policy sub-committee. Develop first institution-wide mission statement.[1] Responsible for all college

[1] "Educating for the Professions That Put People First."

publications, media relations, and public relations programs. Oversee $500,000 publications budget, $170,000 office budget, and manage four person staff. Redesigned publications resulted in 40% increase in inquiries. College media profile dramatically increased (+2600%) over previous years.

2/83 - 11/85 **Director of Communications/Assistant to the President**
Bradford College

Senior college administrator at co-educational 425-student liberal arts college. Major architect, along with the President, in developing a national profile for Bradford's innovative "Practical Liberal Arts" curriculum. Developed programs to enhance the Bradford Plan in such areas as school/College collaborations, arts enrichment, critical discourse (writing, reading, speaking, and thinking skills across the curriculum), faculty development, and the co-curriculum.

Initiated and directed major gifts program resulting in more than $1 million dollars in successful grants from federal, corporate and foundation sources (NEH, FIPSE, EXXON, Ford Foundation, etc.). (Prior level of foundation giving was $600 annually.) Responsible for all College publications, media relations, government, community, and public relations programs. Directed commencement, College special events, and lecture series.

Significant national, regional, and local media visibility. CASE award winner for News and Information Programs. Bradford College named one of the most innovative colleges in American by U.S. News and World Report. 46% increase in inquiries; 29% increase in applications.

1/82-1/83 **Research Associate**
Carnegie Foundation for the Advancement of Teaching

One of four staff members for the Foundation's "Study of the American High School" (published as High School by Ernest L. Boyer), a nation-wide educational reform project. Collaborated in design of study's research agenda, focused interview guides, site visit protocols, and Foundation-initiated secondary school grants program. Analyzed field reports and made site visits on Foundation's behalf. Researched and wrote monographs and chapter drafts for High School. Prepared briefing material and policy papers for the National High School Advisory Panel and Carnegie Foundation President. Represented study before public and professional groups.

10/79 - 1/81 **Freelance Writer**
Jack Morton Productions
Paras/Kahane Productions

Conceived, wrote, and assisted in the production of trade association, corporate, and non-profit multimedia, film, filmograph, and video presentations. Developed other freelance communication projects; speech writing; proposal development; and brochure writing

and design.

10/79 - 6/80 **Paralegal/Researcher**
Hogan and Hartson

Assisted the firm's Community Service (pro bono) Administrator with legal and non-legal research and writing. Major areas of research: federal laws relating to education, housing discrimination, Section 504, and equal employment opportunity.

4/78-10/79 **Confidential Assistant to the Director**
Office for Civil Rights
U.S. Department of Health, Education, and Welfare

Provide personal assistance as reader and traveling aide to the Director, who was visually impaired. Staff participant in many of the decade's major civil rights debates including the Adams' litigation (post-secondary desegregation), Chicago School desegregation, and promulgation of Section 504 and Title Nine regulations. Assignments included, but were not limited to: substantive research; assistance in speech preparation, and correspondence preparation for the Director; assistance in copyediting material submitted for Federal Register publication and national dissemination.

8/75 - 12/75 **Writer/Editor**
Applied Urbanetics, Inc.

Editor and project coordinator, Catalog of National Institute of Education (NIE) Education Products 1985. Overall editorial and production responsibility for two-volume catalog of NIE-funded research projects.

Publications

Darling-Hammond, L and Haselkorn, D., "Reforming Teaching: Are We Missing the Boat?" Education Week (Commentary),Vol, XXVIII(27), 2009.

Levine, A. and Haselkorn, D., "Teaching at the Precipice: Strengthening Teacher Retention and Recruitment for the Long Haul." Education Week (Commentary), Vol. XXVIII(11), 2008.

Encore Performances: Tapping the Potential of Midcareer and Second-Career Teachers (Haselkorn, D. and Hammerness, K. Woodrow Wilson National Fellowship Foundation. 2008).

Teaching as a Second Career (Findings from a national opinion survey). Survey research: Peter D, Hart research Associates. Introduction and commentary: David C. Haselkorn. Woodrow Wilson National Fellowship Foundation. 2008).

McKenna, M. and Haselkorn, D, "NCLB and the Lessons of Columbine" USA Today Magazine, Vol.133 (2720), 2005.

"Why Shortcuts to Teaching Are Not the Rx We Need to Solve the Nation's Teacher Shortages" Education Week (Commentary), Vol. XXI(11), 2001.

The Essential Profession: American Education at the Crossroads (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 2001).

The Essential Profession: California Education at the Crossroads (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 2001).

How to Become a Teacher: A Complete Guide (Haselkorn, D. and Calkins, A., Recruiting New Teachers, Inc. 2000).

Learning the Ropes: Urban Induction Programs and Practices in the United States (Fideler, L. and Haselkorn, D., Recruiting New Teachers, Inc. 1999).

"Teacher Recruitment, Selection, and Induction: Policy Influences on Supply and Quality of Teachers" (Darling-Hammond, L., Berry, B., Haselkorn, D. and Fideler, L.). In Darling Hammond, L. and Sykes, G. (ed.), Teaching as the Learning Profession (Jossey-Bass, 1999).

The Essential Profession: A National Survey of Public Attitudes Toward Teaching, Educational Opportunity, and School Reform (Haselkorn, D. and Harris, L., Recruiting New Teachers, Inc. 1998).

The Essential Profession: A Survey of Public Attitudes in California Toward Teaching, Educational Opportunity, and School Reform (Haselkorn, D. and Harris, L. Recruiting New Teachers, Inc. 1998).

Take This Job and Love It: Making the Mid-Career Move To Teaching (Recruiting New Teachers, et al. Recruiting New Teachers, and Inc. 1998).

"Attracting, Preparing, and Supporting Teaching's Next Generation," (U.S. Department of Education. 1997).

"Shaping the Profession that Shapes America's Future, Initial Ideas for Teacher Development Across America and the Reauthorization of Title V of the Higher Education Act" (Haselkorn, et al. U.S. Department of Education. 1997).

"Tackling America's Teacher Deficit," Education Week (Backpage Commentary), Vol. XV(41), 1997.

Shaping the Profession That Shapes California's Future: The California Statewide Teacher Recruitment Action Plan (Haselkorn, et al. California Commission on Teaching, 1997).

"Breaking the Class Ceiling," Education Week (Backpage Commentary), Vol. XV(41), 1996.

Breaking the Class Ceiling: Paraeducator Pathways to Teaching (Recruiting New Teachers, Haselkorn, D. and Fideler, L. 1996).

"Teacher Recruitment, Selection, and Induction." Background Paper for the National Commission on Teaching and Americas Future (Haselkorn, D. and Berry, B., 1996)

Haselkorn, D. and Calkins, A. "Why Be a Teaching Professional: What Your Guidance Counselor Never Told You," Peterson's Guide to Colleges for Careers in Teaching. Princeton' Peterson's Guides (1996).

"The Schools We Want, The Teachers We Need," *Quality Teaching*, Vol. 4 (1), 1994.

Careers in Teaching Handbook (Recruiting New Teachers, Haselkorn, D., and Calkins, A. 1993).

State Policies to Improve the Teacher Workforce: Shaping the Profession that Shapes America's Future (Haslkorn, et al. Recruiting New Teachers, Inc. 1993).

Teaching's Next Generation: A National Study of Precollegiate Teacher Recruitment Programs (Haselkorn, et al. Recruiting New Teachers, Inc. 1993).

Ranslow, P.B., and Haselkorn, D. "Bradford College: Curriculum Reform and Renewal," Opportunity in Adversity: How Colleges Can succeed in Hard Times. San Francisco: Jossey-Bass, 1986.

Editor, "Opportunity for Excellence: The Lessons Learned by Five Colleges" (Conference Report of Ford Foundation Liberal Arts Project, 1985).

Levine A., and Haselkorn, D.; "Liberal Education's Civic Agenda," The Forum For Liberal Education, Vol. 7 (4), 1985.

Levine, A., and Haselkorn, D. "For the Sake of the Children: The Demise of Education Consensus in America," National Forum, Vol. 64 (2), 1984.

Awards

2001 Distinguished Achievement Award for Excellence in Education Publishing of the Association of Education Publishers for How To Become a Teacher: A Complete Guide.

1999 Distinguished Achievement Award for Excellence in Education Publishing of the Association of Education Publishers for Take This Job and Love It: Making the Mid-Career Move to Teaching.

1997 National Academy for Television Arts and Sciences, Finalist for National PSA Emmy Award.(I Teach)

1994 Distinguished Achievement Award for Excellence in Education Publishing of the Education Press Association for Teaching's Next Generation.

1994 Distinguished Achievement Award for Excellence in Education Publishing of the Education Press Association for Careers in Teaching Handbook.

1993 Bronze Effie (American Marketing Association Award for Excellence and Effectiveness in Public Service Advertising).(Heroes)

1992 Best of New York Citation of Excellence of the American Advertising Federation.(Heroes)

1992 Special recognition Award of The Council of the Great City Schools.

1992 Point of Excellence Award for Distinguished Contributions in Education of the Kappa Delta Pi.

1993 Kohl International Teaching Award.

1992 National Education Association Award for Advancement of Learning Through Broadcasting.

1991 National Academy for Television Arts and Sciences, Finalist for National PSA Emmy Award. (Be a Teacher. Be a Hero.)

1984 Council for the Advancement and Support of Education (CASE) Exceptional Achievement Award for News and Information Programs.

Other Experience

Board Member, National Board for Professional Teaching Standards and member of Executive Committee (2003-2009),

Chair, Ad Hoc Committee on Governance, National Board for Professional Teaching Standards

Member, Chancellor's Blue Ribbon Advisory Panel on Human Resources, NYC Public Schools

Keynote Speaker California Statewide Beginning Teacher Support and Assessment (BTSA) Conference, 2008

Advisor, Ensuring Access Panel, Center for the Future of Teaching and Learning (2005-2006)

Panelist and Presenter, AACTE Annual Meeting (2005)

Panelist/Presenter National Academy of Education-sponsored Town Meeting on NCLB (2004)

Presenter/Facilitator, Blackboard Invitational Summit on Online-Learning (2004)

Panelist, National Clearinghouse on Alternative Teacher Certification (2004).

Panelist, AERA Symposium on Alternative Routes to Teaching (2003).

Keynote Speaker, Florida Teacher Quality, Recruitment, and Retention Symposium (2003).

Panelist and Presenter, Hechinger Institute Colloquium on Politics and the Press (2002).

Panelist and Presenter, Education First Washington Policymaker Forum in No Child Left Behind (2002).

Panelist and Presenter, American Youth Policy Forum Capitol Hill Seminar on Teacher Quality and ESEA (2002).

Keynote Presenter, Texas State Teacher Recruitment Interagency Planning Committee, Texas Education Agency (2001).

Guest Speaker, Hawaii Business Roundtable, Hawaii Senate and Assembly Education Committees, and Hawaii Teaching Standards Board (2001).

Panelist, AERA Symposium on Teacher Recruitment (2001).

Keynote Speaker, Broward County Academy of Teaching Excellence/South Florida Annenberg Project District-wide Professional Development Workshop (2001).

Keynote Speaker, L.A. Community College District Symposium on Teacher recruitment and Retention (2001).

Plenary Speaker, ECS/NGA Title II Technical Assistance Workshop (2001).

Keynote Speaker, Minnesota Teacher Quality Policy Forum (2000).

Keynote Speaker, California Center for the Future of Teaching and Learning, Fall Forum (2000).

Keynote Speaker, Performance Institute, National Summit on Recruiting, Hiring, Training, and Retaining Quality Teachers (2000).

Expert Witness, U.S. House of Representatives Subcommittee on Postsecondary Education Hearings on Teacher Quality (2000).

Session Moderator, "Teacher Quality: A Conversation Among Southern Governors," Southern Governors Association Summit (2000).

Keynote Speaker, Lesley University Board of Trustees Annual Meeting (2000).

Keynote speaker, California Education Policy Seminar (1999).

Presenter/Leader, Harvard Graduate School of Education Faculty Discussion Group: "Teacher Recruitment, Induction, and Development" (1999).

Keynote speaker, DeWitt Wallace Reader's Digest Fund Pathways to Teaching Careers National Scholars Conference (1999).

Consultant/Member, Illinois Task Force on Minority Teacher Recruitment (1999).

Presenter, Education Week Editorial Board Quality Counts Planning Meeting (1999).

Presenter, Shaping America's Future, an AFT/NEA Conference on Teacher Quality (1998).

Panelist/Expert, National Association of State Boards of Education Task Force on Teacher Quality (1998).

Keynote Speaker/Convener, 5th Annual Pathways to Teaching Conference, (1998).

Keynote Speaker, California Center for the Future of Teaching and Learning, Fall Forum (1998).

Lead Facilitator: A Conversation on Teacher Quality/The Council of the Great City Schools Annual Meeting (1998).

Keynote Speaker, California Intersegmental Coordinating Council Symposium on the Future of Teaching (1997).

Keynote Speaker, California Education Policy Seminar (1997).

Presenter, National Commission on Teaching and America's Future (Launch of Commission Report 1996).

Keynote Speaker, Project Induct—North Carolina Statewide Induction Program (1996).

Co-founder, Urban Education Service Corps, Urban Teacher Collaborative (national alliance for teacher development with the Council of Great City Schools, and the Council of Great City Colleges of Education).

Co-convener, (with the OERI, NABSE, and Phi Delta Kappa) "Ensuring Excellence and Diversity in the Teaching Profession, a National Shareholders Conference" (1996).

Consultant Convener, California Commission on Teacher Credentialing Task Force on Statewide Teacher Recruitment Strategies, (1996).

"America's Teacher Diversity Imperative," Plenary Address, Tenth Annual National Conference on Recruitment and Retention of Minorities in Education (1996).

Keynote Speaker, The 1996 Beginning Teacher Induction Network Conference (1996).

Keynote Speaker, American Association of School Personnel Administrators Annual Meeting (1996).

"Recruitment for Diversity," Convener and Moderator, Plenary Symposium Panel, American Association of Colleges of Teacher Education Annual Meeting (1996).

"Urban Education's Professional Development Challenge," Panel Presentation, American Association of Colleges of Education Annual Meeting (1996).

"Teaching at Its Best," Panel Presentation, National Association of State Boards of Education Annual Meeting (1996).

Panel Convener and Moderator "Urban Education's Professional Development Challenge: Issues and Opportunities. " Council of the Great City Schools of Education, 1995.

"America at the Crossroads: Precollegiate Teacher Recruitment and the Promise of Reform." Keynote Address Third Annual Pathways to Teaching Careers Precollegiate Teacher Recruitment Conference, (1995).

Conference Convener/Keynote Speaker: California's Teacher Development and Diversity Challenges (co-sponsored with the California Commission on Teacher Credentialing, 1994).

Keynote Speaker, First Annual Paraeducator Pathways to Teaching Careers Conference (1995).

Presenter, California Education Policy Seminar (1995).

"Shaping The Profession That Shapes America's Future," Keynote Address, Missouri State School Superintendent's Annual Meeting (1994).

"Systemic Teacher Development" Keynote address State Education Leadership Conference, Consortium for Policy Research in Education, Harvard Graduate School of Education - September, 1993.

"America's Education Human Resource Challenges," Keynote address, National Council for Accreditation of Teacher Education State Accreditation Teams Annual Meeting, Washington, D.C., - December 1993.

Co-convener (with National Conference of State Legislatures), "State Policies to Improve the Teacher Workforce,"1992.

Panel Convener, "Systemic Approaches to Human Resource Development," Council of Great City Schools 1992 Annual Meeting.

Former Trustee, Teaching Matters, New York, NY.

Former Trustee, The Shady Hill School, Cambridge, MA.

Consultant/Advisor, "Testing Assumptions: A National Survey of Teachers' Attitudes Towards School Reform" (LH Research for the Ford Foundation).

Member, National Advisory Panel, National Partnership for Excellence and Accountability in Teaching (NPEAT).

Member, National Advisory Group, NCATE Professional Development Schools Standards Project.

Advisory Panel Member, Center for Early Adolescence Panel on Strengthening Teacher Preparation for the Middle Grades.

Member, Advisory Board, New Teacher Recruitment and Retention Project, Teachers College, Columbia University.

Member, Advisory Board, Danforth Foundation, Dorothy Danforth Compton Fellowship Program.

Member, Advisory Board, National Foundation for the Improvement of Education Study of Professional Education.

Member, Advisory Board, Cambridge College (Cambridge, MA).

Member, Advisory Board, National Center for Transition to Teaching.

Member, California Public Education Partnership.

Member, Advisory Board, California Center for the Future of Teaching and Learning

Board Associate, National Center for Education and the Economy (1988-1993).

Member, Blue Ribbon Panel on Attracting Minorities into Teaching Mathematics of the SUMMA Project, Mathematical Association of America.

Project Director and Conference Coordinator, Ford Foundation-sponsored conference on the future of liberal arts colleges, 12/84.

Presenter, Pathways to Teaching Careers, a National convocation on increasing diversity in teaching sponsored by the DeWitt Wallace-Reader's Digest Fund.

Consultant/Initiator: School Choice: a national study of the Carnegie Foundation for the Advancement of Teaching (Princeton, NJ, 1992).

Consultant, National Board for Professional Teaching Standards.

Invited Speaker, American History of Education Society Annual Meeting. (Topic: Reform Movements in American Secondary Education, 1982).

Presidential political campaign policy and transition team experience.

Congressional Intern, The Honorable Dante B. Fascell (ret.), 1970.

Education

Attended Bennington, St. Johns, and Sarah Lawrence Colleges. No degree.

Karla Brooks Baehr
(b)(6)
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WORK HISTORY

7/08 – present	Deputy Commissioner Massachusetts Department of Elementary and Secondary Education
7/00 – 6/08:	Superintendent of Schools Lowell (MA) Public Schools
9/95 - 1/00	Assistant Professor Lesley University School of Education Graduate Programs in Educational Administration and Teaching, Learning and Assessment Cambridge, MA
8/98 – 8/99:	Interim Superintendent of Schools Lexington (MA) Public Schools
7/86 – 8/95:	Superintendent of Schools Wellesley (MA) Public Schools
7/83 – 6/86:	Associate Superintendent for Curriculum and Instruction Wellesley (MA) Public Schools
7/78 – 6/83:	K-12 Professional Personnel and Curriculum Administrator Acting Superintendent of Schools (7/81-12/81) Administrative Assistant to the Superintendent (7/78-6/79) Franklin (MA) Public Schools
9/76 – 6/78:	Junior High School Social Studies/Language Arts Teacher
9/72 – 6/75:	Arlington (MA) Public Schools
9/70 – 6/72:	High School Social Studies Teacher Methuen (MA) Public Schools

SELECTED PRESENTATIONS AND WORKSHOPS

Special Education: a systems approach to closing the achievement gap, keynote address at the Third Annual Special Education Day sponsored by SPEDCO, November 2007

The Hancock Case, a superintendent's perspective, address at the Legislators' Breakfast sponsored by EDCO, the Greater Boston Education Collaborative, spring 2004

'Two-fers', 'trade offs' and other ways to make budget building (and cutting) a tool for school improvement, guest lecture, Graduate School of Education, UMass Lowell, 2004

Leading as Teaching, keynote address at the Annual Conference of the Massachusetts Association of Secondary School Principals (MASSP), July 2003

The Lowell Program: an urban public school-university partnership, presentation at the National Staff Development Council's Annual Conference, December 2002

Leading as Teaching, keynote address at the "Aspiring Leader Conference", sponsored by the Massachusetts Department of Education, October 2002

Core Course Redesign Proposal, presentation to the faculty at Lesley College, May 1998

An Integrated College/Public School Model for Staff Development, Annual conference, Technology Learning and Staff Development for the 21st Century, Washington, D.C., May 1997, (co-presenter)

Collaboration: a key to reform, keynote address for the third annual MASCD High School Conference, Milford, MA, September 1995

High School-College Connections: a Dialogue, The College Board National Forum, Washington, DC, October, 1994 (co-leader)

High School College-Connections, Harvard Graduate School of Education, January 1994, (co-organizer and moderator for a three-day national *Dialogue* for leaders from nineteen high school-college/university teams from across the U.S.)

The Press and Public Schools, Boston University, 1993-1995 (guest lecturer)

Facing Tomorrow: a conversation with educational leaders, Harvard Graduate School of Education, May 1993 (moderator)

Getting Started with Systems Thinking in the Schools, American Association of School Administrators (AASA) Annual Conference, Orlando, February 1993 (co-presenter)

Systems Thinking and its Implications for Special Education, AASA Annual Conference, Orlando, February 1993 (co-presenter)

Making Change, opening address at annual conference of the Technology Education Association of Massachusetts, Worcester, January 1993 (speaker)

On Purposes and Beliefs, Keynote address, 4MAT Renewal Conference, Chicago, June 1992

Impacts of resource constraints: school finance elections in Massachusetts, American Education Finance Association Annual Conference, New Orleans, March 1992 (presenter)

Total quality: some implications for businesses and schools, keynote address, Partnerships for Excellence Conference sponsored by Department of Education and Business Roundtable, Southboro (MA), March 1992

An approach to improving African-American achievement, address at METCO Directors' annual Conference, Boston, May 1990

Workshops on urban economics and local history for Tufts University and Massachusetts Council for the Social Studies in Boston area school districts, 1975-1979

PUBLICATIONS

"Leading as Teaching", Perspectives, (Massachusetts ASCD), fall, 2004 (lead author)

"Using Systems Thinking to Improve Student Learning", Quality Network News, AASA, July/August, 1994 (co-author)

"Systems Thinking About Learning: The Paradigm Shift", Quality Goes to School, AASA, 1993 (co-author)

"Spending Matters", Boston Sunday Globe, November 3, 1991

Governing Yourself, Chicago, SRA, 1980: junior high school civics textbook (co-author)

Boston in the Colonial Period, Cambridge, ABT, 1979: text and activity book on urban history (co-author)

"Creating a Textbook: Linking Process and Content", Curriculum Review, August, 1978 (co-author)

SELECTED PROFESSIONAL ASSOCIATIONS & ACTIVITIES

Alumni Council, Harvard Graduate School of Education, member, 1989-1993; Chair, 1992-93
Boston Public Schools, School Improvement Coach, 1999-2000
Empowering Multicultural Initiative (EMI), an eight-town collaborative formed in 1990 to raise academic achievement of African-American students, funded in 1994 through a *Goals 2000* grant, Board Chair, 1991-95
Harvard Alumni Association, appointed representative of Harvard Graduate School of Education, 1993-95
Harvard Graduate School of Education, *The Harvard Seminar for New Superintendents*, faculty member, 1996-98
Harvard Graduate School of Education, *Urban Superintendents Program,* mentor, 2003-2004
Massachusetts Association of School Superintendents (MASS), member, 1981, 1986 - 2008
Massachusetts *Commission on the Common Core of Learning*, member, 1993-94
Massachusetts Department of Education, *Stakeholder Working Group on Accountability*, representative of Urban Superintendents' Network, 2007 - 2008
Massachusetts High Technology Council's *K-12 Education Leadership Group*, member, 2007 – 2008
The Readiness Project, Subcommittee on Accountability and Assistance, Co-chair, 2007-2008
Tri-County Superintendents' Regional Roundtable, Chair, 1989-90
Urban Superintendents' Network (Massachusetts), Co-Facilitator, 2000-2008

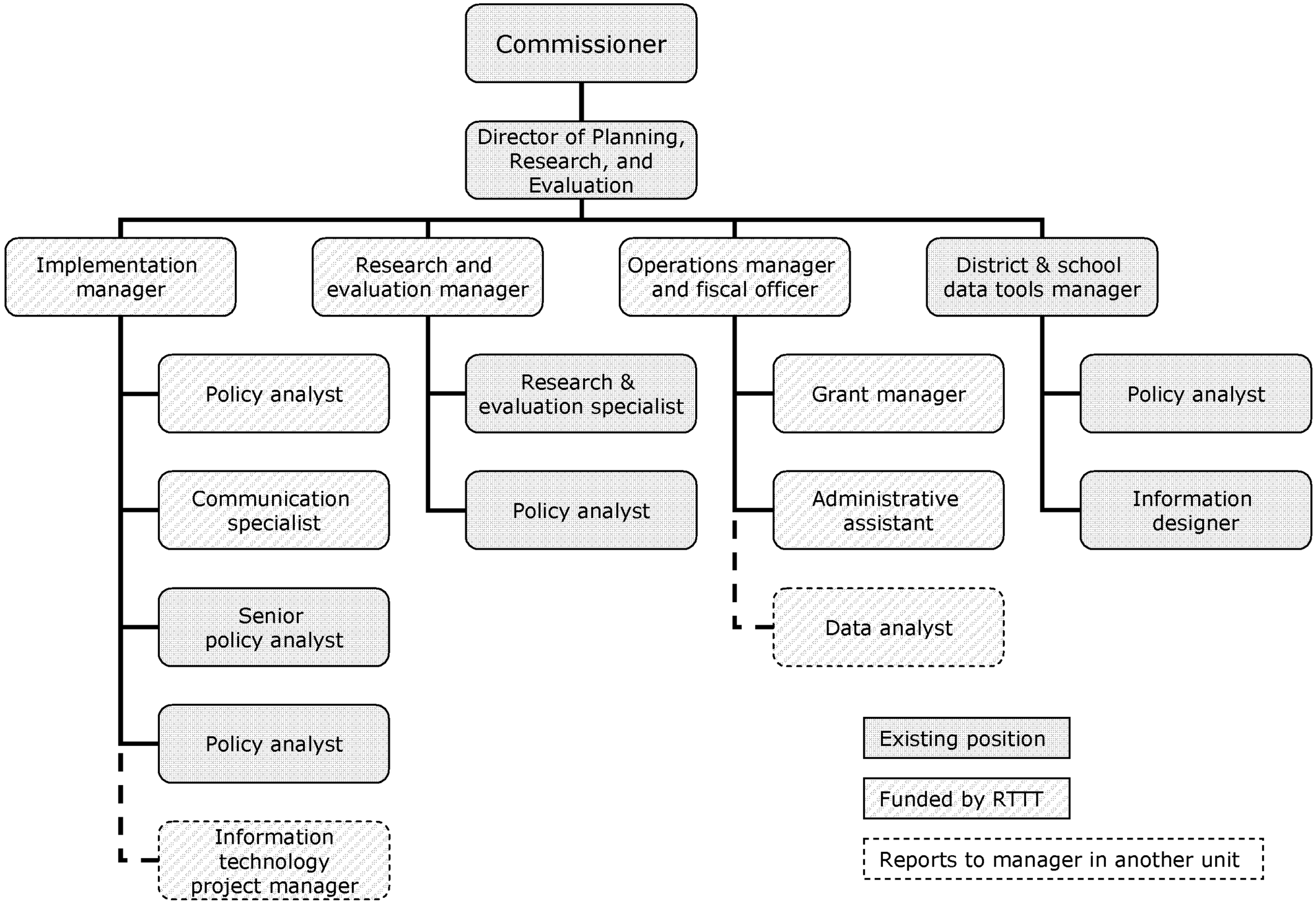
EDUCATIONAL BACKGROUND

Ed.D.	Boston University	1991	major: educational administration
	Dissertation:		A Study of Proposition 2 ½ Override Voting to Support Public Schools in Massachusetts' Municipalities in 1990
Ed.M.	Harvard University	1976	major: education
A.B.	Middlebury College	1970	major: history The Phi Beta Kappa Senior Prize

<u>Other Coursework and Training</u>

M.I.T.	Institute on Systems Dynamics	1991
Efficacy Institute	Efficacy Training for Administrators	1991
AASA	Leadership for Learning Organizations	1992
AASA	Statistical Methods for Total Quality Schooling	1993
Schoolworks	Massachusetts Charter School Inspection Training	1999
EDCO	*Leading the Learning: Professional Practice in a Standards-Based Environment,* a 45-hour course taught by Dr. Louise Thompson	1999
COSI	Spanish Language Institute	2001 & 2002
Research for Better Teaching	*The DNA of School Leadership*	2004 & 2005
National Institute for School Leadership (NISL)	*Executive Development Program for Principals*	2006 - 2008

Appendix A7: Race to the Top Program Management Structure



Appendix A8: Job Descriptions for Program Management Staff

Implementation manager
Provides general oversight on implementation; drives results through effective program management; establishes goals and benchmarks for all projects; coordinates with staff embedded in program units; ensures district accountability and support.

Operations and grants manager
Oversees all operational functions; coordinates grant review with program units; disburses funds; reports on and monitors grants; provides assistance to districts on grant requirements.

Fiscal officer
Provides fiscal accountability; reports on and monitors budgets; manages contracts issued under RTTT; reviews and processes all fiscal documents funded from RTTT; maintains internal spending plan and monitors expenditures to ensure proper reconciliation of funds.

Research and evaluation manager
Designs the overall evaluation strategy for the grant; designs and manages individual program evaluations to measure effectiveness of policies and programs; identifies effective and ineffective practices and key learnings from program implementation.

Policy analyst
Supports effective implementation through performance measure tracking and reporting, advisory memos, etc; develops reports and analysis to support accountability for progress and performance.

Data analyst
Provides data for federal and state reporting, program monitoring, evaluation, and research purposes; conducts other data analysis.

Data systems program manager
Oversees all data systems implementations for RTTT initiatives.

Communication specialist
Develops a communications strategy and implements it with the field; disseminates best practices and lessons learned; coordinates advisory group meetings and convening events with participating districts; produces publications.

Administrative assistant
Supports the OSPRE team in all the above functions.

Appendix A9: Budget Summary and Project Budgets, With Narrative

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	$2,929,375	$3,298,619	$3,274,943	$2,435,188	$11,938,124
2. Fringe Benefits	$814,366	$917,016	$910,434	$676,982	$3,318,799
3. Travel	$479,080	$400,080	$366,160	$366,160	$1,611,480
4. Equipment	$874,000	$1,091,000	$40,000	$30,000	$2,035,000
5. Supplies	$140,050	$36,800	$31,250	$22,000	$230,100
6. Contractual	$28,495,989	$25,102,340	$19,108,677	$13,933,962	$86,640,968
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$950,750	$1,578,250	$1,580,750	$1,478,250	$5,588,000
9. Total Direct Costs (lines 1–8)	$34,683,610	$32,424,105	$25,312,213	$18,942,542	$111,362,471
10. Indirect Costs	$1,907,670	$2,160,733	$2,101,630	$1,714,900	$7,884,934
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$1,914,010	$7,929,203	$7,261,759	$7,147,799	$24,252,770
13. Total Costs (lines 9–12)	$38,505,291	$42,514,041	$34,675,602	$27,805,241	$143,500,175
14. Funding Subgranted to Participating LEAs (50% of Total Grant)	$38,505,291	$42,514,041	$34,675,602	$27,805,241	$143,500,175
15. Total Budget (lines 13–14)	$77,010,581	$85,028,082	$69,351,204	$55,610,482	$287,000,349

BUDGET PART I: BUDGET SUMMARY NARRATIVE

Massachusetts' proposed Race to the Top budget totals $287 million. The budget includes $24 million in Supplemental Funding for Participating LEAs, an allocation from the state's share of funds to support LEAs in implementing critical initiatives. This budget focuses on investments that will continue to reap benefits after the four-year grant period, rather than activities that will be difficult to sustain without grant funding. We have also chosen to contract for many services rather than add agency staff, maintaining a lean central office by leveraging the expertise and capacity of our state's technology, business, and nonprofit sectors. Further, we will coordinate, reallocate, or repurpose approximately an additional $33.8 million (19% of available funds) and 53.0 FTEs (10% of agency staff) from federal and state funding sources to support our proposed activities (see Appendix A10). We have included $12.5 million (4.4% of the budget) for independent program evaluation to support our commitment to holding ourselves accountable for results, identifying best practices, and making work available nationally for others to learn from.

The list of projects is included on the following page. The project-level budget narrative includes a project-level budget table with 4-year costs in the required budget categories for each project, as well as a detailed description of and justification for the line-item costs. The project-level descriptions also include information on projected state-LEA cost-sharing, in the form of the estimated percentage of total costs that the state will contribute to specific line items and projects. In addition, the project-level budget narratives include information on other funding sources (e.g., Title IG) that will be used to leverage Massachusetts' proposed Race to the Top investments.

List of Projects Included in the Project-Level Budget Narrative

Project Name	Proposal Section*	Other Associated Criteria*	Total Costs**
1. Overall program and grant management	(A)(2)(i)	(A)-(E)	$19,302,595
2. Disseminate the Common Core Standards	(B)(3)		$576,758
3. Create a unified PreK–12 teaching and learning system	(B)(3)	(C)(3), (D)(5)	$12,621,819
4. Expand implementation of proven secondary school programs, policies, and incentives	(B)(3)	(E)(2)	$4,564,232
5. Information technology project management	(C)(2), (C)(3)		$429,400
6. Transform state data systems	(C)(2)	(A)-(E)	$21,240,037
7. Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system	(C)(3)	(B)(3), (D)(5)	$8,909,866
8. Strengthen and expand educator training and supports for data use	(C)(3)	(A)-(E)	$1,717,445
9. Improve teacher and principal effectiveness based on performance	(D)(2)		$20,993,628
10. Ensure equitable distribution of effective teachers and principals	(D)(3)	(E)(2)	$13,961,142
11. Improve the effectiveness of teacher and principal preparation programs	(D)(4)		$4,806,322
12. Provide effective support to teachers and principals	(D)(5)	(B)(3), (C)(3), (E)(2)	$9,983,560
13. Develop a specialized corps of turnaround teacher and leader teams	(E)(2)	(D)(3), (D)(5)	$7,647,978
14. Build capacity of proven partners to support struggling schools	(E)(2)		$2,713,478
15. Build district capacity to intervene in struggling schools	(E)(2)	(C)(2)	$9,883,917
16. Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools	(E)(2)		$4,148,000

*Note that most of the proposed projects are interconnected across multiple Race to the Top criteria, as described in the proposal narrative. The above table lists the proposal section in which the description of each project is primarily located in one column; the next column lists other associated criteria.

**Total costs include state direct and indirect costs and Supplemental Funding for Participating LEAs, but do not include the 50% of the budget subgranted to Participating LEAs.

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: 07/01/2009 To: 06/30/2010

Approving Federal agency: _X_ED ___Other

(Please specify agency): _____

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.

COPY

INDIRECT COST RATE AGREEMENT
STATE EDUCATION AGENCY

ORGANIZATION:

Massachusetts Department of Education
350 Main Street
Malden, MA 02148

DATE: JUL 3 1 2009

AGREEMENT NO. 2008-204

FILING REFERENCE: This replaces previous Agreement No. 2006-180A dated October 14, 2008

The purpose of this Agreement is to establish indirect cost rates for use in awarding and managing of Federal contracts, grants, and other assistance arrangements to which Office of Management and Budget (OMB) Circular A-87 applies. The rates were negotiated by the U.S. Department of Education pursuant to the authority cited in Attachment A of OMB Circular A-87.

This agreement consists of four parts: Section I - Rates and Bases; Section II - Particulars; Section III - Special Remarks; and, Section IV -Approvals.

Section I - Rate(s) and Base(s)

TYPE	Effective Period From	Effective Period To	Rate	Base	Coverage Location	Coverage Applicability	
Fixed	07-01-08	06-30-09	14.3%	1/	All	Restricted	2/
Fixed	07-01-08	06-30-09	24.4%	1/	All	Unrestricted	3/
Predetermined	07-01-09	06-30-10	14.3%	1/	All	Restricted	2/
Predetermined	07-01-09	06-30-10	24.4%	1/	All	Unrestricted	3/

1/ Total direct cost less: capital expenditures, alterations, renovations, flow-through funds, and the portion of each competitive bid sub-award in excess of $25,000 regardless of the period covered by that sub-award.

2/ For use on Federal programs which require use of a restricted rate as defined by 34 CFR 75.563 and 34 CFR 76.563.

3/ For use on Federal programs which do not require the use of a restricted rate as defined by 34 CFR 75.563 and 34 CFR 76.563.

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs. However, in accordance with Office of Management and Budget Circular A-87, Attachment B (8)(d)(3), payments to separating employees for unused leave are treated as indirect costs.

Capitalization Policy: Items of equipment costing $1,000 or more with a useful life in excess of one year are capitalized.

Section II - Particulars

SCOPE: The indirect cost rate(s) contained herein are for use with grants, contracts, and other financial assistance agreements awarded by the Federal Government to the Massachusetts Department of Education and subject to OMB Circular A-87.

LIMITATIONS: Application of the rate(s) contained in this agreement is subject to all statutory or administrative limitations on the use of funds, and payment of costs hereunder is subject to the availability of appropriations applicable to a given grant or contract. Acceptance of the rate(s) agreed to herein is predicated on the conditions: (A) that no costs other than those incurred by the State Education Agency were included in indirect cost pools as finally accepted, and that such costs are legal obligations of the State Education Agency and applicable under the governing cost principles; (B) that the same costs that have been treated as indirect costs are not claimed as direct costs; (C) that similar types of information which are provided by the State Education Agency, and which were used as a basis for acceptance of rates agreed to herein, are not subsequently found to be materially incomplete or inaccurate; and (D) that similar types of costs have accorded consistent accounting treatment.

ACCOUNTING CHANGES: Fixed or predetermined rates contained in this agreement are based on the accounting system in effect at the time the agreement was negotiated. When changes to the method of accounting for cost affect the amount of reimbursement resulting from the use of these rates, the changes will require the prior approval of the authorized representative of the cognizant negotiation agency. Such changes include, but are not limited to, changing a particular type of cost from an indirect to a direct charge. Failure to obtain such approval may result in subsequent cost disallowances.

FIXED RATE: The negotiated rate is based on an estimate of the costs which will be incurred during the period to which the rate applies. When the actual costs for such period have been determined, an adjustment will be made in a subsequent negotiation to compensate for the difference between the cost used to establish the fixed rate and the actual costs.

NOTIFICATION TO OTHER FEDERAL AGENCIES: Copies of this document may be provided to other Federal agencies as a means of notifying them of the agreement contained herein.

AUDIT: If a rate in this Agreement contains amounts from a cost allocation plan, future audit adjustments which affect this cost allocation plan will be compensated for during the rate approval process of a subsequent year.

Section III - Special Remarks

1. This Agreement is effective on the date of approval by the Federal Government.

2. Questions regarding this Agreement should be directed to the Negotiator.

3. Approval of the rate(s) contained herein does not establish acceptance of the Organization's total methodology for the computation of indirect cost rates for years other than the year(s) herein cited.

Section IV - Approvals

For the State Education Agency:

Massachusetts Department of Education
350 Main Street
Malden, MA 02148

Signature

Name

ANTHONY P. DeLORENZO
CHIEF FISCAL OFFICER

Title

9-3-2009

Date

For the Federal Government:

US Department of Education
OCFO/FIPAO/ICG
830 First Street, NE
Washington, DC 20202-4450

Signature

Mary Gougisha

Name

Director, Indirect Cost Group

Title

JUL 3 1 2009

Date

Paul J. Brickman

Negotiator

(202) 377-3831

Telephone Number

BUDGET PART II: PROJECT-LEVEL BUDGET NARRATIVE

Budget Part II: Project-Level Budget Table
Project Name: Overall program and grant management
Associated with Criteria: (A)(2)(i)
(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	$695,000	$715,850	$737,326	$759,445	$2,907,621
2. Fringe Benefits	$193,210	$199,006	$204,976	$211,126	$808,319
3. Travel	$60,240	$60,240	$60,240	$60,240	$240,960
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$50,500	$11,500	$11,500	$11,500	$85,000
6. Contractual	$3,617,500	$3,312,500	$3,212,500	$3,212,500	$13,355,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$87,000	$67,000	$67,000	$67,000	$288,000
9. Total Direct Costs (lines 1-8)	$4,703,450	$4,366,096	$4,293,542	$4,321,811	$17,684,899
10. Indirect Costs	$408,322	$400,427	$401,024	$407,922	$1,617,695
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)	$5,111,772	$4,766,524	$4,694,566	$4,729,733	$19,302,595

Project Name: Overall program and grant management
Associated with Criteria: (A)(2)(i)

1) **Personnel**
   - *Implementation manager:* The state will hire 1 FTE to provide general oversight on implementation; drive results through effective program management; establish goals and benchmarks for all projects; coordinate with staff embedded in program units; and ensure district accountability and support.
   - *Research and evaluation manager:* The state will hire 1 FTE to design the overall evaluation strategy for the grant; design and manage individual program evaluations to measure effectiveness of policies and programs; and identify effective and ineffective practices and key learnings from program implementation.
   - *Policy analyst:* The state will hire 1 FTE to support effective implementation through performance measure tracking and reporting, and advisory memos; and to develop reports and analysis to support accountability for progress and performance.
   - *Operations and grant manager:* The state will hire 1 FTE to oversee all operational functions; coordinate grant review with program units; disburse funds; report on and monitor grants; and provide assistance to districts on grant requirements.
   - *Fiscal officer:* The state will hire 1 FTE to provide fiscal accountability; report on and monitor budgets; manage contracts issued under RTTT; and maintain internal spending plan and monitor expenditures to ensure proper reconciliation of funds.
   - *Communication specialist:* The state will hire 1 FTE to develop a communication strategy and implement it with the field; disseminate best practices and lessons learned; coordinate advisory group meetings and convenings with participating districts; and produce publications.
   - *IT project manager:* The state will hire 1 FTE to oversee all data systems implementations for RTTT initiatives.
   - *Data analyst:* The state will hire 1 FTE to provide data for federal and state reporting, program monitoring, and evaluation; and to conduct other data analysis for research purposes.
   - *Administrative assistant:* The state will hire 1 FTE to support the project management team in all the above functions.

Note that all personnel estimates in all project budgets include an estimated inflation rate of 3% in Years 2-4.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Implementation manager	100%	$85,000	$85,000	$85,000	$87,550	$90,177	$92,882
Research and evaluation manager	100%	$80,000	$80,000	$80,000	$82,400	$84,872	$87,418
Policy analyst	100%	$65,000	$65,000	$65,000	$66,950	$68,959	$71,027
Operations and grant manager	100%	$85,000	$85,000	$85,000	$87,550	$90,177	$92,882
Fiscal officer	100%	$85,000	$85,000	$85,000	$87,550	$90,177	$92,882
Communication specialist	100%	$65,000	$65,000	$65,000	$66,950	$68,959	$71,027
IT project manager	100%	$110,000	$110,000	$110,000	$113,300	$116,699	$120,200
Data analyst	100%	$65,000	$65,000	$65,000	$66,950	$68,959	$71,027
Administrative assistant	100%	$55,000	$55,000	$55,000	$56,650	$58,350	$60,100

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Implementation manager	27.8%	$23,630	$24,339	$25,069	$25,821	$98,859
Research and evaluation manager	27.8%	$22,240	$22,907	$23,594	$24,302	$93,044
Policy analyst	27.8%	$18,070	$18,612	$19,170	$19,746	$75,598
Operations and grant manager	27.8%	$23,630	$24,339	$25,069	$25,821	$98,859
Fiscal officer	27.8%	$23,630	$24,339	$25,069	$25,821	$98,859

Communication specialist	27.8%	$18,070	$18,612	$19,170	$19,746	$75,598
IT project manager	27.8%	$30,580	$31,497	$32,442	$33,416	$127,935
Data analyst	27.8%	$18,070	$18,612	$19,170	$19,746	$75,598
Administrative assistant	27.8%	$15,290	$15,749	$16,221	$16,708	$63,968

3) Travel

- *Grant and project management:* To visit participating districts for program monitoring, site visits, and other program management support functions. Assumes six staff each make two instate trips per month at 100 miles per trip at $0.40 per mile, and other staff make 3 instate trips per year at 100 miles per trip at $0.40 per mile.
- *US ED travel:* Assumes OSPRE director plus two staff will need to attend out-of-state meetings with US ED twice per year.
- *Professional development:* Travel for professional development of RTTT staff members. Assumes each staff person attends one conference or similar event per year at $2,000 per trip.
- *External advisory council:* Estimated costs of travel expenses for External Advisory Group. Assumes one in-person meeting per year (and one conference call), with 8 national members at $2,000 per trip plus 2 international members at $4,000 per trip.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Grant and project management	24x6 people, 3x4 people	$40	$6,240	$6,240	$6,240	$6,240	$24,960
US ED travel	2x3 people	$2,000	$12,000	$12,000	$12,000	$12,000	$48,000
Professional development	1x9 people	$2,000	$18,000	$18,000	$18,000	$18,000	$72,000
External advisory council	1x8 national, 1x2 international	$2,000 natl., $4,000 intl.	$24,000	$24,000	$24,000	$24,000	$96,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$4,500	$4,500	$4,500	$4,500	$18,000
Conference supplies	Name tags, folders, and other non-printed materials for conferences	$5,000 per year	$5,000	$5,000	$5,000	$5,000	$20,000
Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$18,000	$0	$0	$0	$18,000
Printers	One black-and-white and one color printer to meet the needs of 9 new employees, plus 3 additional printers to support the work of other RTTT-embedded staff	$2,000	$10,000	$0	$0	$0	$10,000
Software	For research and evaluation manager and policy analyst	$1,500	$3,000	$0	$0	$0	$3,000
Other supplies	Other supplies needed to support project work	$2,000	$2,000	$2,000	$2,000	$2,000	$8,000
Copier	Project management staff and other RTTT-embedded staff will require one black-and-white	$8,000	$8,000	$0	$0	$0	$8,000

	networked copier						

6) Contractual

- *Graphic design:* Contract with graphic designer to design overall "look and feel" for RTTT materials and to design individual print products as needed.
- *Copyediting:* Copyediting services for publications and other written materials.
- *Meeting logistics:* Contract to manage logistics for convening advisory groups.
- *Professional development for all staff involved in RTTT:* Contract for professional development for all ESE staff involved in RTTT on effective project management and organizational change management.
- *Contract management:* Vendor to manage IT contracts, procurement, and RFPs.
- *Program evaluation:* Budget to evaluate all project initiatives as described in (A)(2).

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Graphic design	$80,000	n/a	$20,000	$20,000	$20,000	$20,000	$80,000
Copyediting	$40,000	n/a	$10,000	$10,000	$10,000	$10,000	$40,000
Meeting logistics	$30,000	n/a	$7,500	$7,500	$7,500	$7,500	$30,000
Professional development	$300,000	n/a	$250,000	$50,000	$0	$0	$300,000
Contract management	$405,000	n/a	$205,000	$100,000	$50,000	$50,000	$405,000
Program evaluation	$12.5M	n/a	$3.125M	$3.125M	$3.125M	$3.125M	$12.5M

7) Training Stipends

None

8) Other

- *Other conference costs*: Covers cost of space rental and food for the annual half-day technical assistance sessions; meetings of external and implementation advisory groups; and other convenings of participating LEAs.
- *Printing*: Covers cost of printing technical assistance and best practices materials, including materials for conferences.

- *Professional development fees for RTTT project management staff*: Professional development of RTTT project management staff. $1,000 per staff person per year for conference registration fees, purchasing materials, etc.
- *Project management software*: Server-based project management software to support effective coordination and implementation of projects.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total
Other conference costs	Varies	n/a	$30,000	$30,000	$30,000	$30,000	$120,000
Printing	Varies	n/a	$28,000	$28,000	$28,000	$28,000	$112,000
Professional development fees	$1,000 per person	9 per year	$9,000	$9,000	$9,000	$9,000	$36,000
Project management software	$20,000	n/a	$20,000	$0	$0	$0	$20,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$264,972	$257,077	$263,774	$270,672	$1,056,495
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$21,350	$21,350	$15,250	$15,250	$73,200
24.40%	Approved by US ED. 24.4% applied for evaluation budget, assuming 20 separate	$122,000	$122,000	$122,000	$122,000	$488,000

	contracts					

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
None

13) Total Costs
See Project-Level Budget Table.

PROJECTS DESCRIBED IN SECTION B

Project Name	Proposal Section
2. Disseminate the Common Core Standards	(B)(3)
3. Create a unified PreK–12 teaching and learning system	(B)(3)
4. Expand implementation of proven secondary school programs, policies, and incentives	(B)(3)

Budget Part II: Project-Level Budget Table
Project Name: Disseminate the Common Core Standards
Associated with Criteria: (B)(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	$39,500	$0	$0	$0	$39,500
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$472,000	$0	$0	$0	$472,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$30,000	$0	$0	$0	$30,000
9. Total Direct Costs (lines 1-8)	$541,500	$0	$0	$0	$541,500
10. Indirect Costs	$35,258	$0	$0	$0	$35,258
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)	$576,758	$0	$0	$0	$576,758

Project Name: Disseminate the Common Core Standards
Associated with Criteria: (B)(3)

1) **Personnel**
None

2) **Fringe Benefits**
None

3) **Travel**
- *Meetings to conduct comparative analyses of standards:* 5 day-long meetings at $1,500 each to analyze Common Core standards and compare to Massachusetts English Language Arts and Mathematics Curriculum Frameworks.
- *Meetings to augment the K–12 Common Core standards with unique Massachusetts standards:* Four meetings to decide what (if any) Massachusetts will add to the Common Core standards ($2,000 per meeting for room, food, travel, and substitute reimbursement for 20 attendees at each meeting).
- *Summer 2010 overview sessions:* 12 meetings to disseminate standards through DSACs or webinars led by existing staff ($2,000 per meeting).

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Meetings to conduct comparative analyses of standards	n/a	n/a	$7,500	$0	$0	$0	$7,500
Meetings to augment the K-12 Common Core standards with unique Massachusetts standards	n/a	n/a	$8,000	$0	$0	$0	$8,000
Summer 2010 overview sessions	n/a	n/a	$24,000	$0	$0	$0	$24,000

4) **Equipment**
None

5) **Supplies**
None

6) Contractual

- *Uploading new standards online:* Loading Common Core standards onto Massachusetts' standards database and adjusting online content to new standards.
- *Dissemination workshops:* 12 2-day discipline-specific workshops held in summer 2010 involving 50 people at each workshop. These sessions will be held at DSACs, led by consultants at $6,000 per meeting.
- *Creating guidance documents for dissemination:* ESE staff and discipline-specific Curriculum Framework Advisory Panels work with consultants to produce guidance documents on applications of the Common Core standards.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Uploading new standards online	$200,000	1 year	$200,000	$0	$0	$0	$200,000
Dissemination workshops	$6,000 per workshop	12 2-day workshops	$72,000	$0	$0	$0	$72,000
Creating guidance documents for dissemination	$200,000	1 year	$200,000	$0	$0	$0	$200,000

7) Training Stipends

None

8) Other

Product/ Service	Cost per Item	# of Items	Year 1	Year 2	Year 3	Year 4	Total
Printing	$5 per copy	6,000 copies of standards manuals for LEAs	$30,000	$0	$0	$0	$30,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$16,958	$0	$0	$0	$16,958
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$18,300	$0	$0	$0	$18,300

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table
Project Name: Create a unified PreK–12 teaching and learning system
Associated with Criteria: (B)(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	$734,000	$756,020	$633,888	$652,904	$2,776,812
2. Fringe Benefits	$204,052	$210,174	$176,221	$181,507	$771,954
3. Travel	$314,000	$268,000	$256,000	$256,000	$1,094,000
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$27,300	$5,300	$4,250	$4,250	$41,100
6. Contractual	$970,000	$1,286,000	$963,000	$888,000	$4,107,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$2,249,352	$2,525,494	$2,033,359	$1,982,662	$8,790,866
10. Indirect Costs	$336,562	$345,136	$296,547	$296,377	$1,274,623
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$516,705	$679,875	$679,875	$679,875	$2,556,330
13. Total Costs (lines 9-12)	$3,102,619	$3,550,505	$3,009,781	$2,958,914	$12,621,819

Project Name: Create a unified PreK–12 teaching and learning system
Associated with Criteria: (B)(3)

1) **Personnel**

Model Curricula and High School Syllabi

- *Administrator for Design Teams:* The state will hire 1 FTE to oversee the Curriculum Design Team coordinators and design the state plan for development, implementation, and evaluation of model curriculum units over the four years of the project. This position would also build ESE internal capacity to continue model curriculum development post-RTTT.
- *Curriculum Design Team coordinators:* The state will hire 3 FTEs to work with the administrator to oversee development, implementation, and evaluation in the 7 content areas for which they are responsible. These positions would also conduct training for current ESE staff and for LEAs in curriculum design.
- *Publisher:* The state will hire 1 FTE responsible for proofreading, editing materials, assisting with design, and posting online documents. This position would also be the department liaison for online technology resources associated with model curricula.

Digital Library

- *Content coordinators:* The state will hire 2.1 FTEs in Years 1-2, who will work together with partners to coordinate the identification and alignment of resources to state standards, in collaboration with partners (0.3 FTE for each of 7 areas in Year 1); and to articulate a plan to annually staff and train the Resource review team and design/provide initial professional development on the use of the Digital Library (0.3 FTE for each of 7 areas in Year 2).

Assessment Tools – Formative/Interim Assessments

- *Technical specialist/contractor liaison:* The state will hire 1 FTE who will be responsible for the technical aspects of the system, coordinating with contractor and coordinating advisory committee meetings.

Assessment Tools – Curriculum-embedded Performance Tasks

- *Training and professional development coordinator:* The state will hire 1 FTE to coordinate the design, development, and implementation of training and professional development, including technical assistance work.
- *Project manager/contractor liaison:* The state will hire 1 FTE to coordinate with ESE and contractors on program design, development, and implementation. The manager will also oversee contractor deliverables, focusing on K–12 academic areas.
- *Vocational/technical task specialist:* The state will hire 0.50 FTE to manage development of the vocational/technical performance tasks.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Administrator for Curriculum Design Teams	100%	$90,000	$90,000	$92,700	$95,481	$98,345	$376,526
Model Curricula: Curriculum Design Team coordinators	3 FTEs at 100%	$65,000	$195,000	$200,850	$206,876	$213,082	$815,807
Model Curricula: Publisher	100%	$50,000	$50,000	$51,500	$53,045	$54,636	$209,181
Digital Library: Content coordinators	210%	$65,000	$136,500	$140,595	$0	$0	$277,095
Formative/Interim Assessments: Technical specialist/contractor liaison	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772
Curriculum-embedded Performance Tasks: Training and professional development coordinator	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772
Curriculum-embedded Performance Tasks: Project manager/ contractor liaison	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772
Curriculum-embedded Performance Tasks: Vocational/technical task specialist	50%	$75,000	$37,500	$38,625	$39,784	$40,977	$156,886

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Administrator for Curriculum Design Teams	27.8%	$25,020	$25,771	$26,544	$27,340	$104,674
Model Curricula: Curriculum Design Team coordinators	27.8%	$54,210	$55,836	$57,511	$59,237	$226,794
Model Curricula: Publisher	27.8%	$13,900	$14,317	$14,747	$15,189	$58,152
Digital Library: Content coordinators	27.8%	$37,947	$39,085	$0	$0	$77,032
Formative/Interim Assessments: Technical specialist/contractor liaison	27.8%	$20,850	$21,476	$22,120	$22,783	$87,229
Curriculum-embedded Performance Tasks: Training and professional development coordinator	27.8%	$20,850	$21,476	$22,120	$22,783	$87,229
Curriculum-embedded Performance Tasks: Project manager/ contractor liaison	27.8%	$20,850	$21,476	$22,120	$22,783	$87,229
Curriculum-embedded Performance Tasks: Vocational/technical task specialist	27.8%	$10,425	$10,738	$11,060	$11,392	$43,614

3) **Travel**

Model Curricula and High School Syllabi

- *Staff travel*: $1,000 allocated for instate travel and $2,000 for out-of-state travel per FTE for training and conferences in Years 1 and 2. In Years 3 and 4, $2,000 allocated for instate travel and $1,000 for out-of-state travel per FTE.
- *Meetings for content areas:* Space rental for 5 days in the summer and 2 days during the school year for 285 attendees ($30,000 per day for rental, food, technology, and materials).

Digital Library

- *Resource alignment coordination events*: Events in Years 1 and 2 to establish process and criteria, and to plan for coordinating the identification and alignment of resources to state standards. Attendees will include 6 ESE staff (including the 3 content coordinators), 12 partner representatives, and 12 LEA representatives.
- *Resource review team planning meeting:* The same 30 people will meet in Year 2 to develop a plan to annually staff and train volunteers to serve on the resource review team.
- *Resource review team training:* 3 grade-span teams (5 people per team) for each of 7 subject areas (3 grade spans multiplied by 5 people per grade span multiplied by 7 content areas = 105 people) meeting over 2 days to become trained to review additional resources for the digital library (5 trainers involved). Conducted annually in Years 2–4.
- *Presenting at professional development events*: 1 presenter from ESE, an LEA, partner organization, or vendor to present at various professional development events across the state. The presenter will attend 50 different events of various types.

Assessment Tools – Formative/Interim Assessments:

- *Technical specialist/contractor liaison:* $500 for instate trips; $4,000 for 2 out-of-state trips.
- *Convening interim assessment advisory committee:* $75,000 for convening a policy committee made up of ~15 stakeholders for travel, facility expenses, and other meeting expenses; this committee will meet 3–4 times in Year 1.

Assessment Tools – Curriculum-embedded Performance Tasks

- *Training and professional development coordinator:* This position will travel extensively instate to support professional development efforts. This position also will attend at least one out-of-state professional development event in each of Years 3 and 4.
- *Project manager/contractor liaison:* This position will travel regionally to contractor meetings. This position will attend at least one out-of-state professional development event in each of Years 3 and 4.
- *Vocational/technical task specialist:* This position will have more limited travel, predominantly instate to support implementation and professional development.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Staff travel	20 instate trips per year, 1 out-of-state trip per year per FTE	$50 per instate trip; $2,000 per out-of-state trip	$12,000	$12,000	$12,000	$12,000	$48,000
Model Curricula: Meetings for content areas	n/a	n/a	$210,000	$210,000	$210,000	$210,000	$840,000
Digital Library: Resource alignment coordination events	2 trips per year for 30 people in Years 1-2	$100	$6,000	$6,000	$0	$0	$12,000
Digital Library: Resource review team planning meeting	1 trip for 30 people	$100	$0	$3,000	$0	$0	$3,000
Digital Library: Resource review team training	2 trips per year for 105 people	$100	$0	$21,000	$21,000	$21,000	$63,000
Digital Library: Presenting at professional development events	50 trips for 1 person	$100	$0	$5,000	$0	$0	$5,000
Formative/ Interim Assessments: Technical specialist/ contractor liaison	10 instate trips and 2 out-of-state trips per year	$500 per instate trip; $2,000 per out-of-state trip	$4,500	$4,500	$4,500	$4,500	$18,000
Formative/	n/a	n/a	$75,000	$0	$0	$0	$75,000

Interim Assessments: Convening interim assessment advisory committee							
Curriculum-embedded performance tasks: Training and professional development coordinator	40 instate trips per year; 1 out-of-state trip in each of Years 3-4	$50 per trip for instate; $2,000 per trip out-of-state	$2,000	$2,000	$4,000	$4,000	$12,000
Curriculum-embedded performance tasks: Project manager/ contractor liaison	40 instate trips; 1 out-of-state trip per year	$50 per trip instate; $2,000 per trip out-of-state	$4,000	$4,000	$4,000	$4,000	$16,000
Curriculum-embedded performance tasks: Vocational/technical task specialist	10 instate trips per year	$50	$500	$500	$500	$500	$2,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Office supplies	Basic office supplies for staff	$500 per person per year	$2,500	$2,500	$2,500	$2,500	$10,000
Model Curricula:	Desktop computers	$2,000 per	$10,000	$0	$0	$0	$10,000

Desktop computer equipment	and monitors	person					
Digital Library: Office supplies	Basic office supplies for staff	$500 per person per year	$1,050	$1,050	$0	$0	$2,100
Digital Library: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$4,000	$0	$0	$0	$4,000
Formative/ Interim Assessments: Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$500	$2,000
Formative/ Interim Assessments: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000
Curriculum-embedded performance tasks: Office supplies	Basic office supplies for staff	$500 per person per year	$1,500	$1,500	$1,500	$1,500	$6,000
Curriculum-embedded performance tasks: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$6,000	$0	$0	$0	$6,000

6) Contractual
Model Curricula and Syllabi

- *National experts:* National experts will be brought in to lead trainings at curriculum development sessions at $4,000 per day for 10 days in Years 1-2, decreasing to 5 days for Years 3-4.
- *Syllabi review:* Contract to review course syllabi for high schools.
- *Pilot of student work review platform:* Pilot test a web-based student work review platform.

Digital Library

- *Resource alignment:* Contract with selected content providers (3-5 non-profit or educational organizations) to systematically align their available resources to state standards (approximately $60,000 in each of the 7 curriculum frameworks).
- *Professional development for resource review team members:* Contract with professional development providers (and/or non-profit educational organizations) to provide training for and facilitation of the resource review teams (annual in Years 2-4; see item in travel section for more detail).

Formative/Interim Assessments

- *Assessment contractor:* $1.5M per year for design of the system and creating specifications of the delivery system (including item selection criteria) from vendor. The state will contribute 50% of estimated total costs.
- *Contractor for focus groups:* Contract with consultants to conduct 24 focus groups through the DSAC networks, including facility expenses, travel costs for participants, preparation of meeting materials, and summary reports and analysis.

Curriculum-embedded Performance Tasks

- *Assessment contractor:* The state will contract services for the refined design, implementation plan, and creation of a performance task collection system. This contractor will also coordinate the reviewing of tasks via teacher committees, and pilot the administration of tasks in 4 subjects in 3 grade spans (elementary, middle school, and high school). The state will contribute 20% of estimated total costs.

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: National experts	$4,000 per day	10 days in each of Years 1-2; 5 days in each of Years 3-4	$40,000	$40,000	$20,000	$20,000	$120,000
Model Curricula: Syllabi review	$150,000	3 years	$0	$50,000	$50,000	$50,000	$150,000
Model Curricula: Pilot of student work review	$75,000	1 year	$0	$0	$75,000	$0	$75,000

platform							
Digital Library: Resource alignment	$420,000	2 years	$252,000	$168,000	$0	$0	$420,000
Digital Library: Professional development for resource review team members	$105,000	1 year	$0	$35,000	$35,000	$35,000	$105,000
Formative/Interim Assessments: Assessment contractor	$2,580,000	4 years	$645,000	$645,000	$645,000	$645,000	$2,580,000
Formative/Interim Assessments: Contractor for focus groups	$250,000	1 year	$0	$250,000	$0	$0	$250,000
Curriculum-embedded performance tasks: Assessment contractor	$407,000	4 years	$33,000	$98,000	$138,000	$138,000	$407,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total	$312,162	$302,436	$261,167	$267,097	$1,142,863

	direct costs except for contractual costs and equipment					
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$24,400	$42,700	$35,380	$29,280	$131,760

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

Model Curricula and High School Syllabi

- *Funding for release time:* Funding for teachers to attend the summer trainings and curriculum development sessions ($270 per teacher per day for 285 teachers, 5 days per year).
- *Covering LEA substitute costs:* Funding LEAs for substitutes to send educators to conferences during the school year ($200 per teacher per day to cover substitutes and travel to conferences for 2 days per year).

Digital Library

- *Funding for substitute teachers and/or release time for teachers:* Funding for substitute teachers and/or release time for teachers to participate on the resource review teams. This will involve 105 teachers from multiple LEAs each year for 10 days each year for training and resource review ($150 per teacher per day to cover substitutes and local travel for 10 days per year). Yearly expense in Years 2 and 4.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Model Curricula: Funding for release time	n/a	$384,750	$384,750	$384,750	$384,750	$1,539,000
Model Curricula: Covering LEA substitute costs	n/a	$114,000	$114,000	$114,000	$114,000	$456,000
Digital Library: Funding for substitute teachers and/or release time for	n/a	$0	$157,500	$157,500	$157,500	$472,500

teachers						
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental Funding	n/a	$17,955	$23,625	$23,625	$23,625	$88,830

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table
Project Name: Expand implementation of proven secondary school programs, policies, and incentives
Associated with Criteria: (B)(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	$19,500	$18,000	$18,000	$18,000	$73,500
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$849,500	$572,875	$576,351	$304,932	$2,303,658
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$1,250	$1,250	$1,250	$1,250	$5,000
9. Total Direct Costs (lines 1-8)	$870,250	$592,125	$595,601	$324,182	$2,382,158
10. Indirect Costs	$53,863	$35,197	$35,197	$16,897	$141,154
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$603,470	$551,670	$499,870	$385,910	$2,040,920
13. Total Costs (lines 9-12)	$1,527,583	$1,178,992	$1,130,668	$726,989	$4,564,232

Project Name: Expand implementation of proven secondary school programs, policies, and incentives
Associated with Criteria: (B)(3)

1) **Personnel**
   None

2) **Fringe Benefits**
   None

3) **Travel**
   Early College High School (ECHS)
   - *Annual networking conferences*: $4,000 allocated to networking and informational conferences each year (150 attendees per event including high school and college faculty).
   - *Professional development convening*: $6,000 for annual networking and professional development space (100 attendees including high school and college faculty).

   International Baccalaureate (IB)
   - *Out-of-state travel*: Travel costs for one out-of-state IB conference.
   - *Kick-off conference*: Initial awareness and informational conference sessions for LEAs interested in starting an IB program (estimated 350 participants).
   - *Instate annual conference*: Ongoing annual networking and technical assistance sessions for LEAs with IB programs (estimated 350 participants).
   - *Instate meetings for new programs*: There will be 3 meetings conducted each year for LEAs starting new programs. The total meeting space cost each year is expected to be $2,000.

   MassCore/Adams Scholarship
   - *DHE/IHE/ESE meetings*: Meetings to revise requirements for the Adams Scholarship. 3 meetings at $500 per meeting.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
ECHS: Annual networking conferences	n/a	n/a	$4,000	$4,000	$4,000	$4,000	$16,000
ECHS: Professional development convening	n/a	n/a	$6,000	$6,000	$6,000	$6,000	$24,000
IB: Out-of-state	1 per year	$2,000	$2,000	$2,000	$2,000	$2,000	$8,000

travel							
IB: Kick-off conference	n/a	n/a	$4,000	$0	$0	$0	$4,000
IB: Instate annual conference	n/a	n/a	$0	$4,000	$4,000	$4,000	$12,000
IB: Instate meetings for new programs	n/a	n/a	$2,000	$2,000	$2,000	$2,000	$8,000
MassCore/Adams scholarship: DHE/IHE/ESE meetings	3 meetings	$500 per meeting	$1,500	$0	$0	$0	$1,500

4) Equipment
None

5) Supplies
None

6) Contractual
ECHS

- *Technical assistance partner:* Technical assistance partner to deliver services to support ESE and LEAs with capacity building for ECHS. The state will contribute 40% of estimated total costs.
- *STEM Network building:* Funding for DHE and Readiness Centers to enhance Massachusetts' STEM Network in order to facilitate partnerships between K-12, higher education, non-profits, and businesses to drive innovation and STEM education. The state will contribute 40% of estimated total costs.
- *Higher education partnerships:* Funding for DHE and Readiness Centers to help form and maintain STEM ECHS higher education and related dual-enrollment partnerships. The state will contribute 40% of estimated total costs.

IB

- *State coordinator:* Contract to manage IB expansion including convening LEAs, coordinating technical assistance, and providing support to new IB sites.

Data Collection

- *Database manager:* Enhance student information data collection to include data on IB, ECHS, and Innovation Schools in the Education Data Warehouse to assist program evaluation efforts. 0.8 FTE for Year 1 at $65,000 per year.
- *Java developer:* Enhance student information data collection to include data on IB, ECHS, and Innovation Schools in the Education Data Warehouse to assist program evaluation efforts. 0.8 FTE for Year 1 at $75,000 per year.

- *Quality assurance tester:* Testing the data quality for the new IB, ECHS, and Innovation Schools data. 0.8 FTE for Year 1 at $50,000 per year.

Competency Tracking

- *Implementing/maintaining tracking system:* Contractor will refine state's existing Competency Tracking system ("Vocational Technical Competency Tracking System") and expand its functionality for all subjects and grades for academic areas (K-12 in mathematics, science, ELA, and history plus 43 Voc/Tech skill areas). The new system will assist teachers and students in monitoring progress against content standards. The system will include links to other student measures, both academic and non-academic. The contractor will design, develop, and pilot the new system and will be responsible for all related costs. The budget includes programmers for the initial customization in Years 1-3, declining to general maintenance costs in Year 4. The state will contribute 40% of estimated total costs.
- *Data collection:* A survey administered to all 3,000 Massachusetts principals in Years 1-3 to understand how they currently use the Competency Tracking system and how they would like to use it. Data will be used to design training and refine the system.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
ECHS: Technical assistance partner	$400,000	4 years	$100,000	$100,000	$100,000	$100,000	$400,000
ECHS: STEM Network building	$300,000	3 years	$100,000	$100,000	$100,000	$0	$300,000
ECHS: Higher education partnerships	$180,000	3 years	$100,000	$40,000	$40,000	$0	$180,000
IB: State coordinator	$478,658	4 years	$114,500	$117,875	$121,351	$124,932	$478,658
Data Collection: Database manager	$52,000	1 year	$52,000	$0	$0	$0	$52,000

Data Collection: Java developer	$60,000	1 year	$60,000	$0	$0	$0	$60,000
Data Collection: Quality assurance tester	$40,000	1 year	$40,000	$0	$0	$0	$40,000
Competency Tracking: Implementing/ maintaining tracking system	$568,000	4 years	$208,000	$140,000	$140,000	$80,000	$568,000
Competency Tracking: Data collection	$225,000	3 years	$75,000	$75,000	$75,000	$0	$225,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$5,063	$4,697	$4,697	$4,697	$19,154

24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$48,800	$30,500	$30,500	$12,200	$122,000

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

ECHS

- *Technical assistance and implementation support – STEM community college model:* Supplemental funding for LEAs receiving technical assistance and support for developing STEM ECHS through partnerships with community colleges. Total costs for the cohort of three schools will average $500,000 per year over Years 1-3. The state will contribute 20% of estimated total costs.
- *Technical assistance and implementation support – Ohio model:* Supplemental funding for LEAs receiving technical assistance and support for developing intensive STEM ECHS based on the Columbus Ohio Metro ECHS, through partnerships with 4-year colleges. Total costs for the cohort of three schools will average $525,000 per year over Years 1-4. The state will contribute 20% of total costs.

Innovation Schools

- *Planning and implementation support:* State share of costs for planning and implementation support to LEAs launching Innovation Schools. The state will contribute 50% of estimated total costs.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
ECHS: TA and implementation support – STEM community college model	n/a	$120,000	$100,000	$80,000	$0	$300,000
ECHS: TA and implementation support – Ohio model	n/a	$150,000	$120,000	$90,000	$60,000	$420,000
Innovation Schools: Planning and implementation	n/a	$312,500	$312,500	$312,500	$312,500	$1,250,000

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
support						
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental Funding	n/a	$20,970	$19,170	$17,370	$13,410	$70,920

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

IB: The state will provide funding for IB project management and convenings. LEAs will be expected to fund program costs and technical assistance.

MassCore/Adams Scholarship: The state will provide funding for initial convenings to revise the Adams Scholarship. LEAs will be expected to fund costs to implement math and science courses in schools to facilitate students completing MassCore.

BUDGET PART I: PROJECTS DESCRIBED IN SECTION C

Project Name	Proposal Section
5. Information technology project management	(C)(2), (C)(3)
6. Transform state data systems	(C)(2)
7. Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system	(C)(3)
8. Strengthen and expand educator training and supports for data use	(C)(3)

Budget Part II: Project-Level Budget Table
Project Name: Information technology project management
Associated with Criteria: (C)(2) and (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	$205,000	$100,000	$50,000	$50,000	$405,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$205,000	$100,000	$50,000	$50,000	$405,000
10. Indirect Costs	$6,100	$6,100	$6,100	$6,100	$24,400
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)	$211,100	$106,100	$56,100	$56,100	$429,400

Project Name: Information technology project management
Associated with Criteria: (C)(2) and (C)(3)

Note: This project budget includes oversight and contract management costs across all data infrastructure-related investments, including all projects in section (C); EPIMS, ELAR, and MEPID in section (D); and the enhanced Early Warning Indicator system in section (E).

1) **Personnel**
   None

2) **Fringe Benefits**
   None

3) **Travel**
   None

4) **Equipment**
   None

5) **Supplies**
   None

6) **Contractual**.
   - *Contract management:* Vendor to manage IT contracts, procurement, and RFRs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Contract management	$405,000	4 years	$205,000	$100,000	$50,000	$50,000	$405,000

7) **Training Stipends**
   None

8) **Other**
   None

9) **Total Direct Costs**
   See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$6,100	$6,100	$6,100	$6,100	$24,400

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table
Project Name: Transform state data systems
Associated with Criteria: (C)(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	$355,375	$486,599	$522,483	$71,027	$1,435,484
2. Fringe Benefits	$98,794	$135,274	$145,250	$19,746	$399,065
3. Travel	$9,000	$9,000	$9,000	$9,000	$36,000
4. Equipment	$320,000	$91,000	$40,000	$30,000	$481,000
5. Supplies	$17,250	$6,500	$5,000	$500	$29,250
6. Contractual	$6,186,700	$7,677,700	$3,126,700	$576,700	$17,567,800
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$440,000	$20,000	$20,000	$20,000	$500,000
9. Total Direct Costs (lines 1-8)	$7,427,119	$8,426,073	$3,868,434	$726,973	$20,448,599
10. Indirect Costs	$308,079	$219,496	$205,920	$57,943	$791,438
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)	$7,735,198	$8,645,569	$4,074,354	$784,916	$21,240,037

Project Name: Transform state data systems
Associated with Criteria: (C)(2)

1) **Personnel**
Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture
- *Project manager:* The state will hire 1 FTE in Years 1-3 to oversee the delivery of P–16 expansion, including all elements from the timeline in section (C)(2).
- *Business/data analyst:* The state will hire 1 FTE in Years 2-3 to develop and validate user reports and analytical tools. This position will analyze data from National Student Clearinghouse and develop requirements for other data sources.
- *Program manager:* The state will hire 1 FTE in Year 3 to manage the final implementation of all Education Data Warehouse upgrades.
- *Unix system administrator P–16:* The state will hire 0.50 FTEs in Year 1 and 1 FTE in Years 2-3 to evaluate options, finalize system architecture, and complete technical implementation, including P–16 links. This position will set up security, LPARs, and CPU and RAM allocations.
- *COGNOS architect/modeler:* The state will hire 0.50 FTEs in Year 1 and 1 FTE in Years 2-3 to develop and validate user reports and analytical tools. This position will redesign the Education Data Warehouse data model for added capacity.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Enhance Utility to the Field
- *Project manager:* The state will hire 1 FTE in Years 1-2 to manage vendor and implement dashboards and reports for portal.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF
- *Application administrator*: The state will hire 1 FTE to support SIF implementation at ESE. This position will maintain the SIF Zone.
- *COGNOS extract, transform, and load architecture developer*: The state will hire 0.50 FTEs in Year 1 to load the unique student identifier (SASID) for the claiming process in the Education Data Warehouse.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Data Mart Architecture: Project manager	100% in Years 1-3	$85,800	$85,800	$88,374	$91,025	$0	$265,199
Data Mart Architecture: Business/data analyst	100% in Years 2-3	$64,350	$0	$64,350	$66,281	$0	$130,631

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Data Mart Architecture: Program manager	100% in Year 3	$95,550	$0	$0	$95,550	$0	$95,550
Data Mart Architecture: Unix system administrator P–16	50% in Year 1; 100% in Years 2-3	$68,250	$34,125	$70,298	$72,406	$0	$176,829
Data Mart Architecture: COGNOS architect/ modeler	50% in Year 1; 100% in Years 2-3	$120,900	$60,450	$124,527	$128,263	$0	$313,240
Enhance Utility: Project manager	100% in Years 1-2	$70,000	$70,000	$72,100	$0	$0	$142,100
SIF: Application administrator	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936
SIF: COGNOS extract, transform, and load architecture developer	50% in Year 1	$80,000	$40,000	$0	$0	$0	$40,000

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Data Mart Architecture: Project manager	27.8%	$23,852	$24,568	$25,305	$0	$73,725
Data Mart Architecture:	27.8%	$0	$17,889	$18,426	$0	$36,315

Business/data analyst						
Data Mart Architecture: Program manager	27.8%	$0	$0	$26,563	$0	$26,563
Data Mart Architecture: Unix system administrator P–16	27.8%	$9,487	$19,543	$20,129	$0	$49,158
Data Mart Architecture: COGNOS architect/ modeler	27.8%	$16,805	$34,619	$35,657	$0	$87,081
Enhance Utility: Project manager	27.8%	$19,460	$20,044	$0	$0	$39,504
SIF: Application administrator	27.8%	$18,070	$18,612	$19,170	$19,746	$75,598
SIF: COGNOS extract, transform, and load architecture developer	27.8%	$11,120	$0	$0	$0	$11,120

3) Travel

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture

- *Staff travel:* Two Statewide Longitudinal Data Systems conferences per year with two attendees; one national conference per year with one attendee.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Staff travel	2 SLDS conferences per year for 2 people; 1 national conference for 1	$1,500 per SLDS conference per person; $3,000 per national	$9,000	$9,000	$9,000	$9,000	$36,000

	person	conference					

4) Equipment

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Application servers	3 servers for additional capacity	$17,000	$0	$51,000	$0	$0	$51,000
Enhance Utility: COGNOS server	COGNOS server to support dashboards	$100,000	$100,000	$0	$0	$0	$100,000
SIF: ZIS server for LEAs (the state will contribute 20% of estimated total costs)	Hardware at $5,000 per LEA for 150 LEAs	$5,000	$40,000	$40,000	$40,000	$30,000	$150,000
SIF: Servers for validation engine	5 servers	$20,000 per server	$100,000	$0	$0	$0	$100,000
SIF: Failover reporting server for ODS	4 servers to support failover reporting	$20,000 per server	$80,000	$0	$0	$0	$80,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$2,000	$2,500	$0	$5,500
Transition to a Data Mart	Desktop computers	$2,000 per	$2,000	$2,000	$2,000	$0	$6,000

Architecture: Desktop computer equipment	and monitors	person					
Transition to a Data Mart Architecture: Developer computer equipment	Developer desktop computer and monitor	$3,000 per person	$6,000	$0	$0	$0	$6,000
Transition to a Data Mart Architecture: Statistical software license	1 SPSS license for the business analyst	$1,500	$0	$1,500	$0	$0	$1,500
Enhance Utility: Office supplies	Basic office supplies	$500 per person per year	$500	$500	$0	$0	$1,000
Enhance Utility: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000
SIF: Office supplies	Basic office supplies	$500 per person per year	$750	$500	$500	$500	$2,250
SIF: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000
SIF: Developer computer equipment	Developer desktop computers and monitors	$3,000 per person	$3,000	$0	$0	$0	$3,000

6) Contractual

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Transition to a Data Mart Architecture

- *Expand EDW capacity:* Comprehensive contract to document requirements for functional, FERPA-compliant access for the projected simultaneous use patterns of all

anticipated users, evaluate options and finalize system architecture, and complete technical implementation to build the Education Data Warehouse. This contract will also include building capacity to handle interim assessment data as described in sections (B)(3) and (C)(3).

- *Expand EDW to DYS and special education schools:* Vendor to document requirements, evaluate options, and finalize system architecture; complete technical implementation; and extend access to the Department of Youth Services and private special education schools.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Enhance Utility to the Field

- *Building portals:* Consultants to install dashboard software, integrate with COGNOS, create reports, and train staff on portals.
- *Designing portals*: Consultants to create dashboards and conduct user testing for portals.

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF

- *Customize Student Information Systems (SIS) software for extended SIF elements*: 3 SIS to customize software to be SIF compliant. The state will contribute 20% of estimated total costs.
- *Rollout Zone Integration Server (ZIS):* Vendor to execute rollout of ZIS. The state will contribute 20% of estimated total costs.
- *Implement horizontal SIF*: Consulting for horizontal SIF implementation fees of $3,600 per LEA for 40 LEAs. The state will contribute 20% of estimated total costs.
- *Host SIF-enabled SIS:* Hosting for LEAs without a SIS. Estimated $500,000 implementation cost. The state will contribute 20% of estimated total costs.
- *Implement SIF software for early education and care development:* Vendor to implement custom-developed SIF software.
- *Resolve data quality issues at LEAs:* Consulting fees for data quality at cost of $5,000 per LEA for 40 LEAs. The state will contribute 20% of estimated total costs.

Improve the Usability of ESE's Public Website

- *Revise data flows and enhance user interface:* Vendor to document and streamline data shared through ESE, design architecture for data, analyze requirements and write applications for process improvements, write test cases and conduct usability testing, and analyze the business process of data uploads and automate these processes. Vendor will also work to make website more intuitive to navigate.
- *COGNOS developer:* Developer to finalize web design. This vendor will differentiate access to confidential data for users, develop specifications for providing parent access to data, and determine feasibility and cost of providing parent access to data.

Add Enhanced Data Audits to our Existing Data Validation Protocols

- *Auditors:* This contractor will develop audit protocol and conducts audits for Early Education and Care, ESE, and Department of Higher Education.
- *Writer/trainer:* This contractor will document requirements for auditing system; produce Massachusetts data quality controls; and deliver trainings on data quality for ESE and Early Education and Care.
- *.net developer:* This contractor will develop online testing tools to support developed Massachusetts data quality control.

- *HTML programmer:* This contractor will support posting of Massachusetts data quality control tools to website.
- *Rollout staff:* Staff to support training efforts and rollout of Massachusetts data quality controls to different state and school audiences.

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Transition to a Data Mart Architecture: Expand EDW capacity	$12M	3 years	$3.6M	$6M	$2.4M	$0	$12M
Transition to a Data Mart Architecture: Expand EDW to DYS and special ed schools	$150,000	2 years	$75,000	$75,000	$0	$0	$150,000
Enhance Utility: Build portals	$500,000	1 year	$500,000	$0	$0	$0	$500,000
Enhance Utility: Design portals	$540,000	2 years	$345,000	$195,000	$0	$0	$540,000
SIF: Customize SIS software for extended SIF elements	$30,000	1 year	$30,000	$0	$0	$0	$30,000
SIF: Rollout ZIS	$40,000	1 year	$40,000	$0	$0	$0	$40,000
SIF: Implement horizontal SIF	$28,800	4 years	$7,200	$7,200	$7,200	$7,200	$28,800
SIF: Host SIF-enabled SIS	$100,000	1 year	$100,000	$0	$0	$0	$100,000

SIF: Implement SIF software for early education and care development	$85,000	1 year	$85,000	$0	$0	$0	$85,000
SIF: Resolve data quality issues at LEAs	$40,000	4 years	$10,000	$10,000	$10,000	$10,000	$40,000
Improve Usability: Revise data flows and enhance user interface	$2,175,000	4 years	$881,250	$881,250	$281,250	$131,250	$2,175,000
Improve Usability: COGNOS developer	$85,000	1 year	$85,000	$0	$0	$0	$85,000
Data Audits: Auditors	$741,000	4 years	$185,250	$185,250	$185,250	$185,250	$741,000
Data Audits: Writer/trainer	$426,000	4 years	$106,500	$106,500	$106,500	$106,500	$426,000
Data Audits: .net developer	$49,500	1 year	$0	$49,500	$0	$0	$49,500
Data Audits: HTML programmer	$31,500	1 year	$0	$31,500	$0	$0	$31,500
Data Audits: Rollout staff	$546,000	4 years	$136,500	$136,500	$136,500	$136,500	$546,000

7) Training Stipends

None

8) Other

Improve the Education Data Warehouse to Better Support the Needs of its 80,000 Anticipated Users – Expand SIF

- *SIF-compliant SIS software agents:* Software at $4,000 per LEA for 40 LEAs. The state will contribute 20% of estimated total costs.
- *SIF-compliant HR software agents:* Software at $3,000 per LEA for 40 LEAs. The state will contribute 20% of estimated total costs.
- *SIF-compliant transportation/library or food service software agents:* Software $3,000 per LEA for 40 LEAs. The state will contribute 20% of estimated total costs.
- *Failover/reporting software for ODS:* 12 Oracle licenses at $35,000 per license.

Other Expenditure	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
SIF: SIS software agents	$4,000 per LEA	$8,000	$8,000	$8,000	$8,000	$32,000
SIF: HR software agents	$3,000 per LEA	$6,000	$6,000	$6,000	$6,000	$24,000
SIF: Transportation /library or food service software agents	$3,000 per LEA	$6,000	$6,000	$6,000	$6,000	$24,000
SIF: Failover/ reporting software for ODS	$35,000 per license	$420,000	$0	$0	$0	$420,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$224,582	$160,399	$171,223	$29,347	$585,551

24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$83,497	$59,097	$34,697	$28,597	$205,887

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
None

13) Total Costs
See Project-Level Budget Table.

Additional note on other funding sources:
The activities in this project may also be supported by $13.5M in funding from Massachusetts' proposal for the State Longitudinal Data Systems grant, for which funding decisions will be announced later this year.

Budget Part II: Project-Level Budget Table
Project Name: Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system
Associated with Criteria: (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	$410,000	$422,300	$434,969	$103,809	$1,371,078
2. Fringe Benefits	$113,980	$117,399	$120,921	$28,859	$381,160
3. Travel	$0	$20,000	$20,000	$20,000	$60,000
4. Equipment	$500,000	$0	$0	$0	$500,000
5. Supplies	$12,500	$2,500	$2,500	$500	$18,000
6. Contractual	$3,023,409	$1,949,545	$949,545	$131,250	$6,053,750
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$4,059,889	$2,511,745	$1,527,936	$284,418	$8,383,988
10. Indirect Costs	$161,401	$161,577	$159,427	$43,473	$525,878
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)	$4,221,290	$2,673,322	$1,687,363	$327,891	$8,909,866

Project Name: Invest in the data systems and technology necessary to support the statewide PreK–12 teaching and learning system
Associated with Criteria: (C)(3)

1) **Personnel**
   Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments
   - *Project manager:* The state will hire 1 FTE in Years 1-3 to manage the overall development process for the 'test builder' for interim and formative assessments.
   - *Project manager:* The state will hire 1 FTE in Years 1-3 to manage technical implementation of the assessment tool at ESE.
   - *Project manager:* The state will hire 1 FTE in Years 1-3 to oversee implementation at LEAs with the vendor.
   - *System/data architect:* The state will hire 1 FTE in Years 1-3 to be responsible for implementing best practices in data management and architecture for the integration of different systems into the EDW.

   Pilot a Vendor-built Integrated Instructional Improvement System
   - *Project Manager:* The state will hire 1 FTE in Years 1-3 to manage the vendor-built assessment system and evaluate effectiveness.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Project manager, Development	100% in Years 1-3	$85,000	$85,000	$87,550	$90,177	$0	$262,727
Test Builder: Project manager, Technical	100% in Years 1-3	$85,000	$85,000	$87,550	$90,177	$0	$262,727
Test Builder: Project manager, LEAs implementation	100% in Years 13	$85,000	$85,000	$87,550	$90,177	$0	$262,727
Test Builder: System/data architect	100%	$95,000	$95,000	$97,850	$100,786	$103,809	$397,445
Pilot: Project manager	100% in Years 1-3	$60,000	$60,000	$61,800	$63,654	$0	$185,454

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Project manager, Development	27.8%	$23,630	$24,339	$25,069	$0	$73,038
Test Builder: Project manager, Technical	27.8%	$23,630	$24,339	$25,069	$0	$73,038
Test Builder: Project manager, LEAs implementation	27.8%	$23,630	$24,339	$25,069	$0	$73,038
Test Builder: System/data architect	27.8%	$26,410	$27,202	$28,018	$28,859	$110,490
Pilot: Project manager	27.8%	$16,680	$17,180	$17,696	$0	$51,556

3) Travel

Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments

- *Travel to LEAs for installation/trainings/input:* Expected costs of travel to participating LEAs to gather LEA input and to assist in installation and initial training.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Travel to LEAs for installation/trainings/input	200 per year	$100 per trip	$0	$20,000	$20,000	$20,000	$60,000

4) Equipment

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Develop "test builder"for interim and formative	Hardware for application and database server for development, test, and production	$500,000	$500,000	$0	$0	$0	$500,000

assessments	environments						

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Office supplies	Basic office supplies for staff	$500 per person per year	$2,000	$2,000	$2,000	$500	$6,500
Test Builder: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$8,000	$0	$0	$0	$8,000
Pilot: Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$500	$0	$1,500
Pilot: Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000

6) Contractual

Develop a "Test Builder Engine" that Enables Educators to Assemble, Score, and Access Results from Assessments

- *Develop "test builder" for interim and formative assessments*: Contract to build an interim/formative assessment platform. The state will contribute 25% of estimated total costs for this contract, or 50% of total costs for the teaching and learning system, including project oversight and the Digital Library platform.

Develop and Implement a Digital Library

- *Expand standards database:* This contractor will create a searchable tool, and assess and manage vendors.
- *Improve searchable standards database*: This contractor will develop an improved searchable standards database that links subject material across academic standards and incorporates the capability for multiple tagging.
- *Build the Digital Library platform*: This contractor will build and implement the Digital Library platform to host and organize content created through the model curriculum development process and the Digital Library materials vetting process, as described in section (B)(3).

Pilot a Vendor-built Integrated Instructional Improvement System

- *Subscription fees:* ESE subscription costs for vendor-built comprehensive assessment system pilot for 5,000 students.

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Test Builder: Develop "test builder" for interim and formative assessments	$2,700,000	3 years	$1,435,909	$632,045	$632,045	$0	$2,700,000
Digital Library: Expand standards database	$165,000	3 years	$55,000	$55,000	$55,000	$0	$165,000
Digital Library: Improve searchable standards database	$2,000,000	2 years	$1,000,000	$1,000,000	$0	$0	$2,000,000
Digital Library: Build the Digital Library platform	$918,750	4 years	$262,500	$262,500	$262,500	$131,250	$918,750
Pilot: Subscription fees	$270,000	1 year	$270,000	$0	$0	$0	$270,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$130,901	$137,177	$141,127	$37,373	$446,578
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$30,500	$24,400	$18,300	$6,100	$79,300

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Additional note on cost-sharing:

The state will contribute 50% of estimated total costs for this project, as defined above. LEAs will be encouraged to spend their portion of Race to the Top funds to support the state's investments and specifically to fund local pilots of the vendor-built instructional improvement system described in section (C)(3).

Budget Part II: Project-Level Budget Table
Project Name: Strengthen and expand educator training and supports for data use
Associated with Criteria: (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	$65,000	$141,950	$72,100	$38,625	$317,675
2. Fringe Benefits	$18,070	$39,462	$20,044	$10,738	$88,314
3. Travel	$1,000	$1,000	$1,000	$1,000	$4,000
4. Equipment	$54,000	$500,000	$0	$0	$554,000
5. Supplies	$2,500	$4,000	$500	$250	$7,250
6. Contractual	$420,000	$0	$200,000	$0	$620,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$560,570	$686,412	$293,644	$50,613	$1,591,239
10. Indirect Costs	$33,323	$45,485	$35,049	$12,350	$126,206
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)	$593,893	$731,897	$328,693	$62,962	$1,717,445

Project Name: Strengthen and expand educator training and supports for data use
Associated with Criteria: (C)(3)

1) Personnel

- *Training program manager:* The state will hire 1 FTE in Years 1-2 and 0.50 FTEs in Year 3 to develop specifications of the data training program and select the data use training vendor (described in the contractual section).
- *Moodle developer:* The state will hire 1 FTE in Years 1-2 and 0.50 FTEs in Years 3-4 to configure and maintain Moodle, the learning management system that hosts online training.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Training program manager	100% in Years 1-2; 50% in Year 3	$65,000	$65,000	$66,950	$33,475	$0	$165,425
Moodle developer	100% in Year 2; 50% in Years 3-4	$75,000	$0	$75,000	$38,625	$38,625	$152,250

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Training program manager	27.8%	$18,070	$18,612	$9,306	$0	$45,988
Moodle developer	27.8%	$0	$20,850	$10,738	$10,738	$42,326

3) Travel

- *Staff travel for training program manager:* 20 trips each year at $50 per trip for attending trainings on data use.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Staff travel for training program manager	20 trips	$50 per trip	$1,000	$1,000	$1,000	$1,000	$4,000

4) Equipment

Equipment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Servers for training modules	3 servers at $18,000 per server	$18,000	$54,000	$0	$0	$0	$54,000
Servers for Moodle	$500,000 for additional server capacity	$500,000	$0	$500,000	$0	$0	$500,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$1,000	$500	$250	$2,250
Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$0	$0	$2,000
Developer computer equipment	Developer desktop computers and monitors	$3,000 per person	$0	$3,000	$0	$0	$3,000

6) Contractual

- *Training developer:* Contractor to develop 10 new training modules on data use and analysis, with a portion of costs delayed until Year 3 when development of the teaching and learning system will be complete.
- *Vendor for creating online courses:* Contractor to implement online delivery for 16 training modules (6 existing offline modules plus the 10 new modules described above), with a portion of costs delayed until Year 3 when development of the teaching and learning system will be complete.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Training developer	n/a	n/a	$180,000	$0	$120,000	$0	$300,000
Vendor for creating online courses	n/a	n/a	$240,000	$0	$80,000	$0	$320,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$21,123	$45,485	$22,849	$12,350	$101,806
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$12,200	$0	$12,200	$0	$24,400

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

The state will contribute 55% of estimated total costs for this project, as defined above. LEAs will be encouraged to spend their portion of Race to the Top funds to fund the local delivery of these modules as described in section (C)(3).

PROJECTS DESCRIBED IN SECTION D

Project Name	Proposal Section
9. Improve teacher and principal effectiveness based on performance	(D)(2)
10. Ensure equitable distribution of effective teachers and principals	(D)(3)
11. Improve the effectiveness of teacher and principal preparation programs	(D)(4)
12. Provide effective support to teachers and principals	(D)(5)

Budget Part II: Project-Level Budget Table
Project Name: Improve teacher and principal effectiveness based on performance
Associated with Criteria: (D)(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	$150,000	$154,500	$159,135	$163,909	$627,544
2. Fringe Benefits	$41,700	$42,951	$44,240	$45,567	$174,457
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$6,500	$1,000	$1,000	$1,000	$9,500
6. Contractual	$5,513,000	$165,000	$40,000	$500,000	$6,218,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$120,000	$120,000	$120,000	$120,000	$480,000
9. Total Direct Costs (lines 1-8)	$5,831,200	$483,451	$364,375	$830,476	$7,509,501
10. Indirect Costs	$102,041	$89,902	$85,247	$98,936	$376,126
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$5,036,000	$4,036,000	$4,036,000	$13,108,000
13. Total Costs (lines 9-12)	$5,933,241	$5,609,353	$4,485,622	$4,965,412	$20,993,628

Project Name: Improve teacher and principal effectiveness based on performance
Associated with Criteria: (D)(2)

Note: This project budget includes all six strategies outlined in Section D2, given the overlapping nature of the strategies. Those strategies are:

1. Measuring student growth for each individual student
2. Differentiating levels of effectiveness
3. Using effectiveness measures in educator evaluation
4. Ensuring evaluations include timely and constructive feedback from principals, including data on student growth
5. Using evaluations to inform decisions
6. Reinforcing effectiveness and continuous improvement through state-level reforms

1) Personnel

- *Project manager (Strategies 1-6):* The state will hire 1 FTE to oversee implementation of all strategies described in Section D2 to strengthen effectiveness, including work to define measures, launch pilots on evaluation systems, refine evaluation guidelines, and create new tiered licensure system. The project manager will work with key personnel in the Center for Educator Policy, Preparation and Licensure.
- *Policy analyst (Strategies 1-6):* The state will hire 1 FTE to support the program manager through secondary research on effective policy and practice from other states, which will be used to inform ongoing work to strengthen educator effectiveness.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	100%	$85,000	$85,000	$87,550	$90,177	$92,882	$355,608
Policy analyst	100%	$65,000	$65,000	$66,950	$68,959	$71,027	$271,936

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project manager	27.8%	$23,630	$24,339	$25,069	$25,821	$98,859
Policy analyst	27.8%	$18,070	$18,612	$19,170	$19,746	$75,598

3) Travel

None

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000
Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$4,000	$0	$0	$0	$4,000
Software	1 SPSS license for the policy analyst	$1,500	$1,500	$0	$0	$0	$1,500

6) Contractual

- *Develop measures of effectiveness and evaluation system (Strategies 2, 3):* ESE will contract with national expert(s) to provide consulting support on development of statewide measures of effectiveness and model evaluation system.
- *EPIMS update (Strategy 3):* ESE will contract with an IT consultant to make necessary updates to EPIMS to collect evaluation data from LEAs.
- *Expand data collection for evaluations (Strategy 3):* ESE will contract with database developers to expand data collection related to teacher/principal evaluations.
- *Training module for evaluation (Strategy 4):* ESE will contract with vendor(s) to develop a training module on the new evaluation system. The module will train principals and teachers on the new evaluation guidelines to ensure successful implementation.
- *Online module for evaluation (Strategy 4):* ESE will contract with vendor(s) to develop online modules to complement training modules on the new evaluation system. Two modules will be developed, one for teachers and another for principals and other administrators.
- *Develop licensure system (Strategy 6):* ESE will contract with national expert(s) to develop licensure tiers, performance assessments and career ladders.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Develop measures of effectiveness and evaluation	$2,500,000	1 year	$2,500,000	$0	$0	$0	$2,500,000

system							
EPIMS update	$250,000	2 years	$125,000	$125,000	$0	$0	$250,000
Expand data collection for evaluations	$30,000	1 year	$30,000	$0	$0	$0	$30,000
Training module for evaluation	$400,000	1 year	$0	$0	$0	$400,000	$400,000
Online module for evaluation	$60,000	1 year	$0	$0	$0	$60,000	$60,000
Develop licensure system	$2,858,000 for development and $40,000 for ongoing consulting	4 years	$2,858,000	$40,000	$40,000	$40,000	$2,978,000

7) Training Stipends

None

8) Other

- *Panel to develop effectiveness measures (Strategy 2):* Convene panel of statewide and local education leaders, principals and teachers, and national experts to guide development of measures of effectiveness.
- *Regional networks on evaluation systems (Strategies 3, 4, 5):* Convene regional networks to share best practices on evaluation and HR systems, informed by results from evaluation pilots.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total
Panel to develop effectiveness measures	$10,000 per monthly meeting	12 meetings in Year 1	$120,000	$0	$0	$0	$120,000
Regional networks on evaluation	$20,000 per regional	6 regional meetings	$0	$120,000	$120,000	$120,000	$360,000

systems	meeting	per year					

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$77,641	$77,702	$79,147	$80,636	$315,126
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$24,400	$12,200	$6,100	$18,300	$61,000

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Evaluation and HR pilots (Strategies 3, 5):* Funding for pilot LEAs to implement new evaluations systems, re-align HR and implement alternative compensation programs. This funding may be used towards implementation costs for: 10 pilot LEAs to redesign evaluation systems (Strategy 3); 3 pilot LEAs to align HR decisions to evaluation (Strategy 5); and 4 pilot LEAs to implement alternative compensation in at least a portion of their schools (Strategy 5). The state will contribute 40% of estimated total costs.
- *Technical assistance to pilot LEAs (Strategies 3, 5):* Funding for all 10 pilot LEAs to contract technical assistance over the first two years of the pilot. Pilot LEAs may use funding for technical assistance on the implementation of evaluation systems, HR alignment, and/or alternative compensation (as described in Strategies 3 and 5).
- *Principal training (Strategy 4):* Training on the new evaluation system. Massachusetts will train 5,000 principals, superintendents and other administrators at a cost of $1000 per individual. The state will contribute 20% of estimated total costs.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Evaluation and HR	$10M towards	$0	$4,000,000	$3,000,000	$3,000,000	$10,000,000

pilots	pilot costs					
Technical assistance to pilot LEAs	$2M over 2 years	$0	$1,000,000	$1,000,000	$0	$2,000,000
Principal training	$1,000 per individual trained	$0	$0	$0	$1,000,000	$1,000,000
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental Funding (already included in Evaluation and HR pilot item)	n/a	$0	$36,000	$36,000	$36,000	$108,000

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

Technical assistance for all Participating LEAs to customize evaluation systems (Strategy 3): ESE will provide funding to support evaluation pilots, including a portion of implementation costs and technical assistance. LEAs will be encouraged to use RTTT funding towards technical assistance for the implementation of evaluation systems at all Participating LEAs in Year 4.

Training on evaluation for teachers (Strategy 4): ESE will provide supplemental funding for training principals and other individuals on the new evaluation systems. LEAs will be encouraged to fund costs for training teachers on the new evaluation systems in the same year.

Budget Part II: Project-Level Budget Table
Project Name: Ensure equitable distribution of effective teachers and principals
Associated with Criteria: (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	$150,000	$154,500	$159,135	$163,909	$627,544
2. Fringe Benefits	$41,700	$42,951	$44,240	$45,567	$174,457
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$5,000	$1,000	$1,000	$1,000	$8,000
6. Contractual	$300,000	$3,550,000	$3,600,000	$3,500,000	$10,950,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$496,700	$3,748,451	$3,804,375	$3,710,476	$11,760,001
10. Indirect Costs	$60,195	$66,722	$68,167	$63,556	$258,640
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$161,875	$593,542	$593,542	$593,542	$1,942,500
13. Total Costs (lines 9-12)	$718,770	$4,408,715	$4,466,084	$4,367,574	$13,961,142

Project Name: Ensure equitable distribution of effective teachers and principals
Associated with Criteria: (D)(3)

Note: This project budget includes multiple strategies outlined in Section D3, given the overlapping nature of the strategies. The strategies in D3 are:

1. Publish and monitor data regarding educator effectiveness
2. Expand the supply of effective educators through recruitment and preparation initiatives
3. Concentrate strategic placement of effective educators in turnaround schools
4. Increase the retention of effective teachers

This project budget includes funding for Strategies 1, 2, and 4, while the budget for Strategy 3 falls under the budget for the project "Develop a specialized corps of turnaround teacher and leader teams" as described in section (E)(2).

1) Personnel

- *Project managers (Strategies 1, 2, 4):* The state will hire 2 FTEs to oversee recruitment and distribution initiatives at ESE, including the RFP process for preparation programs.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project managers	2 FTEs at 100%	$75,000	$150,000	$154,500	$159,135	$163,909	$627,544

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project managers	27.8%	$41,700	$42,951	$44,240	$45,567	$174,457

3) Travel

None

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000

Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$4,000	$0	$0	$0	$4,000

6) Contractual

- *Revision of website (Strategy 2):* Contract consultant to redesign the GEM (Gateway for Educators of Massachusetts) and MECC (Massachusetts Educator Career Center) websites to create comprehensive teacher and principal portal.
- *RFP for teacher preparation programs (Strategy 2):* RFP of $15M for funding the expansion/development of innovative teacher preparation programs. The state will contribute 50% of estimated total costs.
- *RFP for principal preparation programs (Strategy 2):* RFP of $6M for funding the expansion/development of innovative principal preparation programs. The state will contribute 50% of estimated total costs.
- *Diversity summit (Strategy 2):* Contract for venue and materials for statewide summit to address educator diversity.
- *Mass TeLLS (Strategy 4):* Contract for vendor to conduct and publish Mass TeLLS (survey of teachers and principals).

Product/ Service	Cost per Procure-ment	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Revision of website	$200,000	1 year	$200,000	$0	$0	$0	$200,000
RFP for teacher preparation programs	$15M	4 years	$0	$2.5M	$2.5M	$2.5M	$7.5M
RFP for principal preparation programs	$6M	4 years	$0	$1.0M	$1.0M	$1.0M	$3.0M
Diversity summit	$50,000	1 year	$0	$50,000	$0	$0	$50,000
Mass TeLLS	$100,000 per survey	1 year	$100,000	$0	$100,000	$0	$200,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$47,995	$48,422	$49,867	$51,356	$197,640
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$12,200	$18,300	$18,300	$12,200	$61,000

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Online induction (Strategy 4):* Funding for 500 new teachers in high needs schools to receive 2 years of online hybrid induction. The state will contribute 50% of estimated total costs.
- *National Board certification (Strategy 4):* Funding for 500 teachers in high needs schools to cover costs of National Board certification. The state will contribute 50% of estimated total costs.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Online induction	$5,000 per teacher for 2 years of induction	$0	$416,667	$416,667	$416,667	$1,250,000
National Board	$2,500 per teacher	$156,250	$156,250	$156,250	$156,250	$625,000

certification	certification					
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental Funding	n/a	$5,625	$20,625	$20,625	$20,625	$67,500

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

Mass TeLLS (Strategy 4): ESE will provide funding to conduct two surveys over the course of the Race to the Top grant. LEAs will be encouraged to use a portion of their funds towards the design, implementation and monitoring of school-level intervention plans on working conditions, based on findings from the Mass TeLLS reports.

Budget Part II: Project-Level Budget Table
Project Name: Improve the effectiveness of teacher and principal preparation programs
Associated with Criteria: (D)(4)
(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	$75,000	$77,250	$154,568	$159,205	$466,022
2. Fringe Benefits	$20,850	$21,476	$42,970	$44,259	$129,554
3. Travel	$1,920	$1,920	$0	$0	$3,840
4. Equipment	$0	$500,000	$0	$0	$500,000
5. Supplies	$2,500	$500	$3,000	$1,000	$7,000
6. Contractual	$1,336,800	$937,640	$922,500	$202,500	$3,399,440
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,437,070	$1,538,786	$1,123,037	$406,963	$4,505,856
10. Indirect Costs	$67,166	$73,480	$97,731	$62,089	$300,466
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)	$1,504,236	$1,612,265	$1,220,768	$469,052	$4,806,322

Project Name: Improve the effectiveness of teacher and principal preparation programs
Associated with Criteria: (D)(4)

1) **Personnel**
   - *Project manager:* The state will hire 1 FTE to oversee work to create new preparation program standards and serve as liaison to programs.
   - *ELAR project manager:* The state will hire 1 FTE in Years 3-4 to oversee IT updates to ELAR based on changes to licensure system.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772
ELAR project manager	100%	$75,000	$0	$0	$75,000	$77,250	$152,250

2) **Fringe Benefits**

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project manager	27.8%	$20,850	$21,476	$22,120	$22,783	$87,229
ELAR project manager	27.8%	$0	$0	$20,850	$21,476	$42,326

3) **Travel**
   - *Meetings with pilot group:* Two ESE staff members will meet monthly with the preparation programs in the program approval pilot in Years 1 and 2.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Meetings with pilot group	24 for each person	$80	$1,920	$1,920	$0	$0	$3,840

4) Equipment

Equip-ment	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Equipment for ELAR integration	Application server, database server, web server for production, testing and development to implement integration	$500,000	$0	$500,000	$0	$0	$500,000

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$500	$1,000	$1,000	$3,000
Desktop computer equipment	Desktop computers and monitors	$2,000 per person	$2,000	$0	$2,000	$0	$4,000

6) Contractual

- *Pathways-style study of prep programs:* Contract expert to conduct in-depth study of a sample of preparation programs, identifying indicators of graduates' impact on student learning.
- *Reporting platform for programs:* Contract expert to create web-based reporting system based on new reporting requirements.
- *Statewide conferences for new requirements:* Conduct 6 conferences statewide with preparation programs on new reporting requirements.
- *Preparation program consultant:* Hire consultant to provide expertise on new reporting requirements.
- *ELAR updates - Business analyst:* Contract with business analyst to conduct ELAR reports based on changes to licensure.
- *ELAR updates - Developer:* Personnel to develop updates to ELAR database based on changes in licensure.
- *ELAR updates - Quality assurance specialist:* Personnel to oversee quality assurance for ELAR updates based on changes to licensure.

- *ELAR integration into Data Warehouse - Consultants:* Consultants to provide set-up for each district, in addition to training, security, and integration of ELAR with the Education Data Warehouse.
- *ELAR integration into Data Warehouse - Business analyst and quality assurance specialist:* Contract 1 business analyst to produce reports and 1 quality assurance specialist to test integrity of data.
- *ELAR integration into Data Warehouse - Technical writer:* Contract technical writer for documentation of integration.
- *MEPID - Documentation:* Contract for requirement documentation and analysis needed to create unique identifier for educators (Massachusetts Educator Personnel ID).
- *MEPID - System design:* Contractor to design system that allows for 26 new ELAR fields and produces associated reports.
- *MEPID - Quality assurance:* Contractor to verify integration and assignment of unique identifier for educators.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Pathways-style study of prep programs	$500,000	1 year	$500,000	$0	$0	$0	$500,000
Reporting platform for programs	$100,000	1 year	$0	$0	$100,000	$0	$100,000
Statewide conferences for new requirements	$100,000	n/a	$0	$50,000	$50,000	$0	$100,000
Expert consultant	$102,000	2 years	$51,000	$51,000	$0	$0	$102,000
ELAR updates - Business analyst	$82,500	1 year	$0	$0	$82,500	$0	$82,500
ELAR updates - Developer	$240,000	2 years	$0	$0	$120,000	$120,000	$240,000
ELAR updates - Quality assurance specialist	$165,000	2 years	$0	$0	$82,500	$82,500	$165,000

ELAR integration into Data Warehouse - Consultants	$1,000,000	3 years	$400,000	$300,000	$300,000	$0	$1,000,000
ELAR integration into Data Warehouse - Business analyst and quality assurance specialist	$487,500	3 years 1 FTE, 2 years 1 FTE	$195,000	$195,000	$97,500	$0	$487,500
ELAR integration into Data Warehouse - Technical writer	$270,000	3 years	$90,000	$90,000	$90,000	$0	$270,000
MEPID - Documentatio n	$180,900	n/a	$60,300	$120,600	$0	$0	$180,900
MEPID - System design	$121,500	n/a	$40,500	$81,000	$0	$0	$121,500
MEPID - Quality assurance	$50,040	n/a	$0	$50,040	$0	$0	$50,040

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$24,466	$24,680	$48,931	$49,889	$147,966
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$42,700	$48,800	$48,800	$12,200	$152,500

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
None

13) Total Costs
See Project-Level Budget Table.

Additional note on other funding sources:
The activities in this project, specifically the investment in tracking prospective educators through MEPID, may also be supported by $0.4M in funding from Massachusetts' proposal for the State Longitudinal Data Systems grant, for which funding decisions will be announced later this year.

Budget Part II: Project-Level Budget Table
Project Name: Provide effective support to teachers and principals
Associated with Criteria: (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	$2,426,080	$1,926,080	$2,034,080	$1,534,080	$7,920,320
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$272,500	$470,000	$472,500	$370,000	$1,585,000
9. Total Direct Costs (lines 1-8)	$2,698,580	$2,396,080	$2,506,580	$1,904,080	$9,505,320
10. Indirect Costs	$90,890	$139,080	$139,690	$108,580	$478,240
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)	$2,789,470	$2,535,160	$2,646,270	$2,012,660	$9,983,560

Project Name: Provide effective support to teachers and principals
Associated with Criteria: (D)(5)

1) **Personnel**
   None

2) **Fringe Benefits**
   None

3) **Travel**
   None

4) **Equipment**
   None

5) **Supplies**
   None

6) **Contractual**
   - *Principal training:* Provide principal training and coaching for 425 principals and district personnel in Level 3/Title 1 schools at cost of approximately $13,000 per individual. The state will contribute 20% of estimated total costs.
   - *Professional Learning Communities expansion:* Hire consulting services and technical assistance to support expansion of Professional Learning Community tools developed by ESE to LEAs. The state will contribute 50% of estimated total costs.
   - *DSAC personnel:* Provide grants to DSACs to hire additional personnel at 6 DSACs.
   - *Funding for Readiness Centers:* Provide grants to fund Readiness Centers to initiate professional development focused on Teaching/Learning and P–16.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Principal training	Approximately $13,000 per individual	4 years	$216,000	$216,000	$324,000	$324,000	$1,080,000
Professional Learning Communities consultant services	$2,000,000	3 years	$1,000,000	$500,000	$500,000	$0	$2,000,000
DSAC personnel	$60,000 per FTE, plus	4 years	$460,080	$460,080	$460,080	$460,080	$1,840,320

	fringe benefits						
Funding for Readiness Centers	$125,000 per Readiness Center per year	4 years	$750,000	$750,000	$750,000	$750,000	$3,000,000

7) Training Stipends

None

8) Other

- *Online/video modules - Model curriculum:* Development of online modules, one for each content area and each grade span (4 content areas X 5 grade spans).
- *Online/video modules - Interim and formative assessments:* Development of online content focused on helping educators use interim and formative assessments.
- *Online/video modules - Curriculum embedded tasks:* Development of online content on using curriculum embedded tasks.
- *Online/video modules - Priority professional development areas:* Development of online videos and web materials, 3 for each of 5 high priority professional development area.
- *NSDC survey:* ESE will conduct the National Staff Development Council's Standards Assessment Inventory in a representative subset of 100 schools in Years 1 and 3.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total
Online/video modules – Model curriculum	$20,000 per module	5 per year	$100,000	$100,000	$100,000	$100,000	$400,000
Online/video modules	$20,000 per module	10 in each of Years 2-3, 5 in Year 4	$0	$200,000	$200,000	$100,000	$500,000
Online/video modules	$20,000 per module	1 per year	$20,000	$20,000	$20,000	$20,000	$80,000
Online/video modules	$40,000 per module	4-5 per year	$150,000	$150,000	$150,000	$150,000	$600,000
NSDC survey	$25 per school	100 schools per survey	$2,500	$0	$2,500	$0	$5,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$66,490	$114,680	$115,290	$90,280	$386,740
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$24,400	$24,400	$24,400	$18,300	$91,500

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Additional notes on cost-sharing:

ESE will fund multiple initiatives to provide support for teachers and principals: creating capacity at the DSACs and Readiness Centers; developing online and video modules that will be accessed by educators statewide; and providing funding for principal training and expansion of the Professional Learning Community tools developed at ESE.

LEAs will be encouraged to spend their portion of Race to the Top funds towards additional professional development opportunities, based on their local needs. The following is a list of potential additional supports.

- *Summits on interim/formative assessments:* Conducting summits in the Eastern and Western parts of MA to instruct participants on how to integrate interim/formative assessments into curriculum and instruction.
- *LEA training and professional development summit on curriculum embedded tasks:* Summer institutes for district assessment staff and district curriculum coordinators attending to be trained as trainers. Train participants in the administration of tasks and on scoring student responses.
- *Summits on high priority professional development areas:* Over the course of Race to the Top, conduct summits in each of the high-priority professional development areas.
- *In-person training for Competency Tracking System:* Face-to-face meetings at the DSACs for general training and orientation, with one representative from each district.
- *Professional development for staff using the Digital Library:* Contracts with professional development providers (and/or non-profit educational organizations) to develop and provide training services to district administrators, curriculum coordinators, and teachers in participating LEAs on the use of the Digital Library.
- *Contracting with local educators to provide regional technical assistance on model curriculum:* Contracted educators in each content area and grade level in each DSAC/region will support local schools with implementation of model curriculum; each educator will be paid an annual stipend.
- *Supplemental professional development and support for select districts on interim/formative assessments:* Supplemental professional development and support for districts with existing interim and formative assessment systems to support transition to ESE's new platform.
- *Additional district level training on teaching and learning system:* Additional support for teachers and principals in urban districts; districts to choose professional development programs.
- *Expand offerings for high priority areas:* Increased participation in professional development programs current offered at the DSACs, with a focus on high priority professional development needs.

PROJECTS DESCRIBED IN SECTION E

Project Name	Proposal Section
13. Develop a specialized corps of turnaround teacher and leader teams	(E)(2)
14. Build capacity of proven partners to support struggling schools	(E)(2)
15. Build district capacity to intervene in struggling schools	(E)(2)
16. Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools	(E)(2)

Budget Part II: Project-Level Budget Table
Project Name: Develop a specialized corps of turnaround teacher and leader teams
Associated with Criteria: (E)(2)(ii)
(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	$150,000	$154,500	$159,135	$163,909	$627,544
2. Fringe Benefits	$41,700	$42,951	$44,240	$45,567	$174,457
3. Travel	$12,000	$0	$0	$0	$12,000
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$7,000	$1,000	$1,000	$1,000	$10,000
6. Contractual	$900,000	$1,050,000	$400,000	$0	$2,350,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,110,700	$1,248,451	$604,375	$210,476	$3,174,001
10. Indirect Costs	$63,611	$60,622	$55,967	$51,356	$231,556
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$580,160	$964,516	$1,348,872	$1,348,872	$4,242,420
13. Total Costs (lines 9-12)	$1,754,471	$2,273,589	$2,009,214	$1,610,704	$7,647,978

Project Name: Develop a specialized corps of turnaround teacher and leader teams
Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Project managers:* The state will hire 2 FTEs to manage the turnaround teacher and turnaround leader pipelines to coordinate the process of program design, fund distribution, and regional rollout. They will be responsible for the details of the initiative proposed in the plan associated with (E)(2).

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project managers	2 FTEs at 100%	$75,000	$150,000	$154,500	$159,135	$163,909	$627,544

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Project managers	27.8%	$41,700	$42,951	$44,240	$45,567	$174,457

3) Travel

- *Convening of experts:* To facilitate the programs, ESE will hold a 3-day convening for 20 experts and providers in the summer of 2010, at a cost of $200/person/day.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
Convening of experts	20x1 person	$600 per person	$12,000	$0	$0	$0	$12,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$1,000	$1,000	$1,000	$1,000	$4,000
Desktop computer	Desktop computers and	$2,000 per	$4,000	$0	$0	$0	$4,000

equipment	monitors	person					
Printer	Shared printer for project managers	$2,000	$2,000	$0	$0	$0	$2,000

6) Contractual

- *Consulting design support:* Consulting to support design of teacher and leader programs.
- *Regional grants:* Capacity-building grants to institutions of higher education, residency programs, and other training/induction providers in each of 4 regions (1 in Year 1, 2 in Year 2, 1 in Year 3). Intended to support allocation of 4 FTEs across providers in each region for that year to start the programs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$750,000	1 year	$500,000	$250,000	$0	$0	$750,000
Regional grants	$400K/region	1 year per region	$400,000	$800,000	$400,000	$0	$1,600,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$51,411	$48,422	$49,867	$51,356	$201,056

24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$12,200	$12,200	$6,100	$0	$30,500

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Teacher recruitment:* Funding for providers to recruit and screen proven, experienced teachers (50 in Year 1, 100 in Year 2, 150 each in Years 3-4). The state will contribute 20% of estimated total costs.
- *Principal recruitment*: Funding for providers to recruit and screen proven, experienced principals via "executive search" (10 in Year 1, 11 in Year 2, 12 in Years 3-4). The state will contribute 20% of estimated total costs.
- *Teacher support and training:* Funding for providers to for training, induction, and associated stipends for teachers (50 in Year 1, 100 in Year 2, 150 each in Years 3-4). The state will contribute 20% of estimated total costs.
- *Principal support and training:* Funding for providers to for training, induction, and associated stipends for principals (10 in Year 1, 11 in Year 2, 12 in Years 3-4). The state will contribute 20% of estimated total costs.

Activity	**Cost per Activity**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Total**
Teacher recruitment	$10,000 per teacher	$100,000	$200,000	$300,000	$300,000	$900,000
Principal recruitment	$35,000 per principal	$70,000	$77,000	$84,000	$84,000	$315,000
Teacher support and training	$25,000 per teacher	$250,000	$500,000	$750,000	$750,000	$2,250,000
Principal support and training	$70,000 per principal	$140,000	$154,000	$168,000	$168,000	$630,000
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental	n/a	$100,000	$200,000	$300,000	$300,000	$900,000

Funding						

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table
Project Name: Build capacity of proven partners to support struggling schools
Associated with Criteria: (E)(2)(ii)
(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	$75,000	$77,250	$79,568	$81,955	$313,772
2. Fringe Benefits	$20,850	$21,476	$22,120	$22,783	$87,229
3. Travel	$1,280	$1,280	$1,280	$1,280	$5,120
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$4,500	$500	$500	$500	$6,000
6. Contractual	$456,000	$484,000	$484,000	$484,000	$1,908,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$557,630	$584,506	$587,467	$590,518	$2,320,121
10. Indirect Costs	$79,698	$103,823	$104,546	$105,290	$393,357
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)	$637,328	$688,329	$692,013	$695,808	$2,713,478

Project Name: Build capacity of proven partners to support struggling schools
Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Priority Provider manager:* The state will hire 1 FTE to manage the Priority Provider program, coordinating the process of identifying, vetting, and distributing Race to the Top grants to qualified supporting partners who fulfill the 11 essential conditions for school turnaround. S/he will be responsible for the details of the initiative to invest in school improvement supports proposed in the plan associated with (E)(2).

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Priority Provider manager	100%	$75,000	$75,000	$77,250	$79,568	$81,955	$313,772

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Priority Provider manager	27.8%	$20,850	$21,476	$22,120	$22,783	$87,229

3) Travel

- *District and school visits:* To assist in evaluating the effectiveness of supporting partners, the Priority Provider manager will make 8 district/school visits per quarter, averaging 100 miles at $0.40/mile.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
District and school visits	32x1 person	$40	$1,280	$1,280	$1,280	$1,280	$5,120

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per	$500	$500	$500	$500	$2,000

		year					
Desktop computer equipment	Desktop computer, monitor, and printer for Priority Provider Manager	$4,000 per person	$4,000	$0	$0	$0	$2,000

6) Contractual

As described in the proposal narrative, it is expected that the per-school costs for supports in Level 4 schools will be funded by Title IG grants. The state will invest its funds in startup costs associated with program design, and will contribute 40% of the estimated total costs necessary to scale up data usage, ELO, and social-emotional supports to new LEAs through capacity-building grants.

- *Process development and assessment:* Vendor contract to build the Priority Provider process, as described in detail in section E(2)(ii).
- *Capacity-building grants:* Capacity-building grants to partners who provide support on social-emotional conditions, extended learning opportunities, and effective data usage to scale up to new districts ($80,000 per partner per district). 8 grants in Year 1, 12 each in Years 2-4. The state will contribute 40% of estimated total costs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Process development and assessment	$500,000	5,000 hours	$200,000	$100,000	$100,000	$100,000	$500,000
Capacity-building grants	$1,408,000	n/a	$256,000	$384,000	$384,000	$384,000	$1,408,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$24,798	$24,523	$25,246	$25,990	$100,557
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$54,900	$79,300	$79,300	$79,300	$292,800

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

None

13) Total Costs

See Project-Level Budget Table.

Budget Part II: Project-Level Budget Table
Project Name: Build district capacity to intervene in struggling schools
Associated with Criteria: (E)(2)(ii)
(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	$70,000	$157,900	$162,637	$76,491	$467,028
2. Fringe Benefits	$19,460	$43,896	$45,213	$21,264	$129,834
3. Travel	$20,640	$20,640	$640	$640	$42,560
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$4,500	$3,000	$1,000	$500	$9,000
6. Contractual	$1,220,000	$1,491,000	$1,300,000	$1,300,000	$5,311,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$900,000	$900,000	$900,000	$2,700,000
9. Total Direct Costs (lines 1-8)	$1,334,600	$2,616,436	$2,409,490	$2,298,895	$8,659,422
10. Indirect Costs	$88,962	$401,486	$380,516	$353,530	$1,224,495
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)	$1,423,562	$3,017,923	$2,790,006	$2,652,426	$9,883,917

Project Name: Build district capacity to intervene in struggling schools
Associated with Criteria: (E)(2)(ii)

1) Personnel

- *Project manager:* The state will hire 1 FTE to identify, manage, and evaluate providers of district-level support, as defined in the initiative described in (E)(2)(ii).
- *Early Warning Data Systems project manager:* The state will hire 1 FTE in Years 2-3 to manage the overall delivery of all project components involved in enhancing the Early Warning Indicator system.

Position	% FTE	Base Salary	Year 1	Year 2	Year 3	Year 4	Total
Project manager	100%	$70,000	$70,000	$72,100	$74,263	$76,491	$292,854
Early Warning Data Systems project manager	100% in Year 2 and Year 3	$85,800	$0	$85,800	$88,374	$0	$174,174

2) Fringe Benefits

Position	Fringe Benefit %	Year 1	Year 2	Year 3	Year 4	Total
Priority Provider manager	27.8%	$19,460	$20,044	$20,645	$21,264	$81,413
Early Warning Data Systems project manager	27.8%	$0	$23,852	$24,568	$0	$48,420

3) Travel

- *District and school visits:* To assist in evaluating the effectiveness of supporting partners, the Priority Provider manager will make 4 district visits per quarter, averaging 100 miles at $0.40/mile.
- *Convene state partners*: 2-day convening in Years 1 and 2 of 100 partners from MassPartners, MASS, and MASC on governance and leadership. Expected cost of $200/person including travel and site costs.

Travel	# of trips	Cost per Trip ($)	Year 1	Year 2	Year 3	Year 4	Total
District and school visits	16x1 person	$40	$640	$640	$640	$640	$2,560
Convene state partners	100x1person	$200	$20,000	$20,000	$0	$0	$40,000

4) Equipment

None

5) Supplies

Supplies	Detail	Cost of Item	Year 1	Year 2	Year 3	Year 4	Total
Office supplies	Basic office supplies for staff	$500 per person per year	$500	$1,000	$1,000	$500	$3,000
Desktop computer equipment	Desktop computer, monitor, and printer	$4,000 per person	$4,000	$0	$0	$0	$4,000
Desktop computer equipment	The Early Warning Data Systems Project manager will require a desktop computer and monitor	$2,000 per person	$0	$2,000	$0	$0	$2,000

6) Contractual

- *Consulting design support:* Consulting contract for design of the district systems of support programs.
- *Grants to state associations:* Capacity-building grants based on 1 FTE per year each for 3 state associations over Years 1-4 to build support for governance and leadership.
- *LEA partners on family/community:* Support for providers to work with districts on family/community engagement (4 in Year 1, 8 in Years 2-4). The state will contribute 40% of estimated total costs.
- *Consultants on HR systems:* Support for experts on HR systems to work with LEAs as needed (4 in Year 1, 8 in Years 2-4). The state will contribute 20% of estimated total costs.

- *Early Warning researcher*: Research and design support for the Early Warning system and pilots via a consulting contract in Years 2-4.
- *Business analyst/Quality assurance*: Quality assurance reports and dashboard from Early Warning Indicator Index model.
- *Developer*: Design and develop reports and dashboard for Early Warning Indicator System.
- *Training delivery contract*: Develop materials for Early Warning Indicator System trainings. The state will contribute 40% of estimated total costs.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$500K	1 year	$500,000	$0	$0	$0	$500,000
Grants to state associations	$960K	4 years	$240,000	$240,000	$240,000	$240,000	$960,000
LEA partners on family/ community	$200K per LEA per year	4 years	$320,000	$640,000	$640,000	$640,000	$2,240,000
Consultants on HR systems	$200K per LEA per year	4 years	$160,000	$320,000	$320,000	$320,000	$1,120,000
Early Warning researcher	$100,000 per year in Years 2-4	3 years	$0	$100,000	$100,000	$100,000	$300,000
Business analyst/Quality assurance	$54,000	1 year	$0	$54,000	$0	$0	$54,000
Developer	$117,000	1 year	$0	$117,000	$0	$0	$117,000
Training delivery contract	$20,000	1 year	$0	$20,000	$0	$0	$20,000

7) Training Stipends

None

8) Other

- *Wrap-around zones:* Pilot "wrap-around zones" in 3 LEAs in Years 2-4, coordinating social/community services provided by government and non-profits into a coherent whole, sharing information to work together for the benefit of individual students.

Expected costs include data systems, allocation of ESE and agency staff time, and convening of community partners. The state will contribute 40% of estimated total costs.

- *Pre-K training in wrap-around zones:* Train center- and home-based providers in each of three wrap-around zones on early math/literacy to create preschool-kindergarten curriculum alignment. 200 providers will be trained in each zone in each of years 2-4, at $1,500 each. The state will contribute 40% of estimated total costs.
- *Early Warning pilots:* Pilot the improved Early Warning system in 6 districts, with technical assistance and training, including: IT support, data analysis assistance, training for all levels (administrators through teachers), protocol and policy development, adding local data to the state-level system, and development and implementation of activities to better support students based on the Early Warning system. The state will contribute 40% of estimated total costs.

Other Expenditure	Cost per Item	# of items	Year 1	Year 2	Year 3	Year 4	Total
Wrap-around zones	$300,000 per zone per year	3 in Years 2-4	$0	$360,000	$360,000	$360,000	$1,080,000
Pre-K training in wrap-around zones	$1,500 per provider per year	600 in Years 2-4	$0	$360,000	$360,000	$360,000	$1,080,000
Early Warning pilots	$75,000 per pilot per year	6 over Years 2-4	$0	$180,000	$180,000	$180,000	$540,000

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$27,962	$274,606	$270,716	$243,730	$817,015
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each	$61,000	$126,880	$109,800	$109,800	$407,480

	contract					

11) Funding for Involved LEAs
None

12) Supplemental Funding for Participating LEAs
None

13) Total Costs
See Project-Level Budget Table.

Additional note on other funding sources:
The activities in this project, specifically the investment in expanding the Early Warning data system, may also be supported by $0.6M in funding from Massachusetts' proposal for the State Longitudinal Data Systems grant, for which funding decisions will be announced later this year.

Budget Part II: Project-Level Budget Table
Project Name: Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools
Associated with Criteria: (E)(2)(ii)
(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	$600,000	$1,250,000	$1,250,000	$3,700,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$600,000	$600,000	$1,250,000	$1,250,000	$3,700,000
10. Indirect Costs	$12,200	$12,200	$30,500	$30,500	$85,400
11. Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$51,800	$103,600	$103,600	$103,600	$362,600
13. Total Costs (lines 9-12)	$664,000	$715,800	$1,384,100	$1,384,100	$4,148,000

Project Name: Develop, attract, and manage lead partners and turnaround operators to execute the restart model at Level 4 and 5 schools
Associated with Criteria: (E)(2)(ii)

1) **Personnel**
   None

2) **Fringe Benefits**
   None

3) **Travel**
   None

4) **Equipment**
   None

5) **Supplies**
   None

6) **Contractual**
   a. *Consulting design support*: Consulting to support design of nonprofit management organization.
   b. *Startup funding for management organization*: ESE will coordinate with philanthropy to identify and incubate an organization to manage and evaluate turnaround operators in the state. The 3-year budget for this organization is projected at $6.6M. RTTT will fund $1M of startup costs over Years 1 and 2, with philanthropy supporting the remainder of the budget.
   c. *Turnaround operator per-school costs*: Funding for school turnaround operators, managed and evaluated by the new management organization. The state will fund the estimated $250,000 per-school turnaround operator costs, with associated funding needs covered by Title IG. The state expects to support 5 schools in each of Years 3 and 4.

Product/ Service	Cost per Procurement	Amount of Time	Year 1	Year 2	Year 3	Year 4	Total
Consulting design support	$200K	2 years	$100,000	$100,000	$0	$0	$200,000
Startup funding for management organization	$1M	2 years	$500,000	$500,000	$0	$0	$1,000,000

Turnaround operator per-school costs	$250K per school per year	2 years	$0	$0	$1,250,000	$1,250,000	$2,500,000

7) Training Stipends

None

8) Other

None

9) Total Direct Costs

See Project-Level Budget Table.

10) Indirect Costs

Indirect Cost Rate	Relevant Application	Year 1	Year 2	Year 3	Year 4	Total
24.40%	Approved by US ED. 24.4% applied to total direct costs except for contractual costs and equipment	$0	$0	$0	$0	$0
24.40%	Approved by US ED. 24.4% applied to first $25,000 annually on each contract	$12,200	$12,200	$30,500	$30,500	$85,400

11) Funding for Involved LEAs

None

12) Supplemental Funding for Participating LEAs

- *Alternative education turnaround operator:* Funding for alternative education/high school turnaround operator model, as described in (E)(2)(ii). RTTT funds will provide $250,000 per school per year, with the remainder funded by Title IG. The state will contribute 20% of estimated total costs, with LEAs drawing on Race to the Top and Title IG funding.

Activity	Cost per Activity	Year 1	Year 2	Year 3	Year 4	Total
Alternative education	$250K per	$50,000	$100,000	$100,000	$100,000	$350,000

turnaround operator	school per year					
3.60% indirect cost rate: Average of indirect cost agreements with LEAs, applied to Supplemental Funding	n/a	$1,800	$3,600	$3,600	$3,600	$12,600

13) Total Costs

See Project-Level Budget Table.

Appendix A10: Massachusetts Federal and State Accounts Under Consideration for Coordination, Reallocation, or Repurposing to Support ESE's RTTT Proposal

Federal accounts

Account Number	Account Name	Admin & TA share of total FY10 award	Approx % of admin/TA to be coord.	Approx FTE to be coordinated	Comments
7043-7001	IDEA (SPED)	$ 5,732,969	25%	1.0	Math PD at DSACs on working with SWDs
7043-1001	Title 1	$ 20,841,909	25%	3.0	DSACs, analysis support
7043-2001	Teacher Quality(Title II-A)	$ 1,734,887	50%	10.0	Educator preparation
7043-4002	After School - 21st Century	$ 910,081	25%	0.5	Coordinate with RTTT beginning in year 2
7043-3001	Title III- English Lang. Acquis.	$ 591,956	50%	2.0	PD focus on common core and priority districts
7060-2002	Ed Tech State Grants (ARRA)	$ 527,283	10%	0.0	Year 1 only: tools for tiered instruction in alt HS
7038-0107	Adult Ed.	$ 1,683,647	10%	1.0	Coordinate with wraparound strategy
7043-1006	School Improvement Grants	$ 2,934,571	100%	0.0	Coordinate with school turnaround strategy
7043-7002	Sped Early Childhood	$ 1,000,000	10%	0.0	Coordinate with wraparound strategy
7043-6001	Title VI State Assessments	$ 7,665,358	10%	5.0	Formative & benchmark assessment
7043-2002	Ed.Tech- Title II-D	$ 214,174	0%	0.5	Coordinate with wraparound strategy
7043-2003	Math & Science- Title II-B	$ 238,708	50%	0.0	PD focus on common core and priority districts
7044-0020	Prog. Improvement	$ 1,160,000	25%	0.0	PD focus on common core and priority districts
7047-9008	Learn & Serve America Competitive	$ 250,000	25%	0.0	Coordinate with wraparound strategy
7043-6501	McKinney Homeless	$ 257,164	25%	0.0	Coordinate with wraparound strategy
7035-0166	Even Start	$ 60,625	25%	0.0	Coordinate with wraparound strategy
	Subtotal	**$ 45,803,332**	**$ 12,608,162**	**23.0**	

State accounts

Account number	Account name	FY10 budget	Approx % of line to be coordinated	Approx FTE to be coordinated	
7010-0005	Department of Education - Admin.	$ 13,168,887	0%	5.0	OSPRE & Commissioner's Office staff
7010-0033	Consolidated Literacy Program	$ 4,175,489	50%	0.0	PD focus on common core and priority districts
7010-1022	Certificate of Occupational Proficiency	$ 20,995	100%	0.0	Fully funded in RTTT
7027-1004	P.D. for Eng. Language Acquisition	$ 397,937	50%	0.0	PD focus on common core and priority districts
7030-1002	Kindergarten Grants	$ 25,948,947	25%	1.0	Coordinate with RTTT beginning in year 2
7035-0002	Adult Learning Centers	$ 28,085,096	10%	1.0	Coordinate with wraparound strategy
7061-0029	District and school accountability	$ 1,189,083	100%	7.0	Key element of RTTT turnaround strategy
7061-9200	DOE Information Technology - Admin.	$ 589,164	10%	1.0	Coordinate on data collection
7061-9400	Student Assessment (MCAS)	$ 25,267,854	10%	5.0	Formative and benchmark assessment
7061-9404	Supports to Close the Achievement Gap	$ 9,294,804	25%	0.0	Coordinate with RTTT beginning in year 2
7061-9408	Targeted Assistance to Schools & Districts	$ 6,874,476	30%	10.0	Office of School Redesign + others; incr in year 2
7061-9412	Expanded Learning Time Grants	$ 15,672,375	5%	0.0	Middle schools may coord with Early College HS
7061-9611	After-School Grant Program	$ 2,000,000	25%	0.0	Coordinate with RTTT beginning in year 2
7061-9804	P.D. for Mathematics	$ 386,227	50%	0.0	PD focus on common core and priority districts
	Subtotal	**$ 133,071,334**	**$ 21,241,015**	**30.0**	
	Grand total		**$ 33,849,178**	**53.0**	
	Percent of total		**18.9%**	**10.1%**	

Appendix A11: Stakeholder Letters of Support

A total of 146 stakeholders have signed letters of support for Massachusetts' proposal. The letters follow; below is a list of the organizations that have submitted letters, in order of appearance in the appendix.

Legislators
U.S. Congressional Delegation
State Senate and House leadership and chairs of the Joint Committee on Education

Teachers and Principals Associations
AFT Massachusetts
Massachusetts Teachers Association
Massachusetts Elementary School Principals Association
Massachusetts Secondary School Administrators Association

Other K-12 Education Associations
Association of Independent Colleges and Universities in Massachusetts
Massachusetts Association of School Committees
Massachusetts Association of School Superintendents
Massachusetts Charter Public Schools Association
Massachusetts Parent Teacher Association
MassPartners for the Public Schools

Other Education Associations and Agencies
Commonwealth Readiness Project Co-chairs
Council of State College Presidents
Massachusetts Board of Higher Education
Massachusetts Department of Early Education and Care
Massachusetts Department of Higher Education
Massachusetts Association of Colleges for Teacher Education
Readiness Centers Network
Proficiency Gap Committee, Board of Elementary and Secondary Education
ELL subcommittee of Proficiency Gap Task Force

Community and civil rights groups
Black Leaders for Excellence in Education
Multicultural Dropout Outreach Collaborative
NAACP New England Area Conference

STEM stakeholders
Governor's STEM Advisory Council, Lieutenant Gov. Timothy Murray
Massachusetts Biotechnology Council
National Center for Technology Literacy and Museum of Science
Robert H. Goddard Council
STEM Early College Pathway Initiative - Boston, Lowell, and Springfield
STEM Pipeline Fund
STEMTech Alliance

Business associations
Massachusetts Business Alliance for Education
Massachusetts Business Roundtable

Nonprofits and other associations
Achieve
Boston Plan for Excellence in the Public Schools
MassInsight
Teachers21

Foundations
Barr Foundation
Boston Education Funders
Boston Foundation
Nellie Mae Foundation
Strategic Grant Partners

Other
Robert Schwartz, Academic Dean, Harvard Graduate School of Education

Congress of the United States
Washington, DC 20515

January 14, 2010

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

Dear Secretary Duncan:

We are writing to enthusiastically endorse Massachusetts' Phase I application for the Race to the Top Fund.

As you know, Massachusetts is a national leader in education reform and improvement, and our students consistently rank among the highest performers on U.S. and international measures of reading, mathematics and science achievement. Still, we recognize the need to continue working to close persistent achievement gaps and ensure that each and every one of our students receives a world-class public education. Massachusetts' Race to the Top application aims to accomplish this goal by building on the strong foundation of our landmark 1993 Education Reform Act and launching a second phase of major education reforms designed to propel student achievement to new heights.

Massachusetts' application emphasizes four ambitious yet achievable goals: providing all students with a more personalized educational experience; developing and retaining an effective, diverse, and culturally competent educator workforce; concentrating high-quality instruction, additional supports for students and families, and tools for educators in the lowest-performing schools; and increasing the readiness of all students for college and careers.

The application also articulates a series of bold and innovative strategies to reach each of the above goals. For example, Massachusetts plans to establish a new teaching and learning system that will give educators unprecedented access to formative, benchmark, and interim assessments that are closely aligned to rigorous content standards. Our application will promote the establishment of a greatly enhanced student data system that will allow educators to run sophisticated, real-time reports assessing students' academic mastery and continued learning needs.

We hope to use Race to the Top funding to establish a new teacher licensure system to ensure that teachers are expertly qualified in different domains, as well as a teacher career ladder that will encourage educators to move into new leadership roles. Finally, we will use program funding to implement dramatic new turnaround strategies authorized by the state legislation, which you joined us in promoting last July. Taken together, we believe these initiatives will not

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only be a powerful impetus for dramatic change in Massachusetts, but also allow our state to continue to serve as a national model for educational improvement and reform.

We appreciate the leadership that you and President Obama have shown to make this unprecedented opportunity available to states and respectfully request that you will give Massachusetts' application the fullest consideration.

Sincerely,

Edward J. Markey
U.S. Representative

John F. Kerry
U.S. Senator

Barney Frank
U.S. Representative

Paul G. Kirk
U.S. Senator

Richard E. Neal
U.S. Representative

John W. Olver
U.S. Representative

Bill Delahunt
U.S. Representative

Jim P. McGovern
U.S. Representative

John F. Tierney
U.S. Representative

Michael E. Capuano
U.S. Representative

Stephen F. Lynch
U.S. Representative

Niki Tsongas
U.S. Representative

COMMONWEALTH OF MASSACHUSETTS

THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

January 15, 2010

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

Dear Secretary Duncan:

On behalf of the Massachusetts General Court and the citizens of the Commonwealth of Massachusetts, we are writing to share our enthusiastic support for Massachusetts' Phase I application to the Race to the Top Fund.

As you know, Massachusetts' students consistently outperform their national and international peers in the areas of reading, math and science, on multiple measures of assessment. Despite this success, however, we recognize that we have a tremendous amount of work to do to close persistent achievement gaps and ensure that each and every one of our students receives the best possible public education. In 1993, our General Court put in place a strong foundation through a landmark Education Reform Act, and this year our state legislature has reaffirmed its support for education reform through legislation enacted this week. The Legislature's support for *An Act Relative to the Achievement Gap* underscores our belief in providing meaningful intervention tools to address persistent underperformance in our schools, lifting charter school caps in our most challenged districts, and promoting innovation in all Massachusetts schools and districts. These are three essential steps Massachusetts must take to achieve our educational goals and close the achievement gap, and with the Governor's signature, this law will be the most significant education legislation our state has passed since the Education Reform Act of 1993.

The Commonwealth's Race to the Top application, coupled with this newly passed law, will allow us to initiate an ambitious second phase of education reform in Massachusetts that will improve student achievement while closing achievement gaps. Our application emphasizes four ambitious yet achievable goals: providing all students with more individualized educational experiences; developing and retaining an effective, diverse, and culturally competent educator workforce; concentrating high-quality instruction, additional supports for students and families, and tools for educators in the lowest-performing schools; and increasing college and career readiness for all students. The Commonwealth's application articulates a series of bold and innovative strategies to reach each of these goals that will not only be a powerful impetus for dramatic change in Massachusetts, but will also allow our state to continue to serve as a national model for educational improvement and reform.

We are grateful to you and President Obama for providing this opportunity to the Commonwealth, and we look forward to working to ensure *all* of our students receive a high-quality educational experience. On behalf of the Massachusetts General Court, we hope that you will grant your fullest consideration to the Commonwealth of Massachusetts' Race to the Top application. Please do not hesitate to contact us if we can provide additional information.

Sincerely,

Speaker Robert A. DeLeo
Massachusetts House of Representatives

President Therese Murray
Massachusetts State Senate

Representative Martha M. Walz
Chairwoman
Massachusetts Joint Committee on Education

Senator Robert A. O'Leary
Chairman
Massachusetts Joint Committee on Education

AMERICAN FEDERATION OF TEACHERS MASSACHUSETTS
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Fax: (617) 423-0174

January 15, 2010

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

Dear Secretary Duncan:

On behalf of the 23,000 members of the American Federation of Teachers Massachusetts, I am writing to urge your support of Massachusetts' Race to the Top application.

I would be less than honest if I did not say that our members do have many serious reservations about the Race to the Top program. I expressed many of those concerns when I submitted detailed comments to you last fall. Quite frankly, those concerns still exist, particularly in regard to mandates to tie teacher evaluations to student performance and in regard to the limitations and prescriptive nature of the four Race to the Top approved school intervention models. In addition, the recent legislation adopted by the state legislature concerns me.

That said, however, we have concluded, after several meetings with Commissioner Mitchell Chester and staff from the Massachusetts Department of Elementary and Secondary Education that the Race to the Top Funds offer an opportunity for us to address the educational challenges of our neediest students and could provide great benefit to all the students of Massachusetts.

Public school students in Massachusetts achieve at an exceptionally high level. I hope that we obtain hard data on what is exactly occurring to achieve these results and then use the information to help students who do not achieve as well as we would like.

From the beginning, we have said that our guiding principle is that we want school reform that is good for children, fair to educators, and done collaboratively. We are confident that given the opportunity to work as equal partners with superintendents and school committees, the Race to the Top program will provide a framework through which we can shape programs that are educationally productive, research based, and consistent with our principles.

It is in that spirit that we have recommended to all of our local union presidents that they sign the Memorandum of Understanding with their superintendents and school committee chairs. And we have urged them to participate in good faith to implement the goals of the Massachusetts proposal.

Thank you for your consideration.

Sincerely,

Tom Gosnell

Thomas Gosnell
President, AFT Massachusetts

Massachusetts Teachers Association

Anne Wass, President
Paul F. Toner, Vice President
David A. Borer, Executive Director-Treasurer

January 14, 2010

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

Reference: Massachusetts Race to the Top Application

Dear Secretary Duncan:

The Massachusetts Teachers Association is writing to you in support of the Massachusetts Race to the Top application. As leaders of the largest professional education association and union in the state, we believe that we must participate in this process so that we can play an important role in developing new policies in the areas of teacher evaluation, using data to improve instruction, providing incentives for teachers to work in hard-to-staff schools and giving our lowest performing schools the support and oversight they need to help their students achieve.

As an association, we have reservations and concerns about some elements of the Race to the Top grant and some elements of the Massachusetts state application, including provisions that call for using student test scores for teacher evaluations and compensation. In addition, as we have stated previously, we oppose the mandated improvement strategies for underperforming schools. These mandates could force some of our larger districts to transfer or terminate at least 50 percent of the staff in several schools, even if educational leaders in the district believe that such a move would be disruptive and counterproductive for students.

Despite these concerns, we have encouraged our local affiliates to be part of this process of change if they have collaborative and supportive working relationships with their superintendents and school committee members. We look forward to partnering more closely with the Massachusetts Department of Elementary and Secondary Education, parents, principals, school committees, superintendents and other community stakeholders to support our teachers in developing better conditions for teaching and learning in all of our schools. We believe we all must work together to make a positive difference in the education of our students and the professional lives of our members.

Massachusetts has one of the most unionized educator work forces in the country, and our students consistently rank at or near the top in every category on the National Assessment of Educational Progress (NAEP) and the Trends in International Mathematics and Science Study

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(TIMSS). However, Massachusetts – like the rest of the nation – does have significant achievement gaps among our student populations. We are ready to work with all partners to develop new and better strategies to help close these gaps. The fact that we have done so well with so many of our students puts us in an excellent position to tackle this most difficult of problems: helping low-income, minority and limited English proficient students succeed in school even when they face significant personal, economic and societal challenges.

Each school faces unique challenges; one solution will not work for all. Our vision of the RTTT implementation is that educators and policy leaders will acknowledge the experience and skills that everyone brings to the table and design workable models to help our disadvantaged students and schools become more successful. Together, state and local policy-makers, our Commonwealth's educators and their unions have laid the foundation upon which we can build a better system that is equitable for all.

That foundation includes a willingness to embrace innovation. Many of our district schools already offer alternative models of instruction, and the MTA is a leading advocate of both the Expanded Learning Time initiative and the Partnership for 21st Century Skills. We look forward to discussing additional innovative proposals and hope that the federal government will support states and districts as they experiment with their own models.

We look forward to advancing the goal of helping all of our students succeed and urge you to select Massachusetts as one of the Race to the Top states. Thank you for your consideration.

Sincerely,

(b)(6)

Anne Wass
President

(b)(6)

Paul Toner
Vice President

Massachusetts Elementary School Principals' Association, Inc.

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Affiliated with N.A.E.S.P

January 11, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Secretary Duncan,

On behalf of the Massachusetts Elementary School Principals' Association, Inc. (MESPA), I am writing to inform you of MESPA's support for the Massachusetts Race to the Top Application.

MESPA is the professional association representing elementary and middle level principals with some 1,100 members across the state. Our Core Values are Leadership, Learning, Service and Community, and MESPA is committed to providing programs, activities, professional development, licensure programs and degree programs, networking opportunities and current research for principals and their staff members. As an example, MESPA was the first association in the country to develop an alternative program to prepare educators to become principals that has received national recognition and has prepared over 300 principals; the first to develop a doctoral program in educational leadership for principals and others administrators in conjunction with a local university (Boston College and now Lesley University); the first to develop a technology center,; and the first to develop a comprehensive professional development program that is research-based and geared toward improving practice. These activities are part of our mission to improve schools through enlightened leadership that begins with pre-service and continues through post-service.

The Massachusetts Race to the Top assurance areas around leadership are of immense interest to us because they include a comprehensive approach to working with leaders and teachers that will provide research and standards-based professional development, leadership coaching, leadership training, support to school districts, and a fair system of accountability. MESPA will actively support these activities as it has the capacity and the programs to do so. MESPA has partnered with the Department of Elementary and Secondary Education for many years. For example, we are a lead partner in the Central Massachusetts Readiness Center, have developed the coaching program used by the state, and worked with principals, assistant principals and aspiring principals through state funded programs.

MESPA supports the thoughtful, comprehensive and innovative program that has been developed in this application. It sets high standards, provides considerable support to educators, and holds them accountable for reaching all students. MESPA has provided input to the development of key aspects of the program and expects that it will continue to offer its services toward implementation. The award of a grant to Massachusetts will provide needed funding to build the capacity of individuals, institutions, districts, and the state to implement and sustain the proposed strategies. The funding for professional development, coaching, teacher and leadership development, and all around high standards will allow our state not only to continue to sit at or near the top of performance in the country, as evidenced by national assessments, but to continue to improve its service to students and educators. We ask that you support Massachusetts' efforts by selecting it as one of the states to receive this award.

Sincerely,

Nadya Aswad Higgins
Executive Director

MASSACHUSETTS SECONDARY SCHOOL ADMINISTRATORS' ASSOCIATION, INC.

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Mr. Mark Wood
Principal
Tri-County RVTHS, Franklin

January 8, 2010

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

Reference: Massachusetts' Race to the Top Application

Dear Secretary Duncan:

The Massachusetts Secondary Schools Administrators' Association (MSSAA) writes this letter in support of the Massachusetts' Race to the Top grant application. The MSSAA supports the best possible educational opportunities for middle level and high school students throughout Massachusetts by initiating leadership training and providing services designed to improve administration and instruction. The Association advocates positions on significant statewide educational matters. MSSAA supervises and administers nonathletic activities and provides extensive professional development opportunities for its members to enhance their effectiveness as educational leaders. The Association provides many opportunities for networking and other forms of educational exchange.

Massachusetts is not alone in facing achievement gaps and, along with the Nation's educational leaders, is searching for solutions. The challenge is to create a high performing public education system with the capacity and resources to meet the needs of all students; i.e. those who come to school with advantages and those who do not.

We believe that the Race to the Top Fund will allow Massachusetts to implement innovations to ensure a first-class educator workforce and a high-quality education for every child. We are anticipating our DESE will expect MSSAA to have a fundamental role in the detailed development of the four Massachusetts' Race to the Top initiatives.

MSSAA supports the opportunities for school improvement, and increased funding set forth in the RTTT initiative. We ask that you look favorably on Massachusetts' application.

Thank you.

Joan Scribner, President

David Thomson, President-elect

Richard F. Neal, Executive Director

AICUM
Association of Independent Colleges and Universities in Massachusetts

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American International College
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College of the Holy Cross
Curry College
Dean College
Elms College
Emerson College
Emmanuel College
Endicott College
Fisher College
Franklin W. Olin College of Engineering
Gordon College
Hampshire College
Harvard University
Hebrew College
Labouré College
Lasell College
Lesley University
Marian Court College
Massachusetts College of Pharmacy & Health Sciences
Massachusetts Institute of Technology
Merrimack College
MGH Institute of Health Professions
Mount Holyoke College
Mount Ida College
New England College of Optometry
New England Conservatory of Music
Newbury College
Nichols College
Northeastern University
Pine Manor College
Regis College
Simmons College
Smith College
Springfield College
Stonehill College
Suffolk University
Tufts University
Urban College of Boston
Wellesley College
Wentworth Institute of Technology
Western New England College
Wheaton College
Wheelock College
Williams College
Worcester Polytechnic Institute

January 8, 2010

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

Dear Secretary Duncan:

The Association of Independent Colleges and Universities in Massachusetts (AICUM) wholeheartedly endorses the Commonwealth's application for Race to the Top (RTTT) federal funding support.

AICUM colleges and universities are vital to the education, economy and culture of the Commonwealth. Our institutions are vigorously and visibly engaged in improving the educational attainment of our young people. Our colleges, faculty and students collaborate regularly with public schools across the state, including programs in teacher preparation and training, and teacher and administrator professional development. On any given school day, literally thousands of AICUM member students can be found volunteering in tutorial or enrichment programs in the performing arts, STEM disciplines, athletics, dual-enrollment programs and offerings of Advanced Placement courses on our campuses. In many cases, our institutions have taken on the responsibility of running their own pre-schools or high schools in partnership with the local school district.

AICUM institutions educate some 250,000 students annually -- over half of whom are Massachusetts residents. Last year our private colleges and universities awarded over $400M in need-based institutional aid to Massachusetts students, allowing them to attain a higher education degree. Clearly we have a vested interest in the preparation and success of Massachusetts public school students.

Massachusetts private colleges are serious about supporting real efforts to reform underperforming schools. The RTTT grant will help institutions to promote and reward a culture of innovation and partnership between our K-12 schools and our Commonwealth's outstanding public and private colleges and universities. As leaders of independent higher education institutions in Massachusetts, we know full well in this challenging economic environment, that resources matter in the successful delivery of educational services – be they at the post-secondary level or at the PreK-12 level – and as such, we strongly endorse the Commonwealth's funding application.

Massachusetts public schools have achieved enviable national rankings in performance-based outcome testing. We believe that RTTT funds will allow the Commonwealth to build on this success, help bridge the achievement gap where it exists and ensure that our Massachusetts public schools maintain their tops in the nation status.

We are poised to assist in this important endeavor and hope you will call upon us as this initiative moves forward.

Sincerely,

Richard J. Doherty, President

masc

Massachusetts Association of School Committees, Inc.

One McKinley Square, Boston, Massachusetts 02109

(617) 523-8454 (800) 392-6023 fax: (617) 742-4125 www.masc.org

Kathleen D. Robey, President

Glenn Koocher, Executive Director

January 11, 2010

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

Dear Secretary Duncan:

MASC is a member driven association whose mission is to support Massachusetts' school leaders in their increasingly complex governance role. Through a wide range of programs and services including training workshops and institutes, policy development and administrator search services, legal and advocacy support, and as an information clearinghouse, the Association provides important guidance and expertise to its members and serves to communicate the school committee perspective to government leaders, the media, administrative agencies and other education-related associations.

After careful review, we believe that the goals, strategies, and action plan reflected in the application are skillfully designed to help our districts, including those in greatest social and economic need, make significant improvement in student achievement and that the outcome will be an effective and successful long-term investment in our schools and public education system. On behalf of the Massachusetts Association of School Committees, we are very pleased to endorse the Massachusetts Race to the Top (RTTT) application.

Our organization has monitored carefully the development of the application and we have had extensive discussions with the key project developers. In addition, we have worked closely with other stakeholder groups to achieve what we hope will be a powerful initiative on behalf of students. We have also encouraged all of our member districts to participate in RTTT.

We look forward to bringing our state school committees to the table with superintendents, administrators, principals, teachers, staff and parents to make the master strategy work. You may be assured of our cooperation and collaboration with our state Executive Office of Education and Department of Elementary and Secondary Education to make the most efficient use of the resources, energy and time inherent in making Race to the Top a legacy that will be remembered for modeling best practices, innovation, academic excellence, and long term school and student success from pre-kindergarten to college and career.

Yours truly,

(b)(6)

Kathleen D. Robey
President

Glenn S. Koocher
Executive Director

Massachusetts Association of School Superintendents, Inc.

January 6, 2010

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

Dear Secretary Duncan:

The Massachusetts Association of School Superintendents strongly supports and endorses the Race To The Top application submitted by the Massachusetts Department of Elementary and Secondary Education.

Our organization represents all 277 district superintendents in the Commonwealth of Massachusetts. We are proud of our long standing work to make Massachusetts the leader in public education. Our rigorous standards and assessments, strong data systems, high levels of accountability and continuous focus toward improvement of student learning for all provide the necessary conditions to lead the Race To The Top initiatives.

Our association is proud of its work to support district leadership in its important role of instructional leadership. We provide strong professional development programs for current and future district leaders including initiatives in Instructional Rounds, Adaptive Leadership, the use of data for instructional improvement, supervision and evaluation and other critical offerings. Currently, we are developing a comprehensive three year education program for all new superintendents as well as specific support systems for superintendents engaged in turnaround schools. Finally, we have been active in setting state policy for increased accountability and reform of our education system.

Race To The Top provides Massachusetts an opportunity to be the example for others to follow. While our success is unquestioned, we have much more work to be done. With RTTT support we can advance our work with education workforce development, improve our capacity and focus on underperforming schools and provide the tools for improved instruction and student performance for all.

The Massachusetts Association of School Superintendents is committed to making the goals of our RTTT proposal a success. Our proven track record of success only foreshadows the possibilities Massachusetts provides as a beacon of what public education can be.

Your support is greatly appreciated.

Sincerely,

Thomas A. Scott, Ed.D
Executive Director

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info@masscharterschools.org ~ www.massacharterschools.org

January 14, 2010

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

Dear Secretary Duncan:

The Massachusetts Charter Public School Association is pleased to extend its enthusiastic support to Massachusetts' Race to the Top proposal. Over 95% of the Commonwealth Charter Schools in Massachusetts have signed on to help implement Massachusetts' ambitious plans to strengthen standards and assessments, build data systems to support instruction, foster great teachers and leaders, and turn around our lowest achieving schools.

As you know, Massachusetts is a national leader in both the rigor of its charter school authorizing process and the positive educational impact our charter schools have on students. We have been eager to expand in our state's low performing districts, where thousands of students are on charter school waitlists, but until now have been limited by our state's charter school cap. The new "smart cap" legislation passed by our state just this week strengthens our state's Race to the Top application, but far more importantly, it will allow our best charter school organizations to serve thousands more students in Massachusetts' lowest performing districts.

We are particularly excited by the opportunities Race to the Top would provide to build stronger connections between charter and traditional district schools around curriculum, instruction, educator effectiveness measures, and professional development, so that we can learn from one another's experiences and foster a stronger education system statewide. As you know, dissemination of best practices is at the heart of the charter school mission and we think that Race to the Top will finally break down some of the walls between charters and districts that have made this dissemination so difficult.

We are in discussions with our member schools on how we work collectively to further enhance our benefits from Race to the Top and provide efficiencies and collective action

towards developing and implementing new paths toward closing the achievement gaps that still permeate our public school system.

We in the Massachusetts charter school community applaud and support your initiative in developing the Race to the Top fund. We think it has already had a profound impact on Massachusetts public education and the application hasn't even been submitted yet! We look forward to further collaboration with your office, the Massachusetts public education sector and our charter schools to continue to push Massachusetts along the path of reform.

Sincerely,

(b)(6)

Marc Kenen, Ed.D.
Executive Director

Massachusetts Parent Teacher Association
POB 421
Rehoboth MA 02769

Kim S. Hunt, President
Mary Ann Stewart, President-elect
Barbara Bailey, Vice President for Leadership
Ellie Goldberg, Vice President for Legislative Affairs
Erik J. Champy, Secretary
Jennifer Francioso, Treasurer

January 14, 2010

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

Dear Secretary Duncan,

We write to urge you to support Massachusetts' *Race to the Top* application.

More than forty years of research has shown that when parents are involved in their child's education, student achievement increases. The Massachusetts Parent Teacher Association (PTA) is an all volunteer child advocacy association representing 15,000 members organized in 100 local units across the Commonwealth. We support family, school, and community partnerships that improve and enhance educational outcomes for all students.

Across the state, PTAs have collaborated with administrators, faculty, staff, and communities to engage more families in learning-focused involvement activities like family math or literacy nights, family-teacher conferences that involve students, and family workshops on planning for college. Our leadership trainings give tools to local leaders who speak up for children to protect and promote their success. We encourage families to become knowledgeable about the operations of schools and the laws that govern those operations, to be confident about their ability to work with schools, and to expect only the best from their children and for their children.

The Massachusetts PTA is an active, present member of the state education community:

- A new Massachusetts General Law requires the Board of Elementary and Secondary Education to include a representative of parents of school children selected by the Governor from a list of three nominees provided by the Massachusetts PTA.

- PTA is represented on the Parent and Community Engagement and Involvement Advisory Council (PCEI) to the Massachusetts Board of Elementary and Secondary Education. Over the past year, PCEI has worked to propose a set of six standards for Family and Community Engagement (FCE), which are based on National PTA's Family-School Partnership Standards.

- PTA is also represented on the MassPartners for Public Schools board of directors. Members of the MassPartners coalition share a commitment to improving public schools, to educating all children to high standards, and to supporting accountability in the educator workforce.

Effective family engagement is essential regardless of parents' education level, ethnicity, or socioeconomic background. Families play a critical role in children's school readiness as well as of students' decision to pursue higher education. Their role is a shared responsibility through collaboration with schools, educators, and community organizations to achieve more effective educational opportunities.

We hope you will support Massachusetts' Race to the Top application.

Sincerely,

Kim S. Hunt,
President

Mary Ann Stewart,
President-elect

American Federation of Teachers Massachusetts
Thomas J. Gosnell
President

Massachusetts Association of School Committees
Glenn Koocher
Executive Director

Massachusetts Association of School Superintendents
Thomas A. Scott
Executive Director

Massachusetts Elementary School Principals' Association
Nadya Aswad Higgins
Executive Director

Massachusetts Parent Teacher Association
Mary Ann Stewart
President-elect

Massachusetts Secondary School Administrators' Association
Phillip F. Flaherty
Assistant Director

Massachusetts Teachers Association
Anne Wass
President

. . . . . .

MassPartners
Patricia A. Sweitzer
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psweitzer@masspartners.com

January 7, 2010

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

Reference: Massachusetts' Race to the Top Application

Dear Secretary Duncan:

MassPartners for Public Schools requests your support of the Massachusetts' Race to the Top application. MassPartners is a collaboration of organizations representing teachers, parents, principals, school committees, and superintendents. We share a commitment to improving public schools, to educating all children to high standards, and to supporting accountability in the educator workforce.

The hard work of students, parents, educators, business leaders, and policy makers in Massachusetts has been impressive and the results are clear. As you know, our students consistently rank at or near the top in every category on the National Assessment of Educational Progress (NAEP) and the Trends in International Mathematics and Science Study (TIMSS) test.

Massachusetts is not alone in facing achievement gaps and the nation is searching for solutions. The challenge is to create a high performing public education system with the capacity and resources to meet the needs of students with disadvantages who may attend high-poverty schools.

We believe that the Race to the Top Fund will provide Massachusetts with needed funding to implement innovations to ensure a first-class educator workforce and a high-quality education for every child. As members and conveners of the State Implementation Group, we know that a collaborative partnership with our state education agency will lead to success.

Each school faces unique challenges; our vision of the RTTT implementation is that experienced educators and policy leaders, in partnership with parents and communities, will work together to design workable models to help our disadvantaged students and schools become more successful. Massachusetts has laid the foundation upon which we can build a better system that is equitable for all. We hope you will act favorably upon the Massachusetts' application. Thank you.

Sincerely,

(b)(6)

Phillip Flaherty, Chair, MassPartners for Public Schools
Assistant Director
Massachusetts Secondary School Administrators' Association
www.mssaa.org

(b)(6)

Paul Toner, Vice-Chair, MassPartners for Public Schools
Vice-President, Massachusetts Teachers Association
www.massteacher.org

(b)(6)

Thomas Gosnell, Immediate Past Chair, MassPartners for Public Schools
President, American Federation of Teachers Massachusetts
www.aftma.net

(b)(6)

Nadya Aswad Higgins, Executive Director
Massachusetts Elementary School Principals' Association
www.mespa.org

(b)(6)

Glenn Koocher, Executive Director
Massachusetts Association of School Committees
www.masc.org

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Thomas Scott, Executive Director
Massachusetts Association of School Superintendents
www.massupt.org

(b)(6)

Mary Ann Stewart, President-Elect
Massachusetts Parent Teacher Association
www.masspta.org

(b)(6)

Anne Wass, President
Massachusetts Teachers Association
www.massteacher.org

COMMONWEALTH READINESS PROJECT

January 14, 2010

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

Dear Secretary Duncan:

We were privileged to serve as Co-Chairs of Governor Deval Patrick's Commonwealth Readiness Project, and we are most pleased to submit this letter of support for the Massachusetts' Race to the Top application.

Shortly after Governor Patrick's historic inauguration, he moved to make good on his campaign promise to make improvements in education one of his highest priorities. Governor Patrick called on a diverse group of education, business and civic leaders to look to the future of public education in the Commonwealth and offer a set of recommendations to transform our state system of public education into a comprehensive, integrated, student-centered education system that begins before kindergarten and continues through grade 12 and beyond. The Governor asked us to focus not only on those changes that will bring incremental improvements but rather "dramatic, widespread improvements."

The three of us – a college president, the former superintendent of the Boston Public Schools, and the Chairman and Chief Executive Officer of one of the largest corporations in Massachusetts – were asked to lead an 18-member Readiness Project Leadership Council. In addition to the Council, the Project formed 13 subcommittees to request feedback from and leverage the expertise of more than 200 Massachusetts citizens.

The work of the Readiness Project was informed by the research, debate and discussions of the subcommittees as well as by the perspectives of citizens across Massachusetts. More than 2,000 parents, teachers, students, professors, administrators, practitioners, experts, advocates and other community members shared their ideas at more than a dozen public forums in town hall meetings with the Governor. In addition, more than 700 grassroots leaders participated in countless smaller gatherings and conversations. Our final report was submitted to Governor Patrick on June 25, 2008.

All of this work resulted in a clear vision and set of recommendations with the success of every student – no matter his/her ZIP code, age or socioeconomic status – at the center. Four key goals provided the foundations for twenty-four final recommendations. To generate the dramatic and widespread improvements in education the Governor charged, we established the following broad goals:

- Meet the learning needs of each student and provide the understanding, encouragement, support, knowledge and skills each requires to exceed the state's high expectations and rigorous academic standards;

- Ensure that every student in the Commonwealth is taught by highly competent, well-educated, strongly supported and effective educators;

- Prepare every student for postsecondary education, career and lifelong economic, social and civic success; and

- Unleash innovation and systemic change throughout the Commonwealth's schools, school districts, colleges and universities as well as in the partnerships and collaborations among education institutions, communities, businesses and nonprofits.

The recommendations of the Readiness Project provide the groundwork and foundation for Massachusetts' Race to the Top application. The goals of the RTTT application – (1) provide all students with more individualized educational experiences; (2) develop and retain an effective, diverse, and culturally competent educator workforce; (3) allocate targeted instructional resources and more comprehensive support services to students and educators in our lowest-performing schools; (4) and increase college and career readiness for all students – are in complete alignment with the Readiness Project goals and recommendations.

The RTTT application also highlights the successful effort of the Governor and Legislature to remove the cap on expanding access to charter public schools in the lowest-performing districts in the state, preserving the current funding formula and encouraging innovation, autonomy and flexibility within school districts. Our application will build on the progress already made through this and other efforts, and will provide much needed and required resources to accelerate implementation, provide bold and responsive action, and improved educational opportunities for our most disadvantaged students.

The Commonwealth of Massachusetts is in a unique position to continue its proud tradition of leadership in education and to make good on Governor Patrick's commitment to education improvement. We urge you to provide us this once-in-a-generation opportunity.

Thank you for your consideration.

Sincerely,

(b)(6)

Jackie Jenkins-Scott
President
Wheelock College

Dr. Thomas Payzant
Professor of Practice
Harvard Graduate School of Education

Joe Tucci, President
Chairman & CEO
EMC Corporation

January 9, 2010

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

Re: The Commonwealth of Massachusetts' Race To The Top Proposal

Dear Secretary Duncan:

We are writing in strong support of the Massachusetts Executive Office of Education's proposal to access Federal Race to the Top (RTTT) funds allocated through the American Recovery and Reinvestment Act of 2009. The initiatives detailed in the proposal will enhance academic success for all students, work to close student achievement gaps, provide strategic support to our lowest performing primary and secondary schools, and help to improve the best in the nation public education system in preparing students for higher education and the workforce.

The State Colleges are pleased to be active partners with the Massachusetts Executive Office of Education in implementing relevant Race To the Top initiatives highlighted in the Commonwealth's application. Indeed, our involvement and support is crucial to the state's education success since one out of three elementary and secondary school teachers working in the Commonwealth are graduates of our state colleges. Although rigorous and innovative state college teacher education programs currently prepare teachers for classroom instruction, the proposed application and initiatives will help facilitate statewide efforts to ensure that all teachers receive the cutting edge preparation, training, and support needed to provide each and every student with a world-class 21st century education.

The state colleges of Massachusetts include six comprehensive state colleges—Bridgewater State College, Fitchburg State College, Framingham State College, Salem State College, Westfield State College, and Worcester State College—and three specialized colleges—Massachusetts College of Art and Design, Massachusetts College of Liberal Arts, and Massachusetts Maritime Academy. All of our colleges integrate liberal arts and sciences programs with professional education, and the three specialized colleges also focus on academic areas identified in the college's name.

Council of Presidents

Executive Office, c/o Massachusetts College of Art and Design, 621 Huntington Avenue, Boston, MA 02115; Phone 617-879-7929, Fax 617-879-7017

Bridgewater State College • Fitchburg State College • Framingham State College • Massachusetts College of Art • Massachusetts College of Liberal Arts
Massachusetts Maritime Academy • Salem State College • Westfield State College • Worcester State College

Our mission requires that each college place a special emphasis on teaching and lifelong learning and promote a campus life that fosters intellectual, social, and ethical development. Committed to excellence in instruction and to providing responsive, innovative, and nationally accredited educational programs of high quality, we seek to develop each student's critical thinking, quantitative, technological, oral, and written communication skills, and practical appreciation of the arts, sciences, and humanities as they affect good citizenship and an improved quality of life. The state colleges provide a campus environment where the ideas, values, perspectives, and contributions of all students are respected. Each college is a leader and resource for the community and contributes to the region's cultural, environmental, educational, and economic development.

The initiatives found in the Massachusetts Race To The Top Application will assist the state colleges in carrying out our mission. We believe the proposal advances the Massachusetts tradition of strengthening collaboration in public education at all levels: pre-K through higher education. The State Colleges of Massachusetts have already begun to actively support state efforts to implement these strategies by partnering with the Executive Office of Education and the Department of Elementary and Secondary Education in forming six regional educational "Readiness Centers" to provide, in part, statewide technical assistance and support to educators. These Centers link higher education with school districts and community-based organizations to assess, streamline, target and disseminate effective models of professional development and instructional services for P-12 and early educators and the students they serve. In many ways, these cross-sector and interdisciplinary Centers are already contributing to statewide efforts to enhance the college readiness of our high schools graduates. Importantly, from our perspective, Race to the Top Funds will serve to strengthen this innovative collaborative model as we work together to continue to build and grow our Massachusetts Readiness Centers.

Mr. Secretary, given your and President Obama's commitment to providing each of our nation's students access to an education of the highest quality in the world, and our own state's desire to be a model for the rest of the nation in educational excellence, we are pleased to support the Massachusetts Executive Office of Education's proposal to unlock the innovation that these once-in-a-generation Race To The Top funds will leverage. This opportunity will allow the Commonwealth of Massachusetts to provide students with a model world class education and to build upon the collaborations already initiated within and across all sectors of education in Massachusetts.

Respectfully,

President Richard Gurnon
Massachusetts Maritime Academy
Chairperson, Council of State College Presidents

President Mary Grant
Massachusetts College of Liberal Arts

President Dana Mohler-Faria
Bridgewater State College

President Robert Antonucci
Fitchburg State College

President Timothy Flanagan
Framingham State College

President Katherine Sloan
Massachusetts College of Art

President Patricia Maguire Meservey
Salem State College

President Evan Dobelle
Westfield State College

President Janelle Ashley
Worcester State College

Massachusetts Department of Higher Education

One Ashburton Place, Room 1401
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Richard M. Freeland, *Commissioner*
Charles F. Desmond, *Chairman*
Massachusetts Board of Higher Education

January 11, 2010

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

Dear Secretary Duncan:

The Massachusetts Board of Higher Education strongly supports the Race to the Top Proposal that is being submitted to the U.S. Department of Education by the Massachusetts Department of Elementary and Secondary Education.

The mission of the Board of Higher Education is to ensure that Massachusetts residents have the opportunity to benefit from a higher education that enriches their lives and advances their contributions to the civic life, economic development, and social progress of the Commonwealth. To that end, the programs and services of Massachusetts higher education must meet standards of quality commensurate with the benefits it promises and must be truly accessible to the people of the Commonwealth in all their diversity.

Access to higher education and preparation for higher education go hand in hand and require appropriate measures to ensure that students entering college are ready for college work. To that end, the Board of Higher Education has a long history of collaboration with K-12 colleagues to develop policies that support more rigorous admission standards for the state colleges and university, academic support and pathways for students at risk, incentives for high school graduates who demonstrate high achievement in rigorous high school courses, and strong educator preparation, especially in STEM fields.

The Board of Higher Education wants Massachusetts to have the best-educated citizenry and workforce in the nation. Accomplishing this goal requires partnering with K-12 to enhance the college readiness of high school students and improve the state's college-going rates, improving rates of degree and certificate completion among students enrolled at our public campuses, and reducing disparities in educational attainment among ethnic/racial, income and gender groups.

The organizing initiatives described in the Massachusetts proposal provide a strong basis for achieving the Race to the Top fund's overarching goals of developing great teachers and leaders, embedding rigorous standards and assessments, turning around lowest-achieving schools, using data systems to support instruction and investing in STEM. Successful achievement of these Race to the Top goals are foundational to Massachusetts attaining its goal of national leadership in higher education.

Mr. Secretary, as you and President Obama are determined to do all that you can to advance the quality and effectiveness of our nation's education system, so are the members of the Board of Higher Education and I determined, along with our colleagues in the Board of Education and Executive Office of Education, to do all that we can to make the Massachusetts public education system the best in the nation. Race to the Top funds will leverage years of collaborative effort and provide an unparalleled investment in our education infrastructure that will catalyze achievement among all student groups for decades to come.

Sincerely,

Dr. Charles F. Desmond
Chairman

c: Paul Reville, Secretary of Education
Dr. Mitchell Chester, Commissioner of Elementary and Secretary Education
Dr. Richard Freeland, Commissioner of Higher Education

Department of
Early Education and Care
THE COMMONWEALTH OF MASSACHUSETTS

SHERRI KILLINS, COMMISSIONER

January 12, 2010

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

Dear Secretary Duncan:

The Massachusetts Department of Early Education and Care (EEC) strongly supports the Race to the Top Proposal as prepared by the Massachusetts Department of Elementary and Secondary Education (ESE) for submission to the U.S. Department of Education.

It is the mission of EEC to provide the foundation that supports all children in their development as lifelong learners and contributing members of the community, and supports families in their essential work as parents and caregivers. EEC is working to continually build a system of early education and care which includes a governance structure, regulations, workforce and professional development, standards assessment and accountability, informed families and public and finance. Each of EEC's efforts are strategically designed to implement best practices, focus on identifying and improving quality and meet the needs of children at highest educational risk across the Commonwealth.

In order to realize success, EEC is committed to a critical partnership with ESE to ensure children receive strong support starting even before birth to allow for the development of an optimal foundation for growth and academic achievement as they prepare for their future success, specifically in kindergarten through 3rd grade.

EEC is implementing a Quality Rating and Improvement System (QRIS) to improve quality for all (including public schools, and other providers of early education and care including family child care, head start and center based providers) early education and care programs serving children birth through age 14. The QRIS is a structure to organize the key functions of an early education and care and after–school and out-of-school time system to produce positive outcomes for children, families, and communities. Massachusetts' QRIS embeds five typical components of such a system, including standards, monitoring and accountability (ratings), program and practitioner supports, fiscal incentives and family and consumer engagement. The QRIS system includes standards for Curriculum and Learning, Environment, Workforce and Professional Development, Family Involvement and Leadership Management and Administration.

In support of our youngest citizens we have partnered with ESE on several activities as delineated below.

> In support of a statewide approach to organize support and assistance to the school districts in Massachusetts with challenges, including serving among the highest percentages of students living in poverty statewide and containing more than 80 percent of the schools currently designated as underperforming, ESE has recognized ten

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"Commissioner's Districts". Multiple EEC initiatives prioritize these ten designated ESE districts in order to provide a coordinated approach to targeting resources to support these portions of the state. Two such initiatives include a summer-only early education and care program linked to closing the summer learning gap (774 children served in 2009) and an out-of-school-time grant which aims to retain or increase students' academic gains, particularly in the area of literacy, by reinforcing their school day and year learning through high-impact activities and effective curricula during the summer months and throughout the school year.

EEC continues to identify opportunities to cultivate best practices for intervening in the lowest-achieving schools in the state. To that end, EEC has developed and will enter into a Memorandum of Understanding (MOU) with the Springfield, MA public school district, one of the ten ESE "Commissioner's Districts". The MOU is to develop a comprehensive integrated service delivery and learning system designed to support collaboration, coordination and shared results for the children of Springfield from Pre-K to third grade including public schools, and other providers of early education and care including family child care, head start and center based care. Alignment of standards, curriculum, professional development to support teacher quality and assessment pre-kindergarten to third grade requires organization across multiple domains and stakeholders.

EEC has agreed to work with ESE to ensure alignment of priorities regarding Pre-K to 3 system building, beginning with a focus on formative assessment. ESE and EEC are actively working toward assigning of ESE's unique student identifier, the SASID, to children ages 0-5 in EEC programs.

EEC is committed to the implementation of universal high quality assessments for children and is currently engaged in multiple efforts, including the Universal Pre-Kindergarten Program (UPK) which prioritizes preschool programs that serve at-risk and low-income children. The UPK program promotes school readiness and positive outcomes for children, supports the use of child assessment systems/tools to ensure that programs are effectively measuring children's progress across all developmental domains and uses this information to inform practice and the longer-term implementation of universally accessible, affordable, high quality early education.

In efforts to access and use data to improve instruction, EEC was pleased to be the recipient of a technical assistance grant from the Council of Chief State School Officers to assist in developing a statewide assessment system. EEC is currently working to build a statewide assessment system and is coordinating with ESE to ensure alignment of formative and summative assessments and data collection efforts taking place in the Kindergarten to 12th grade system.

It is EEC's intention to support educator improvement and effectiveness through the state's regional Readiness Centers in the future by providing career and planning for individual educators and programs and leadership; coaching and mentoring to support the academic success of individual educators in higher education, implementing a career plan

for educators to attain specific skills, knowledge and abilities, supporting improvements by programs that result in achieving a higher level on QRIS or accreditation; and developing competencies to attain an associates, bachelors or masters degree in early childhood education or a related field and attainment of specific competencies by educators.

With the understanding that early literacy is essential for success in school and life, EEC and ESE are collaborating on an Early Literacy Proficiency Gap Task Force. In Massachusetts, many students fail to demonstrate reading proficiency as evident in the 2009 ESE data in which 43% of 3rd grade students scored below proficient in reading on the Massachusetts Comprehensive Assessment System (MCAS) exam. All too often, these same students are identified as living in poverty, have special needs, are English language learners, or identify themselves as members of one or more of the major ethnic or racial minorities in Massachusetts.

The joint Task Force has provided recommendations which include building a shared statewide system of pre-service and in-service ongoing professional development in literacy that addresses a continuum of pre-kindergarten to 3rd grade standards, assessments, and research-informed instructional practices; convening a Task Force to review measurement options in order to identify formative and summative assessments with a focus on comprehensive assessment of literacy for uniform statewide implementation and guidance to districts in Pre-k to 3rd grade; providing access for all children in low performing school districts; and the development, promotion and provision of concrete vehicles and benchmarks for parent/school partnerships including literacy support in the home through oral language and print.

The investment of Race to the Top funding will allow Massachusetts to bolster a more comprehensive sustainable approach to providing innovative supports to children/students, families and educators across the state and across the continuum of agencies that support the development of these populations within the educational framework in Massachusetts. The support of Race to the Top funds will advance our shared investment in targeted districts for preschool and out-of-school time programs in enhancing teacher quality and defining shared formative assessments.

Sincerely,

Sherri Killins
Commissioner

cc:
Paul Reville, Secretary of Education
Mitchell Chester, Commissioner, Department of Education
JD Chesloff, Chairman, Board of Early Education and Care

Massachusetts Department of Higher Education

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Richard M. Freeland, *Commissioner*
Charles F. Desmond, *Chairman*
Massachusetts Board of Higher Education

January 12, 2010

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

Dear Secretary Duncan:

The Massachusetts Department of Higher Education strongly endorses the Race to the Top Proposal as prepared by the Massachusetts Department of Elementary and Secondary Education for submission to the U.S. Department of Education. The Department is committed to the vision of Massachusetts as having the best-educated citizenry and workforce in the nation. The readiness of all students for college and career success, as well as the preparation of the educators who teach in and lead our elementary and secondary schools, is fundamental to achieving this vision.

Critical measures of educational attainment, however, reveal deep disparities between different population groups in Massachusetts. On the college-going rate of 18-24 year olds, there is a 10 percent gap between whites and all minorities, with the largest gap (21 percent) being between whites and Hispanics. Both public and private higher education in Massachusetts have race/ethnic disparities with regard to graduation rates with a 9.3 percent gap in six-year graduation rates of whites and all minorities at public four-year campuses. Reducing and ultimately eliminating these disparities is an urgent priority for three reasons. First, these disparities deepen social and economic inequities that are at odds with our basic commitment to social justice and equal opportunity. Second, the ethnic groups that are faring least well in educational attainment are also the most rapidly growing segments of our population. We need these students to be mainstays of the future workforce. Third, eliminating these disparities is one of the most powerful steps we can take to raise Massachusetts to national leadership in the overall educational attainment of our citizenry.

The Department of Higher Education has worked and continues to work closely with our colleagues in elementary and secondary education to end these disparities and make Massachusetts best in the nation in the education attainment of its citizens in all their diversity. Our P-16 policies—which center on preparation of effective educators, sharing of student longitudinal data, alignment of high school exit and college entrance and requirements, and exposure of students to college experiences while they are still in high school—include the following priority initiatives:

- Implement the rigorous *MassCore* curriculum as a default program of studies statewide. Adopt four years of math education for high school graduation and

college admissions to strengthen general college readiness and strengthen the elementary teacher pool.

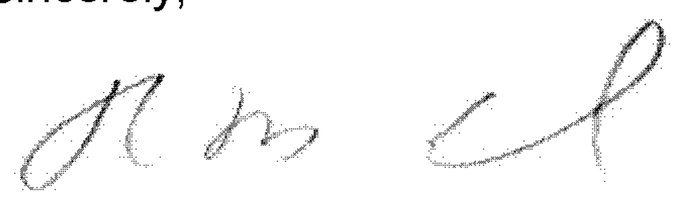
- Dramatically expand the continuum of Early College opportunities, especially in STEM fields. Strengthen the infrastructure for the Commonwealth Dual Enrollment Program—which is a cornerstone for a range of early college opportunities, including early college high schools—by developing a statewide articulation agreement for dual enrollment courses, as well as a statewide online tool for students and counselors to locate articulated dual enrollment courses available online or on campuses. Expand early assessment in mathematics, reading and writing to provide early notice to students about their college readiness.
- Utilize the Commonwealth's Readiness Centers to support ongoing regional meetings of high school and college math and English teachers for the examination of student work, curriculum alignment, and joint course development.
- Expand the *School-to-College* database and reporting to support informed, data-driven decisions by all education stakeholders.
- Communicate broadly Massachusetts' college and career readiness definition and agenda. Establish timetables and hold ourselves accountable for implementation.

In further support of educator effectiveness, the Department of Higher Education has focused the 2010 NCLB Title IIA *Improving Teacher Quality* grant solicitation on college readiness in math and writing, targeting teachers of low-income students. Higher education is also working to develop a quantitative reasoning course and an English composition course that can be accessed statewide through the Commonwealth Dual Enrollment Program and that will meet both high school senior and college freshman distribution requirements in English and mathematics.

The Massachusetts Race to the Top proposal identifies five broad initiatives: provide all students with more personalized instruction; develop and retain an effective, diverse, and culturally competent educator workforce; concentrate great instruction and additional supports in the schools that need it most; increase college and career readiness for all students; and invest in STEM in the context of RTTT initiatives. These organizing initiatives align well with Massachusetts priority recommendations for college readiness, participation and success.

Mr. Secretary, the commitment by you and President Obama to direct precious resources to the education sector during a time of severe economic constraint demonstrates your recognition that a strong education system is essential to our national prosperity and quality of life. The Massachusetts Race to the Top proposal has been thoughtfully and carefully crafted with input from a variety of stakeholders, including higher education. I am convinced that the crucial once-in-a-lifetime investment that Race to the Top funding represents will result in an improved education infrastructure and significant lasting returns in the quality, effectiveness and achievement of institutions, teachers and students throughout the Commonwealth's education continuum.

Sincerely,



Richard M. Freeland
Commissioner

c: Mitchell Chester, Commissioner, Department of Education
Charles Desmond, Chairman, Board of Higher Education
Paul Reville, Secretary of Education

MACTE

Massachusetts Association of Colleges for Teacher Education

American International College
Anna Maria College
Assumption College
Atlantic Union College
Bay Path College
Becker College
Berklee College of Music
Boston College
Boston Conservatory
Boston University
Brandeis University
Bridgewater State College
Cambridge College
Clark University
College of the Holy Cross
Curry College
Eastern Nazarene College
Elms College
Emerson College
Emmanuel College
Endicott College
Fitchburg State College
Framingham State College
Gordon College
Harvard University
Hellenic College Holy Cross
Holyoke Community College
Lasell College
Lesley University
Massachusetts College of Art
Massachusetts College of Liberal Arts
Merrimack College
Mount Holyoke College
Mount Ida College
Nichols College
Northeastern University
Northern Essex Community College
Pine Manor College
Regis College
Salem State College
Shady Hill School
Simmons College
Smith College
Springfield College
Springfield Technical Community College
Stonehill College
Suffolk University
Tufts University
University of Massachusetts Amherst
University of Massachusetts Boston
University of Massachusetts Dartmouth
University of Massachusetts Lowell
Wellesley College
Western New England College
Westfield State College
Wheaton College
Wheelock College
Worcester Polytechnic Institute
Worcester State College

Affiliate:

American Association of Colleges for Teacher Education

January 11, 2010
Honorable Arne Duncan
U.S. Department of Education
400 Maryland Ave, SW
Washington, D.C. 20202

Dear Secretary Duncan:
This letter from The Massachusetts Association of Colleges for Teacher Education (MACTE) is written in support of the Massachusetts Department of Elementary and Secondary Education's application for Race To The Top funds. MACTE represents over sixty public and private colleges and universities dedicated to promoting the highest quality of pre-service and in-service teacher education in the Commonwealth of Massachusetts. MACTE collaborates with other associations and with state government, businesses, policymakers, and grassroots organizations in order to advocate for high quality teacher education. As part of our work, MACTE sponsors two annual professional development conferences for teacher preparation faculty, teacher candidates, k-12 teachers and administrators. Our recent conferences spoke to issues of promoting equity and social justice as well as meeting diverse learning needs of all students. This conference focus provides a clear indication of our efforts to "develop and retain an effective, diverse and culturally competent workforce," part of the MA Department of Elementary and Secondary Education's RTTT initiative two.

As a state affiliate of the American Association of Colleges for Teacher Education (AACTE), MACTE supports all of AACTE Goals, particularly: "Strengthen programs and build their capacity to prepare educators who can teach every child effectively and "Increase the diversity of education candidates and improve programs' curriculum to ensure that all educators can serve diverse learners." These two national goals supported by our state MACTE chapter are in direct alignment with the RTTT program goals and four reform assurances.

MACTE has member representation on the MA Educational Personnel Advisory Council (advisory to our state board of education) as well as the Working Group for Educator Excellence (WGEE), a state policy group advocating for a systemic approach to influencing what teachers and educational leaders "know and are able to do" in both Massachusetts and nationally. The MACTE Board is a proud supporter of the state of Massachusetts application for Race to the Top funding. We feel this would build capacity to enhance the effectiveness of P-12 educators for generations. Thank you for this opportunity to share our enthusiasm for this exciting work.

Sincerely,
Lorne Ranstrom
MACTE Past President

Executive Board

James Martin-Rehrmann , Westfield State College Pres.
Kathleen McNamara, Stonehill College, Pres Elect
Lorne Ranstrom, Eastern Nazarene College, Past President
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Elaine Francis, Fitchburg State College
Fran Loftus, Boston College
Elaine Tateronis, Worcester State College

READINESS CENTERS NETWORK

January 14, 2010

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

Dear Secretary Duncan:

On behalf of the Readiness Centers Network that is comprised of the partners that are managing the six regional Readiness Centers in Massachusetts, we are writing to enthusiastically endorse our state's Race to the Top application.

Governor Patrick's Education Action Agenda included a recommendation to establish Readiness Centers, multipurpose and collaborative hubs focused on improving the quality of teaching both across the education continuum and across Massachusetts. The Executive Office of Education (EOE) established the Readiness Centers in October 2009, and they will offer instructional and professional development services to address both local/regional educational needs and statewide priorities. Most notably, the Readiness Centers are being managed and will continue to be developed by regional consortia of partners that include public and private institutions of higher education, school districts, early education and out-of-school-time providers, educational collaboratives, and business and community partners. We represent over 35 institutions and organizations that are committed to leveraging existing relationships and building new partnerships to continually improve the content, quality, and delivery of aligned and coherent services to all of our educators.

We are ready to fulfill the roles and responsibilities of the Readiness Centers as described in Massachusetts' Race to the Top application. First, we will support and complement the efforts of the Department of Elementary and Secondary Education (ESE) to provide high-quality professional development focused on: 1) implementing new curricular and assessment tools; 2) using data more effectively to assess student progress and improve instruction; and 3) other areas of statewide need including closing achievement gaps among different groups of students and providing high-quality instruction for English language learners and in STEM courses of study.

Second, we will leverage our robust network of regional partners to convene representatives from early education, elementary and secondary education, higher education, and other sectors to address, among others, the following priorities: 1) increasing vertical alignment across the educational continuum; 2) implementing strategies to increase college and career readiness; 3) linking emerging guidelines for educator effectiveness with human resource practices; and 4) expanding the supply of effective and culturally competent educators, particularly educators of color and those teaching STEM courses, English language learners, and students with disabilities. In addition, we will utilize our network of partners to disseminate information about

promising practices and innovative instructional or professional development models to stakeholders across the state.

The Readiness Centers initiative has generated significant interest and commitment on the part of multiple stakeholders in Massachusetts, as it represents a bold and ambitious approach to improving the core work of education – the interactions between educators and students.

We are eager to further develop our partnerships with the EOE, ESE, the Department of Early Education and Care, the Department of Higher Education, and other stakeholders, and we believe that the Race to the Top program will significantly enhance our efforts to ensure that all of our educators will effectively support student engagement, achievement, and success. Thank you in advance for your consideration of Massachusetts' Race to the Top application.

Sincerely yours,

Cynthia Farr Brown, Ph.D.
Vice President of Academic Affairs
Massachusetts College of Liberal Arts
Berkshire Readiness Center

Elaine Francis, Ed.D.
Dean of Education
Fitchburg State College
Central Massachusetts Readiness Center

Robert A. Martin, Ph.D.
Vice President for Academic Affairs
Framingham State College
Greater Boston Readiness Center

Mary-Lou Breitborde, Ed.D.
Associate Dean of Education
Salem State College
Northeast Regional Readiness Center

Robert A. Hayes, Ph.D.
Vice President of Academic Affairs
Westfield State College
Pioneer Valley Readiness Center

Anna L. Bradfield, Ph.D.
Dean, School of Education/Allied Studies
Bridgewater State College
Southeast Massachusetts Readiness Center

EFFICACY INSTITUTE

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PHONE 781.547.6060
FAX 781.547.6077
www.efficacy.org

January 15, 2010

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

Dear Secretary Duncan:

The Massachusetts Board of Elementary and Secondary Education (BESE) has charged a Proficiency Gap Committee to generate concrete recommendations, focused on leveraging the resources and expertise of the Department of Elementary and Secondary Education (DESE), to close the achievement gap in the Commonwealth. Massachusetts is widely acknowledged as having the highest performing students in the United States, as measured by the National Assessment of Educational Progress (NAEP). This is a significant achievement, catalyzed by the investments and policy changes mandated by the Massachusetts Education Reform Act of 1993, and realized by hard working educators in cities and towns around the Commonwealth.

But it is an achievement with an asterisk; we are also known for having one of the largest achievement gaps in the nation, and this is no honor. 'Achievement gap' is the term used to describe differences in academic outcomes between different population groups—comparing, for example, white students with black. These gaps are important and portentous. They are present inequalities that reliably predict future life prospects in a complex society and increasingly competitive global labor market. They represent the unfinished business of education reform, and an appropriate focus for the current generation of leadership in the Commonwealth.

As a member of the BESE, and Chair of the Proficiency Gap Committee, I am excited, and energized by the substance of our Race to the Top application, and by the prospect of Federal support for work it outlines. Specifically:

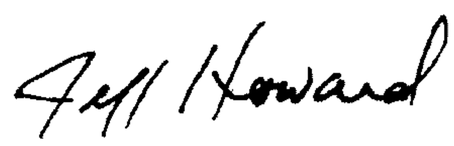
- The Massachusetts RTTT proposal is explicitly grounded in, and predicated on the importance of eliminating achievement gaps. This has been a stated priority of Governor Patrick, Secretary of Education Paul Reville, and BESE Chair Maura Banta, and is now given substance in our approach to RTTT.

- The focus of RTTT resources on low-performing schools and districts is aligned with our Committee's finding that these schools and districts are the locus of the achievement gap—the very schools and districts where students from underperforming populations are concentrated.

- The focus on assessment tools, high quality curriculum and professional development is completely aligned with the deliberations of the Proficiency Gap Committee. These are the foundational strategies that will make the difference in underperforming schools.

I believe I can speak for the entire Committee when I say that prospect that this proposal might be successful in the RTTT competition has increased our dedication to this challenging, essential work.

Sincerely,
Jeffrey P. Howard,



Chair, Proficiency Gap Committee of BESE
President, Efficacy Institute.

Black Leaders *for* Excellence *in* Education

January 11, 2010

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

Dear Secretary Duncan:

Black Leaders for Excellence in Education is pleased to submit this letter of support for the Commonwealth of Massachusetts' Race to the Top application.

We are an advocacy organization that came together to shine a light on the need for meaningful change in the education system in Massachusetts. While we are proud of the national reputation for excellence that schools in Boston and across the Commonwealth have earned in recent years, we share a deep concern about the persistence of an achievement gap for our students of color. While other states have made progress in closing this gap, we have not seen the level of success we would hope for here.

Emerging from that concern, we joined a wide range of leadership groups in the Race to the Top Coalition to bring our concerns and our support to the effort to enact significant reform through the action of the state legislature. Of particular interest to us during this process has been the opportunity to provide our feedback to the Massachusetts Secretary of Education about the urgent needs of students of color. Our concerns were listened to, and are reflected in the legislation that was ultimately passed in the State Senate and House of Representatives, and so we stand in strong support of what has been accomplished.

Among the accomplishments reflected in the new legislation that Black Leaders for Excellence in Education wishes to underscore are the following:

- A targeted raise in the cap on charter schools in the state's lowest performing districts, which will allow proven providers with demonstrated records of success to open new or expand existing schools and serve populations of students who have the greatest academic need;
- Broad powers provided to school superintendents to intervene in the lowest-performing schools in their districts;
- The creation of Innovation Schools, which will be given charter-like autonomy and the support they need to bring best practices to address persistent failure to succeed.

The current Race to the Top application being submitted by the Commonwealth captures many of our hopes for systemic change. We are particularly encouraged by the state's human capital strategy captured in this document, including these goals:

c/o THE BOSTON FOUNDATION * 75 ARLINGTON STREET * BOSTON, MA 02116 * PHONE 617-338-1700

- Concentrate great instruction and additional support in the districts and schools that need them most, drawing on our most highly skilled and committed teachers to work with students most in need of their expertise;
- Increase college and career readiness for all students, promoting more rigorous high school curricula and building in a greater focus on programs that raise the bar in science and mathematics; and
- Develop and retain an effective, diverse and culturally competent educator workforce.

Higher drop-out rates for our students of color, in Boston and across the Commonwealth, are foreclosing on the future of the next generation at a time when we need every child to succeed. We are convinced that the historic legislation acted on this month gives our educators the tools they need to end the achievement gap that has limited the hopes and aspirations of generations of students. Race to the Top funds will allow the Commonwealth to use the tools provided by the legislature, and implement the strategies proposed, which will benefit all of Massachusetts' students.

Today, Massachusetts has reclaimed its historic leadership in public education and stands ready to extend the promise of a new school culture to every child in the Commonwealth.

On behalf of Black Leaders for Excellence in Education, we thank you for your consideration.

Jackie Jenkins-Scott,
President, Wheelock College

Greg Shell
Research Analyst, GMO, LLC

Bennie Wiley
Principal, The Wiley Group

Rev. Dr. Ray A. Hammond, M.D., M.A.
Senior Pastor, Bethel AME Church

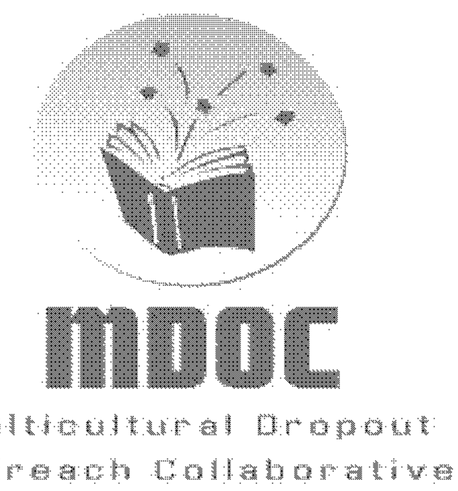
Wendell J. Knox
Lead Director, The Efficacy Institute

Michele Courton Brown
Chief Operating Officer, The Efficacy Institute

Gail Snowden
Chief Executive Officer, Freedom House, Inc.

Imari K. Paris Jeffries
Executive Director, Friends of the Children Boston

c/o THE BOSTON FOUNDATION * 75 ARLINGTON STREET * BOSTON, MA 02116 * PHONE 617-338-1700



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

January 9, 2010

Dear Secretary Duncan:

It is with pleasure that the Multicultural Dropout Outreach Collaborative (MDOC) submits this letter of support for Massachusetts' application for Race to the Top federal funding.

The MDOC is a network of organizations working to end the high dropout rate in the Boston Public Schools, with a special focus on the development of high impact, culturally competent initiatives and practices to ensure the success of Boston's youth of color.

The MDOC network developed the *One Step Closer* program, a mentoring program for students who have dropped out of high school or are at risk of dropping out. This program bridges at-risk students with trained mentors who support the student in staying on track with school. Mentoring also includes support with life skills, and a sense of belonging and preparation for a career and college or technical training. Stipend internships are also developed for program participants with community based organizations to develop job skills, self esteem, as an incentive to stay in school and exposure to the world of work.

MDOC works closely with the Boston Public Schools, and we are recognized for our contributions to the state Graduation and Dropout Prevention and Recovery Commission. At this time we are working closely with Boston Public Schools personnel in redefining and rewriting alternative education programming. MDOC is fortunate to have a working relationship with the Boston Public Schools.

We are encouraged by the proposed initiatives and strategies entailed in the Race to the Top application, particularly the goals to:

- Provide all of our students with a more personalized educational experience;
- Concentrate great instruction and additional support in the districts and schools that need it most, drawing our most highly skilled and committed teachers to work with students most in need of their expertise; and
- Increase college and career readiness for all students, promoting more rigorous high school curricula and building in a greater focus on programs that raise the bar in science and mathematics.

The Race to the Top funds will allow the Commonwealth to utilize the tools provided, and implement the strategies proposed, which will benefit all of Massachusetts' students.

The Multicultural Dropout Collaborative supports Massachusetts' Race to the Top application.

Sincerely,

Gail Snowden
Chair

Karen L. Payne
Co-Chair

Freedom House, Inc ✷ 14 Crawford St ✷ Dorchester, MA 02124

NAACP
NEW ENGLAND AREA CONFERENCE
Post Office Box 320128 West Roxbury, MA 02132
(617) 325-7580 Facsimile (617) 325-7666

January 13, 2010

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

Dear Secretary Duncan:

The New England Area Conference of the NAACP is proud to submit a letter of support for the Massachusetts' Race to the Top application.

The New England Area Conference (NEAC) of the NAACP is the governing and coordinating entity for NAACP Branches, College Chapters and Youth Councils in the states of Rhode Island, Massachusetts, New Hampshire, Maine and Vermont. NAACP Branches within the Commonwealth of Massachusetts represented by NEAC include: Boston; Brockton; Cambridge; Cape Cod; Lynn; Martha's Vineyard; Merrimack Valley; Mystic Valley; New Bedford; South Middlesex County; Springfield; and Worcester.

NEAC is the only entity of the NAACP authorized to speak on state-wide policy issues, and is therefore authorized to endorse this application.

A high priority of the NAACP is its advocacy for equal and quality educational opportunity and to close persistent achievement gaps where they exist. NEAC Branches have been diligently engaged over the last 50 years with school districts and various advisory boards within the Commonwealth to address these issues. If awarded the grant, Massachusetts will have the opportunity to concentrate greater resources, additional and more high-quality instruction and other support in schools that need it most.
More specifically, the grant will:

1. Provide all students with more individualized educational experiences.

   Massachusetts has experienced greatest success when every student is provided the understanding, encouragement, support, knowledge and skills required to meet the Commonwealth's high academic standards.

2. Develop and retain an effective, diverse and culturally competent educator workforce.

   Research indicates that cultural competency is an important element in maximizing the learning experience of students. Massachusetts has made progress in this regard, but the grant will aid Massachusetts in making greater progress.

3. Concentrate better instruction, supports for students and families, and tools and resources for educators in the schools that need it most.

   Many of our lowest-performing schools are located in the communities listed above, and we strongly support the school turnaround strategies that are included in the Race to the Top application.

4. Increase college and career readiness for all students.

   Closing gaps among different groups of students with regard to college and career preparation is most important to the NAACP, as it will help all students prepare for economic, social and civic success.

In sum, The New England Area Conference of the NAACP strongly supports the application of the Commonwealth of Massachusetts for the Race to the Top Fund. NEAC feels that the state has the vision to measurably improve education for all and has an efficient system to implement its vision, with support from the varied communities of the Commonwealth. We are eager to work in collaboration with state education partners to support the initiatives and strategies included in the Race to the Top application and ensure that our students, families, educators, and community members benefit from this unprecedented opportunity.

Sincerely yours,

(b)(6)

President
NAACP, New England Area Conference

Chair, Education Committee
NAACP, New England Area Conference

OFFICE OF THE GOVERNOR
COMMONWEALTH OF MASSACHUSETTS
STATE HOUSE • BOSTON, MA 02133
(617) 725-4000

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

January 14, 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 write in strong support of the Commonwealth of Massachusetts' Race to the Top application. In the first three years of the Patrick-Murray Administration, numerous improvements have been made in our education system. We are prepared to implement, oversee, and track the policy and funding goals outlined in the state's response to the Race to the Top criteria. Through these initiatives we will be certain to impact more students, thus continuing the Commonwealth's tradition of being a leader in all areas of education.

Governor Deval Patrick's Education Action Agenda that was issued in June 2008 reflects both ambitious goals for the state, as well as challenges that we must address to meet the needs of our students and schools. Prior to the release of the action agenda, the state implemented a reorganization of our education structure that was unanimously approved by our partners in the legislature. This legislation created a Secretary of Education to oversee and hold accountable the Department of Higher Education, the Department of Elementary and Secondary Education, and the Department of Early Education and Care.

As the Chairman of the Governor's Science, Technology, Engineering, and Math (STEM) Advisory Council, recently created by executive order in October 2009, I further ask your consideration in approving the STEM section of this application. STEM is the comprehensive component that ties together many of the leading industries which make up the Massachusetts economy. The Council serves as a vehicle for advocates from the public and private sectors, as well as legislators and educators, to engage in meaningful collaborations with our administration, including the Executive Offices of Labor and Workforce Development, Housing and Economic Development, and Education.

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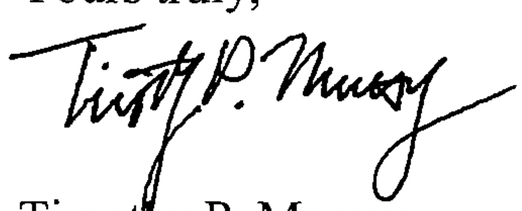
The STEM Council is working to dramatically increase student interest in, and preparation for, careers in the areas of science, technology, engineering and math. Members of the Council include college presidents, educators, and high level non-profit executives and business leaders. The comprehensive team approach and structure we have in place for this Council will lead to the success of the initiatives laid out in our plan. One example is the goal to launch a campaign to assist parents, students, employees and community leaders in understanding why the STEM disciplines are so important to individual and workforce successes.

The proposed initiatives and strategies in this Race to the Top application will enable the state to: 1) provide all of our students with a more personalized educational experience; 2) develop and retain an effective, diverse, and culturally competent educator workforce; 3) allocate targeted instructional resources and more comprehensive support services to students and educators in our lowest-performing schools; and 4) increase college and career readiness for all students.

If we receive Race to the Top awards, we will invest these funds to build the capacity of students, institutions, state agencies and school districts. I am confident that these strategies will allow us to build on our success to date and set the standard nationwide for a public education system that provides every student with the tools, standards, and supports they need to succeed in college, career, and life in the 21st Century.

Thank you Mr. Secretary for your leadership and hard work on this rare and ambitious opportunity to ensure that Massachusetts and the entire country have the ability to make their case for Race to the Top funding. Given the difficult fiscal situation in the state, we owe it to our students, our educators, our parents, and our collective future to secure a significant grant award. I am confident that the attached application will demonstrate that the Commonwealth of Massachusetts is ready to continue our record of high achievement and success in the field of education.

Yours truly,



Timothy P. Murray
Lieutenant Governor
Chairman, Governor's STEM Advisory Council
Commonwealth of Massachusetts

MassBio
MASSACHUSETTS BIOTECHNOLOGY COUNCIL

MASSBIOED
Massachusetts Biotechnology Education Foundation

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www.massbio.org | www.massbioed.org

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

Dear Secretary Duncan:

It is with great pleasure that we write to you in support of Massachusetts' application for Race to the Top funding. We have reviewed the application and we support the Commonwealth's commitment to provide all Massachusetts students with a world-class education.

In 2001, the Massachusetts Biotechnology Council (MassBio), one of the country's largest biotechnology trade organizations, took action on the industry's concern for a future workforce by creating the Massachusetts Biotechnology Education Foundation (MassBioEd). MassBioEd is focused on developing and providing engaging biotechnology educational experiences in schools, the workplace, and the community at large.

BioTeach is the Foundation's flagship program designed to provide all 339 Massachusetts public high schools with the training and resources needed to incorporate biotechnology education as part of their core curriculum. BioTeach provides professional training for educators so they can access and use biotechnology curricula and provide their students with career awareness activities. To date, teacher professional development training and classroom laboratory equipment has been provided to 177 public high schools through this program. Nearly $3 million in equipment supplies and consumables has been awarded, and nearly 500 science teachers have received biotechnology laboratory training. To date, BioTeach has reached over 26,000 students.

It is with this extensive programmatic experience that we enthusiastically support the application's overall strategy and, in particular, its focus on the following:

- *Develop and retain an effective, diverse, and culturally competent educator workforce*. Educators need an improved system to provide professional development for their particular needs, and school systems need metrics to measure educator effectiveness. We believe the Massachusetts application takes a creative and determined approach towards meeting these objectives.
- *Increase college and career readiness for all students*. This is paramount to preparing our future workforce. The application builds on our high academic standards by promoting more rigorous high school curricula and developing pathways to college programs focused on science, technology, engineering, and math.

MassBio and MassBioEd welcome the opportunity to partner with the Commonwealth of Massachusetts on their Race to the Top initiatives. We are committed to leveraging the biotechnology sector's resources to make this an effective partnership and we encourage you to fund Massachusetts' Race to the Top application.

Sincerely,

(b)(6)

Robert Coughlin, President & CEO
Massachusetts Biotechnology Council

Lance Hartford, Executive Director
Massachusetts Biotechnology Education Foundation

MASSBIO is committed to fostering a positive environment that enables each biotechnology company to achieve its full potential, making Massachusetts a world renowned center for biotechnology.
MASSBIOED is a non-profit organization committed to promoting biotechnology education in Massachusetts through school science programs, workforce training, and lifelong learning.

National Center for Technological Literacy

Museum of Science, Boston

January 11, 2010

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

Dear Secretary Duncan:

We are pleased to write this letter of support on behalf of the Massachusetts Race to the Top (RTTT) application. The Museum of Science, Boston and the National Center for Technological Literacy® (NCTL®) is a long standing partner of the Massachusetts Department of Elementary and Secondary Education. Our mission and goal is to provide innovative and engaging science, technology and engineering exhibits, programs and partnerships that foster life-long learning and engagement. The four pillars outlined in the Massachusetts RTTT application are consistent with building on our past successes to ensure a brighter future for all our students.

The NCTL leadership team shares their expertise on several statewide advisory groups including Massachusetts Science & Technology/Engineering Curriculum Framework (2001, and 2009), the 2007 Governor's Readiness Project council and the Massachusetts Test for Educator Licensure (MTEL) . The NCTL believes the development of a strong strategic plan scaffolded by rigorous standards and assessments will support all our students having a more personalized educational experience. To this end, we have taken our outreach efforts directly to our school districts.

The Museum of Science, Boston established The Gateway Project in 2004, to help school districts implement the *Massachusetts Science and Technology/Engineering Curriculum Framework*. To date we have reached 58 Massachusetts districts that serve 341,560 students (35.6% of the state's K-12 enrollment). The goal of building strong leaders and educators to impact systemic and sustainable change has been quite successful.

In addition, we have developed a rigorous set of K-12 standards-based, teacher-tested technology and engineering curriculum. Our materials build upon students' content knowledge and 21st century skills to inspire the next generation of inventors and innovators. Thus far, 397,530 students in Massachusetts use our curriculum materials and 7,210 teachers have completed professional development. At the NCTL, we stand prepared to support Massachusetts in achieving its goal of developing a world class education system.

Sincerely

(b)(6)

Ioannis N. Miaoulis
President & Director
Museum of Science

Yvonne M. Spicer, Ed.D
Vice President
Advocacy & Educational Partnerships

COMMONWEALTH OF MASSACHUSETTS

THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

January 8, 2010

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

Dear Secretary Duncan,

We write to you as co-chairs of the Robert H. Goddard Council in support of the Massachusetts Executive Office of Education's application to the Race to the Top Fund. The Goddard Council was established in 2006 with the intention of advising the Board of Higher Education and the legislature on workforce development programs and policy in the fields of Science, Technology, Engineering, and Mathematics (STEM). The 27 member council is comprised of representatives from business, industry, state government, K-12 and higher education in the Commonwealth.

Utilizing funds from the STEM Pipeline Fund, the Council has studied and developed a series of programs aimed at recruiting and retaining more skilled and qualified educators. As requirements to pass the Massachusetts Tests for Educator Licensure (MTEL) become more stringent, one issue that has arisen is that there has been a marked decrease in the first-time passage of the elementary teacher's math test. To address this disparity, the Council has developed a comprehensive strategy that includes MTEL prep workshops.

The Massachusetts economy was traditionally based on manufacturing based but as the economy has evolved, Massachusetts, with one of the largest clusters of higher educational institutions in the country, needs to utilize this asset to train students for the jobs of the new economy, whether they be in engineering, green jobs, high-tech, life sciences, or energy. In conjunction with the Lieutenant Governor's STEM Policy Advisory Council and the Business Roundtable's Education Innovation and Workforce Initiative, we hope to prepare students for these new jobs, build on the work we have done, and provide businesses with the workforce they need.

Regional STEM networks have been established with educators from PreK-16 to align programs among partners and across the state with the assistance of the Department of Elementary and Secondary Education. Information sharing such as this will help identify areas where schools are underperforming and allow the Executive Office of Education to assess these schools knowing what programs are offered, how they differ from schools that are higher achieving, and formulate a plan for improving the quality and efficacy of education at those institutions.

In closing, we urge you to strongly consider supporting Massachusetts' Race to the Top Fund application so that we may continue and expand the work of the Goddard Council in tandem with the other educational organizations in the state. If you have any questions regarding the Council, please do not hesitate to contact our offices. Thank you for your consideration in this matter.

Sincerely yours,

SENATOR THOMAS M. MCGEE, Co-chair
Robert H. Goddard Council

REPRESENTATIVE DANIEL E. BOSLEY, Co-chair
Robert H. Goddard Council

Boston Public Schools

Carol R. Johnson, Superintendent

January 14, 2010

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Re: LEA Commitment to MA STEM Early College Pathway Initiative

Dear Secretary Duncan:

We respectfully submit this letter of commitment to participate in Massachusetts' STEM Early College Pathway initiative should USDE award a Race to the Top (RTTT) grant to the Commonwealth.

Massachusetts is proud of the high math and science performance of our students on the TIMSS benchmark and of the high rate with which our high school graduates go on to college. But as everywhere in the country, high-poverty and minority students are far less likely to graduate high school, to matriculate to college and ultimately attain a higher education degree. Further, far too few students across the socioeconomic spectrum develop a passion and a high level of skills in the STEM areas, even in a state that leads the nation in great job opportunities in those fields.

Massachusetts has included in their RTTT application an initiative to create a pioneering cohort of STEM early college high schools and feeder middle schools developed with a higher education partner and local STEM-focused organization to provide significant STEM-oriented experience, traction, success, and credit in college for students from predominantly low-income backgrounds. This initiative will create a pipeline of high-achieving students with an interest and skill set in STEM related studies and careers that is critical to our state's economic vitality.

26 Court Street
Boston, MA 02108

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(617) 635-9059 Fax

www.bostonpublicschools.org

FOCUS On Children
Boston Public Schools

The Honorable Arne Duncan
January 14, 2010
LEA Commitment to MA STEM Early College Pathway Initiative

We applaud Massachusetts' efforts to address the chronic shortage of urban, minority students with the necessary skill and interest in STEM related fields and subject to receiving a RTTT grant, commit to actively working with the Massachusetts Department of Elementary and Secondary Education to implement the STEM Early College Pathway initiative in our respective cities.

Sincerely,

LEA Superintendent	**LEA Superintendent**	**LEA Superintendent**
Carol Johnson		
Signature/Date	Signature/Date	Signature/Date
CAROL Johnson		
Print Name/Title	Print Name/Title	Print Name/Title
Superintendent Boston Public Schools		

January 14, 2009

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

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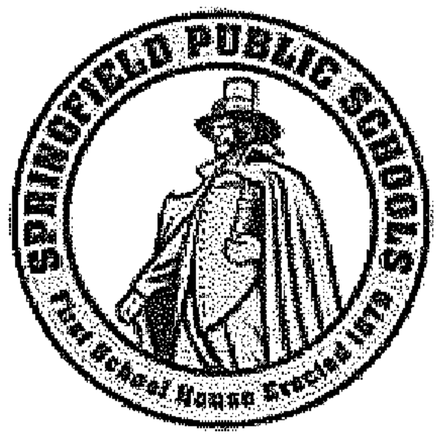
Sincerely,

LEA Superintendent	**LEA Superintendent**	**LEA Superintendent**
Signature/Date	Signature/Date	Signature/Date
Print Name/Title	Print Name/Title	Print Name/Title



THE PUBLIC SCHOOLS of SPRINGFIELD, MASSACHUSETTS

Dr. Alan J. Ingram
Superintendent of Schools
ingrama@sps.springfield.ma.us
413.787.7087

Central Office
P.O. Box 1410
195 State Street
Springfield, MA
01102-1410

January 14, 2009

The Honorable Arne Duncan
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

Re: LEA Commitment to MA STEM Early College Pathway Initiative

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Sincerely,

LEA Superintendent	**LEA Superintendent**	**LEA Superintendent**
Signature/Date	Signature/Date	Signature/Date 1/12/10
Print Name/Title	Print Name/Title	Dr. Alan J. Ingram, Superintendent Print Name/Title

Massachusetts Department of Higher Education

One Ashburton Place, Room 1401
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Richard M. Freeland, *Commissioner*
Charles F. Desmond, *Chairman*
Massachusetts Board of Higher Education

January 8, 2010

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

Dear Secretary Duncan:

On behalf of the STEM Pipeline Fund, I am writing in enthusiastic support of the Race to the Top (RTTP) proposal submitted by the Commonwealth of Massachusetts. The Robert Goddard Council is a statutory body formed to advise the policies and programs of the STEM Pipeline Fund. This fund is administered by the Department of Higher Education. Senator Thomas McGee and Representative Daniel Bosley have submitted a letter as Co-Chairs of the Goddard Council.

The goals of the Pipeline Fund are to increase the number of students who prepare for and enter STEM careers, increase the number of STEM-qualified teachers, and improve STEM educational offerings. The STEM Pipeline Fund provides funds on a competitive basis for regional STEM networks and programs to increase student interest in pursuing STEM studies/careers, and it works to support implementation of state policies to enhance STEM preparation. There is a strong interconnection between these goals and the key initiatives in the Massachusetts RTTP proposal.

One of the chief assets developed through the Pipeline Fund is a statewide structure of regional STEM Networks to coordinate at the regional level the engagement of key STEM stakeholders (the PreK-12 system, higher education (public and private), the employer community, and non-profit STEM advocacy organizations. While the Commonwealth has committed over $8 million over several years to the Pipeline Fund, there remains a great need to increase the scale of these efforts, and this could be achieved through a RTTP award to the Commonwealth.

STEM is infused throughout the Race to the Top proposal and through each of the Massachusetts initiatives. We have already begun discussions among regional network leaders about engagement in this project, and there is very strong special interest across the state in Initiative Number 4: increasing college and career readiness for all students. Given the current and future structure of the Massachusetts economy and the educational requirements to participate in this economy, STEM preparation is a core element of post-secondary education and career success.

While Massachusetts has demonstrated STEM competence on state, national and international assessments, the distribution of STEM prepared students and teachers is very uneven. Despite the best efforts of the Goddard Council, the STEM Pipeline Fund and the leaders of the programs that we fund, we are all too aware of the limitations on our efforts compared to the scope of the problem. The Commonwealth's RTTP program would greatly enhance our Goddard Council and STEM Pipeline Fund goals. Our regional networks and programs provide a structure to build upon to support the rapid, effective implementation of an RTTP award. We are ready to go to work.

Sincerely,

David McCauley
Director STEM Pipeline Fund/Senior Administrator for the Robert Goddard Council
Deputy Commissioner for Workforce Development

January 11, 2010

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

Dear Secretary Duncan:

The STEMTech Alliance, a coalition composed of six science and technology trade associations in Massachusetts, is pleased to provide this letter of support for our state's application for Race to the Top funding.

We applaud the following targeted goals because they will enhance both teaching and learning:

- Providing a world-class education that includes increasing college and career readiness for all students and
- Improving the preparation, training and support for the Commonwealth's teachers.

Success in both these areas is critical to Massachusetts' continued leadership role in scientific and technological innovation. As a result, we are also tremendously supportive of the emphasis on STEM (science, technology, engineering and math) in the state's application for funding.

The coalition was formed two years ago to address the problem highlighted by federal and state governments and common to all the partner associations – a shortage of workers in the STEM pipeline. The six associations, whose logos appear above, jointly developed and are implementing a statewide project to increase the interest of sixth grade students in STEM subjects and careers. The project, with support and funding from the state, involves reaching out to *every school in the state that has a sixth grade* – all 568 of them – and matching them with STEM professionals who go into the classrooms to tell their career stories and to help students visualize themselves in STEM careers. The STEM industry sectors participating in the project include software, telecommunications, wireless, robotics, biotech, medical devices, clean energy and engineering.

We are pleased to partner with, lend our support to, and work cooperatively with the state to meet the goals outlined in its application. We urge you to fund the Commonwealth's Race to the Top proposal; doing so will positively impact the Commonwealth's educational opportunities and ability to innovate. Thank you.

Sincerely,

(b)(6)

Joyce L. Plotkin, STEMTech Alliance Chair
President Emerita, Massachusetts Technology Leadership Council

MBAE
MASSACHUSETTS BUSINESS ALLIANCE FOR EDUCATION
400 Atlantic Avenue, Boston, MA 02110 • tel 617-737-3122 fax 617-737-3126 • www.mbae.org

January 11, 2010

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

Dear Secretary Duncan:

The Massachusetts Business Alliance for Education (MBAE) is a policy advocacy group of and for businesses in Massachusetts. We are committed to a high quality public education system that will prepare all students to engage successfully in a global economy and society. We bring together business and education leaders to promote education policies and practices based on measurable standards of achievement, accountability for performance, and equitable educational opportunities for all students. As the organization that provided the conceptual framework and advocacy for the Massachusetts Education Reform Act of 1993, MBAE, and the employers we represent, have a long history of supporting education reform focused on student achievement. We are proud that such reform efforts have resulted in our students' sustained academic performance at the top of the nation and we enthusiastically support the Commonwealth's application for the Race to the Top to accelerate our state's progress.

While MBAE celebrates our accomplishments, yet recognizes that we have much work ahead to close persistent achievement gaps and to prepare all students to compete in a rapidly changing global workforce. We have a reputation for effectively communicating the business perspective to policy and program initiatives in Massachusetts and will capitalize on our established relationships with state leaders and other stakeholders to actively support state efforts to implement and sustain the strategies outlined in the state's application. Our organization's strategic goals are aligned with the four assurances you are seeking from all Race to the Top applicants, and the proposals Massachusetts is putting forward. We believe that Massachusetts Race to the Top proposals are also aligned with those four assurances and warrant an award of Race to the Top funding, particularly applied to the following:

- <u>Graduate all students ready for college, career and citizenship</u>

MBAE is a strong advocate for increasing college and career readiness and believes that the state's Race to the Top commitments to increasing rigorous college and career pathways, with an emphasis on STEM, rightly target issues identified by the Massachusetts business community as critically important. We believe the proposed P-12 Teaching and Learning System will drive the statewide reform necessary to raise graduation rates and ensure that all students acquire the applied skills and content knowledge essential for college and career success. Business leaders have been engaged by MBAE in the development of the MassCore graduation standards and initiatives to develop performance-based assessment of college and career readiness. We remain committed as the business partner in these endeavors, and for the state's American Diploma Project team, to intensify our efforts to make MassCore the minimum graduation requirement for all students as part of a continuum of school reforms. We also support a comprehensive approach to increasing graduation rates based on ambitious goals and evidence-based solutions. The Commonwealth's Graduation and Dropout Prevention and Recovery Commission recently articulated a plan to reduce the

dropout rate that can be implemented immediately as part of the state's Race to the Top program.

- Ensure effective teachers and leaders in every school and classroom

Reaching the goals of high standards and achievement can only be accomplished with changes in our school management and human resource systems. As a member of the Working Group for Educator Excellence, MBAE has supported a comprehensive approach to improving the system for educator recruitment, development and management. We strongly endorse the state's commitment to require districts to evaluate all teachers annually, with student achievement as a factor. The Massachusetts business community has significant experience evaluating professionals that can be brought to bear on this challenge. MBAE has initiated a project to share private sector expertise in performance evaluation, and its relation to compensation, with state policymakers. We will convene experts to review these issues and recommend action. Our work on high school reform demonstrates success in framing discussion that leads to solutions of complex educational questions. Last year, our Report on "Educating a 21st Century Workforce" was used by 29 Massachusetts district teams to develop plans for progress in their communities. Employers should be included in the collaborative work to develop multiple measures of effectiveness anchored in student performance, and MBAE has pledged its participation.

- Turn around Massachusetts' lowest performing schools

MBAE has defended high standards and equitable opportunities for all children against both legal and political challenges and will continue to do so. At the district and school level, MBAE considers accountability for performance essential to raising student achievement and making the case for state investment in education. Our efforts have resulted in the preservation of a proven system for evaluating and reporting on district management and operational systems essential to quality teaching and learning. This is now linked to a new structure for providing the assistance needed to support school improvement. The Accountability and Assistance Advisory Council charged with design of this system is chaired by an MBAE Board member and MBAE also fills the business representative seat. We are confident that with this system, coupled with statutory changes that provide greater autonomy and management rights to school leaders, which we have championed, will enable Massachusetts to finally bring our lowest performing schools up to the level of quality that our students need and deserve.

Most Massachusetts companies have experienced rapid and extensive changes in their industries and professions as a result of technological advances and the globalization of the marketplace. Educational institutions have been slower to adapt. MBAE is keenly aware of the unique opportunity that Race to the Top, in coordination with other economic stimulus grant programs, provides for systemic changes rather than incremental advances. Our commitment to working with state leaders, and to holding them accountable for results, is demonstrated by the recent "Leaders and Laggards" report on educational innovation in the states. Massachusetts was the only state in the nation meeting all four conditions for a strong state reform environment because of MBAE's membership in the Policy Innovators in Education network. MBAE and our allies in the business community will monitor and report on progress toward the goals and promises set forth in our Race to the Top application. We urge you to support the selection of Massachusetts for a Race to the Top award.

Sincerely,

(b)(6)

Robert W. Richardson, Chairman
East Coast Education Program Manager, Intel
(Business Representative on Science, Technology and Engineering Curriculum Frameworks Review)

For the Members of the MBAE Board of Directors

Donald F. Baldini, Esq., Assistant Vice President and Sr. Legislative Counsel
Liberty Mutual Insurance Company

Andrea Bruce, Director of Marketing and Brand
Suffolk Construction Co., Inc.

JD Chesloff, Deputy Director
Massachusetts Business Roundtable
(Member, Board of Early Education and Care Department)

Lawrence Coolidge
Loring, Wolcott & Coolidge

Henry C. Dinger, Esq., Partner
Goodwin Procter LLP

Patricia S. Eagan, Massachusetts Regulatory Affairs
Verizon (Business Representative on English Language Arts Curriculum Frameworks Review)

Joseph E. Esposito, C.P.A.
Chair of the Massachusetts Accountability and Assistance Advisory Council
Member, NAEP Business Policy Task Force

Cathleen Finn, New England Program Manager, Corporate Citizenship and Corporate Affairs
IBM Corporation
(Business Representative for Massachusetts TELLs Study)

Jack Foley, Vice President, Government Relations
Clark University

Beth C. Gamse, Ed.D., Principal Associate
Abt Associates Inc.

Robert Gittens, Vice President for Public Affairs
Northeastern University

Victoria Grisanti, Manager, Community Involvement
EMC Corporation
(Business Representative on Mathematics Curriculum Framework Review Committee and Graduation Rate Task Force)

Paul F. Heffernan, Vice President of Human Resources
Tufts Medical Center

Paul Karoff, Chief Communications Officer
American Academy of Art & Sciences

Alan G. MacDonald, Executive Director
Massachusetts Business Roundtable

Andre Mayer, Senior Vice President
Associated Industries of Massachusetts

Neil J. McKittrick, Esq., Partner
Ogletree Deakins

James McManus, Principal
Slowey/McManus Communications

Peter Nessen, Principal
CRIC Capital

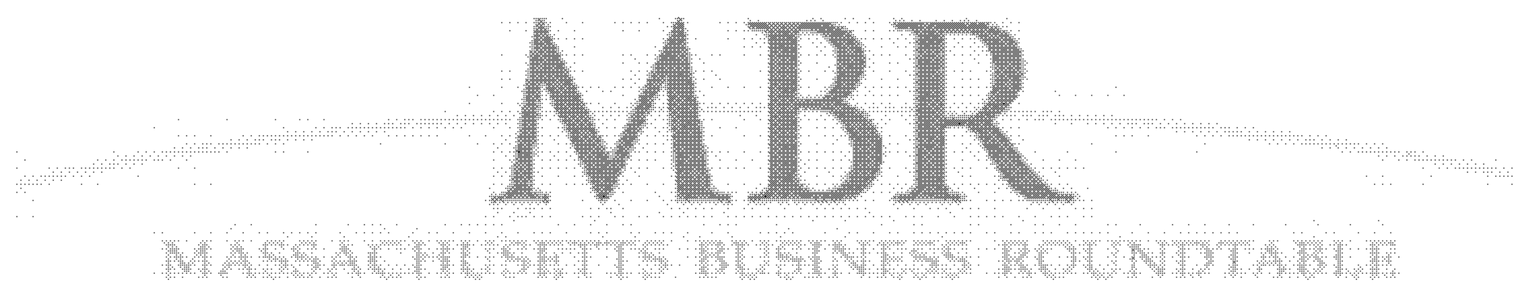
Paul Serotkin, Vice Chairman, Executive Vice President, Operations and Finance
Glevum Associates

William Walczak, CEO
Codman Square Health Center

Michael J. Widmer, President
Massachusetts Taxpayers Foundation

Jean C. Wood, Ph.D., Former Sr. Vice President and Chief Operating Officer
Abt Associates Inc.
(Member of Early Education and Care Advisory Council)

Contact :
Linda M. Noonan, Executive Director
Linda_Noonan@mbae.org
617-737-3122
(Business Representative Accountability and Assistance Advisory Council)



January 14, 2010

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

Dear Secretary Duncan:

I am writing on behalf of the Massachusetts Business Roundtable (MBR) to convey our strong support for Massachusetts' Race to the Top application. MBR is modeled on the national Business Roundtable, and is comprised of CEOs and leading executives from the state's leading companies representing a full range of Massachusetts industry. The Roundtable's mission is to apply the unique managerial perspective of its members toward the resolution of complex state public policy issues that improve the social and economic vitality of Massachusetts.

MBR's Education and Workforce Development Task Force has four strategic areas of focus that are included throughout the state's Race to the Top application and achieve our mutual goal of preparing our students for a new, global economy: 1) a sustained commitment to Science, Technology, Engineering and Mathematics (STEM) teaching and learning; 2) improving teacher quality throughout the Commonwealth; 3) advocating for innovative school models; and 4) building a solid foundation by supporting early childhood education.

Massachusetts' Race to the Top application is consistent with MBR's focus areas and we are pleased to support it. In particular, we are impressed with the application's recognition of Science, Technology, Engineering and Mathematics (STEM) as a priority to be woven throughout the state's strategies. This past summer, MBR convened 15 of the state's leading technology and business associations to issue a report called "Tapping Massachusetts' Potential," (TMP) which provides a call-to-action to make STEM a statewide public policy priority, with a series of goals, recommendations and strategies to "develop a forward-thinking, integrated strategy to build the talent infrastructure necessary to meet" the expectations of the 21st century employer.

Massachusetts has an impressive infrastructure in place to address the STEM priority. There are seven regional STEM networks throughout the Commonwealth, bringing together key stakeholders—K-12, higher education, businesses and community organizations—to collaboratively address regional education and workforce needs. In addition, Governor Patrick recently signed an Executive Order creating the state's first Governor's STEM Advisory Council, which will serve as a central advisory body, bringing together public and private sector stakeholders involved with STEM planning and programming, with the goal

of increasing student interest in, and preparation for, careers in STEM. And as previously mentioned, the state's business community is aligned with the goals of the STEM networks and Advisory Council.

MBR members are keenly aware of the importance of having an education system that produces people who are ready to work, thrive and innovate in the 21st Century. They understand the importance of competing, both on the state level and nationally, in an increasingly competitive and global economy. MBR believes that the state's commitment to STEM, in the context of the broader Race to the Top goals of "pursuing transformational reform" and preparing every student in Massachusetts to compete in the 21st century global economy, gives strength to the Massachusetts application and we are pleased to support it.

Sincerely,

(b)(6)

Alan G. Macdonald
Executive Director

BOARD OF DIRECTORS

CO-CHAIRS

Governor Phil Bredesen
State of Tennessee

Craig R. Barrett
Former CEO/Chairman of the Board
Intel Corporation

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Jeff Wadsworth
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Battelle

Governor Dave Heineman
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State of Massachusetts

CHAIR EMERITUS

Louis Gerstner, Jr.
Former Chairman & CEO
IBM Corporation

PRESIDENT

Michael Cohen

TREASURER

Peter Sayre
Controller
Prudential Financial, Inc.

January 11, 2010

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

Secretary Duncan:

I am pleased to write in wholehearted support of the Massachusetts application for Race to the Top funds. Achieve has a decade-long history of closely working with Massachusetts. We know well its track record, as well as the current context of and leadership for education reform. We believe its proposal is sound, strong and very likely to succeed.

Because we also work closely with the other 34 states in the American Diploma Project Network, we know that Massachusetts has been one of the leading states in education reform in the past decade. Achieve regards its content standards as a model for the country because they are rigorous, clear, and focused on essential content and skills. They already incorporate the knowledge and skills needed for students to be ready for postsecondary success. The state's assessment system, MCAS, is also a national model. The tests are well aligned to the standards and rigorous, containing constructed response as well as multiple choice items. MCAS is transparent. Test items are released every year to help give students, teachers and parents a clear idea of expectations for students.

Massachusetts has a decade-long track record of successful improvement, as demonstrated by significant gains on MCAS and world-class performance on TIMSS. The education system has demonstrated the capacity to produce results, over a sustained period of time, and at scale. This would not have been possible without a large cadre of highly professional and dedicated local educators. The plan Massachusetts has developed builds on the lessons learned and capacities developed from this experience. It is appropriately targeted on closing achievement gaps and improving college and career readiness, and incorporates the right strategies: providing students with the personalized supports and assistance they need; providing their teachers with the tools, preparation and supports they need; strengthening the state's focus on college readiness; and targeting these approaches to the schools that need them the most.

This plan has been developed by an unusually strong state leadership team. Achieve has worked closely with the state's key education officials – Governor Patrick, Secretary Reville, Commissioner Chester, Commissioner Freeland, State Board of Education Chair Banta, and many of their colleagues. They are a strong team, united by a clear vision and a commitment to translate it into statewide action. We also know from first- hand experience that the Massachusetts Department of Education is one of the strongest in the country, and is capable of taking education reform in Massachusetts to the next level.

Funding the Massachusetts proposal will be a worthwhile federal investment. It will pay dividends for Massachusetts' students, and enable other states to continue to benefit from the leadership Massachusetts has provided the nation.

Sincerely,

(b)(6)

Michael Cohen

1775 Eye Street NW, Suite 410, Washington, D.C. 20006 Phone (202) 419-1540 Fax (202) 828-0911
www.achieve.org

Boston Plan for
EXCELLENCE
IN THE PUBLIC SCHOOLS

January 11, 2010

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

Dear Mr. Duncan,

The Boston Plan for Excellence (BPE) is pleased to endorse the Commonwealth's Race to the Top (RttP) application. Receiving these funds will help Massachusetts and Boston not only educate well the student groups we have not yet successfully educated, but also build new systems to repurpose existing resources and sustain changes begun with RttP funds. Massachusetts is poised to be a great RttP success story and solve intractable urban education problems; BPE is committed to helping implement the state's strong plan.

The Boston Public Schools (BPS), Massachusetts largest and most complex district which educates 17% of the state's poor children, has made measurable progress in moving more students to a high standard. Its all-schools effort culminated in BPS winning the prestigious Broad Award in 2006; as Superintendent Payzant acknowledged when he accepted the award, BPE has been a large part of Boston's success. We have fully embraced and supported – financially and directly at schools – the district's emphasis on improving the skills of teachers and creating conditions that encourage effective teaching and learning in schools, the elements at the heart of student success. The state context has been important: Massachusetts was lauded early for its high standards and rigorous, aligned assessments, and MCAS surely has been a factor in BPS's recent great math NAEP results. A good assessment helps keep the attention of teachers at schools where we work on challenging content.

The plan put forth in this RttP application will strengthen BPS further. As BPS's primary partner, BPE's work will contribute to its successful implementation. Our work includes managing with BPS the Boston Teacher Residency, which is preparing skilled teachers for urban teaching. We also work directly with schools – some of them heretofore constantly unsuccessful – to help teacher teams match instructional response to student need and together share the responsibility for struggling learners' success. We also develop strong tools; our student risk indicator has been adapted in modified form by the state for all schools. Finally, our work includes an intense focus on improving school leadership, the indisputable key to turning around struggling schools. Since the start of BPS's reform work, we have designed, piloted, refined, and collaborated with BPS to scale up success. RttP funds offer the potential for us to expand and intensify that work in Boston and to share our successes with struggling schools in other urban districts. We look forward to that prospect.

Sincerely,

(b)(6)

Ellen C. Guiney
Executive Director

6 Beacon Street, #615 Boston, Massachusetts 02108 Phone (617) 227-8055 Fax (617) 227-8446 <www.bpe.org>

Mass Insight EDUCATION

January 14, 2010

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

Dear Secretary Duncan,

On behalf of Mass Insight Education & Research Institute, we are pleased to support the Commonwealth of Massachusetts' proposal for the Race to the Top program. We believe that Massachusetts is poised to lead transformational reform in its schools and districts. The unprecedented level of funds available through a Race to the Top award would enable the Commonwealth to accelerate the scope, scale, and pace of reform to the great benefit of our one million public school students.

Massachusetts builds on an extraordinary platform of success on standards, assessments, and data systems built in the 1990s, which made us a national education leader, as measured by performance on the NAEP. We are ready to move these early gains into a significant new phase of improvement.

Because Race to the Top is intended to build on success and to take successful initiatives to scale, an investment in Massachusetts will yield measurable results, for our students, educators, schools, and districts. The Massachusetts proposal focuses on capacity-building initiatives in districts and schools.

As an organization, Mass Insight has been focused on the critical challenge of turning around low-performing schools both here in Massachusetts as well as across the country. We were gratified that many of the key themes of our 2007 report—*The Turnaround Challenge*—have been adopted in the guidelines of President Obama's federal stimulus package, and we are eager to assist in turnaround efforts in Massachusetts, and across the nation.

We believe that in the assurance area of school turnaround, Massachusetts has demonstrated an impressive and exceptional commitment to the principles necessary to enacting dramatic and effective school turnaround of its most chronically failing schools. We are confident that if awarded the competitive grant, Massachusetts will be ready and willing to implement the critical actions necessary to implement scalable and sustainable school turnaround.

Additionally, STEM is a priority for Race to the Top, and has been a priority in Massachusetts as well. Massachusetts has made early commitments to STEM through its STEM Pipeline Fund, and

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has a major national initiative underway. Connection to another major national STEM initiative would be feasible through Race to the Top funding.

We look forward to our continued partnership with the Massachusetts Department of Elementary and Secondary Education, and stand ready to assist our schools and districts to work towards the state's ambitious vision for student achievement.

Sincerely,

(b)(6)

William H. Guenther, President
Mass Insight Education & Research Institute, Inc.

TEACHERS21
Reshaping the profession of teaching

January 11, 2010

Honorable Arne Duncan
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20200

Dear Secretary Duncan,

Massachusetts has made significant progress in improving student learning since Education Reform began here in 1993. Our students perform better than students in states across the nation, as well as most other western nations, on several indicators of student learning. Yet, we still have work to do if we are to reach the goals of quality education for all students in the Commonwealth. Research shows that improving the quality of teaching and school leadership is the most effective way to make sure all students have the knowledge and skills they need to succeed. The original Massachusetts Ed Reform did not explicitly address this issue, and we need to address it now. Fortunately, the strength of Massachusetts' schools puts us in a position to make the most of the unprecedented resources of Race to the Top funds to improve teaching and leading across the state.

The Federal Race to the Top request for proposals makes Great Teachers and Leaders a cornerstone of states' work to improve schools and assure students are prepared to excel in the 21st century. Thus, *Teachers*[21], an education nonprofit organization dedicated to reshaping the profession of teaching through professional learning, policy, public discourse, and research and development, wholeheartedly supports the Massachusetts Department of Elementary and Secondary Education in its efforts to win the considerable resources afforded by Race to the Top funding. This support would significantly contribute to furthering our shared goal of systematically improving teaching and leading for all students in the Commonwealth.

Teachers[21]spearheads the work of the Working Group for Educator Excellence (WGEE), a statewide coalition of 24 education, business, parent, and community groups dedicated to strengthening the educator workforce. These groups, in collaboration with the MA Department of Elementary and Secondary Education, are working to fundamentally improve the quality of teaching and leadership in the Commonwealth. Currently, we have two important partnership projects underway that highlight our shared commitment to recruiting, retaining, and supporting the very best educators for all students in Massachusetts.

The first initiative is the Knowledge and Skills of Professional Teaching (KSPT) project which aims to identify and create a specific inventory of concrete knowledge and skills that go beyond the abstract standards schools currently rely on for guidance. With this partnership, education stakeholders in Massachusetts have the opportunity to come together to agree upon a common professional knowledge and skill base for teaching and organize a central repository of this

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Teachers21.org

professional knowledge. In addition, this project will provide a well-researched map of professional knowledge to guide educator quality policy in the Commonwealth.

Additionally, *Teachers*[21], the WGEE, and the DESE are collaborating to plan and develop a Comprehensive Approach Pilot Study (CAPS) Project that supports three mid-size, urban school districts to systematically and strategically create, strengthen, and align the key levers that influence the quality of teaching and leadership in schools. These ten levers are: Preparation; Licensure; Recruitment, Hiring, and Placement; Comprehensive Induction; Professional Development; Supervision and Evaluation; Re-licensure; Teacher Leadership; Organizational Structure; and, Organizational Culture. A fundamental principle of this work is that, when these key levers are coordinated, teaching and leading becomes more effective and efficient. This project of aligning the ten levers in three districts, in keeping with the federal government's bold agenda, will link teacher and student outcomes and develop differentiated compensation models as a part of the overall reforms. Ultimately, with the support and guidance of the DESE, these districts will achieve long-term and sustainable improvements in student achievement.

The goal of these model partnership projects is to bring about the kind of educational change necessary to prepare students for the challenges of the 21st century. This requires an unprecedented break from the piecemeal educational reforms of the past. The DESE has been a critical partner in these reform initiatives, demonstrating a commitment to coordinated and comprehensive reform. We are confident that with this approach, Massachusetts, as a recipient of the Race to the Top funding, will lead the nation as a model of educational change. We look forward to collaborating with our national colleagues on advancing the critically important Race to the Top agenda.

Sincerely,

(b)(6)

Susan Freedman
President, *Teachers*[21]

Jonathan Saphier
Founder, *Teachers*[21]

BARR FOUNDATION

January 11, 2010

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

Re: Massachusetts's Race to the Top Application

Dear Secretary Duncan,

Massachusetts students score at the top of the nation on standardized tests and the Boston Public Schools, the largest district in the state, is ranked as one of the best urban districts nationwide. With only two large city districts scoring higher on the 2009 National Assessment of Educational Progress, Boston is a national leader. Even so, we know that no large urban district, Boston included, has succeeded in leveling the playing field for all of its students. In Boston, where the majority of students are low-income and of color, 9th graders face no better than a 1.5 in10 chance of graduating and completing a college degree within seven years.

Yet transformational efforts are taking root in Boston and Massachusetts. Building on the successes of Massachusetts's 1993 Education Reform Act, our Legislature has approved new reforms to address the achievement gaps that persist for low-income, minority, and special needs students and children learning English as a second language. These new efforts substantially increase avenues for innovation, including expansion of our successful charter schools, and new authority and flexibility for districts to intervene quickly and decisively in low-performing schools. Boston has made a head start on this work in 2009 – closing six underperforming schools and identifying fourteen more for turnaround.

The Barr Foundation is an enthusiastic supporter of Massachusetts's Race to the Top proposal. New England's largest private foundation (www.barrfoundation.org), Barr seeks to provide quality educational experiences that enable all of Boston's youth to realize their full potential.

To this end, we have supported the Boston Public Schools'

- successful transformation of its human resource systems, so that it can more efficiently hire and retain quality staff;
- expansion of its quality preschool services, so that more students have a better start; and
- teacher training, so that the district can effectively implement its literacy curriculum (purchased with American Recovery and Reinvestment Act funds).

and Barr has provided resources for successful schools to expand and to effectively integrate students from closed underperforming schools.

.../...

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Barr has also supported efforts such as the nationally recognized *Boston Teacher Residency*, which has increased the number of effective classroom teachers in the district and offers valuable lessons statewide and beyond. In addition, Barr participates in Boston's *Opportunity Agenda*, a partnership of local government, funders, and nonprofit organizations working together to create a quality education pipeline in the city from birth through adult education.

Boston and Massachusetts are poised to leverage Race to the Top resources effectively to continue improving public education, particularly for students in low-achieving schools. We sincerely hope that the Massachusetts proposal will be funded so that we can achieve our goal that all, not just some, of our students receive the excellent, world-class education they deserve.

Sincerely,

(b)(6)

Patricia H. Brandes
Executive Director
Barr Foundation

Boston Education Funders

EXECUTIVE COMMITTEE

Lynn D'Ambrose
Co-Chairperson
Nellie Mae Education Foundation
781.348.4200

Elizabeth Pauley
Co-Chairperson
The Boston Foundation
617.566.2124

Mary Phillips
Treasurer
GMA Foundations
617.391.3090

Kathleen Traphagen
Coordinator
413.687.1710

January 15, 2010

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

Dear Secretary Duncan:

On behalf of Boston Education Funders (BEF), we are pleased to submit this letter of support for the Commonwealth of Massachusetts' Race to the Top application.

BEF is an affinity group of over sixty grantmakers who support early childhood, K-12 and postsecondary education in greater Boston and beyond. Launched in 1996 with a leadership grant from the Charles Hayden Foundation along with donations from other founding members, BEF plays an important role in helping to engage and inform donors about ongoing efforts to reform public schools in greater Boston. During the one year period of July 1, 2006 – June 30, 2007 (the most recent period for which available data exists), BEF members' grants in support of public education in Boston totaled nearly $11.8 million.

BEF's monthly meetings focus on linking foundations' resources and interests with those of urban education, particularly schools in Boston and the metro area. During 2009, BEF was pleased to host a series of discussions with Boston Public Schools Superintendent Carol R. Johnson and her leadership team on the challenges and the strengths of the school system, providing valuable insights on how funders and BPS may work together to increase the strategic impact of private investments. Other recent BEF sessions included a discussion of Race to the Top strategy with the Deputy Commissioner of the Department of Elementary and Secondary Education and a briefing on the BPS 5-Year Acceleration Agenda, education reform legislation and related policy developments with leaders of BPS and Boston City Hall.

BEF also continues to create peer learning opportunities through introducing members to new programming, best practices and research. Our efforts to promote conversations and provide learning opportunities for funders are aimed at leveraging funding investments and helping local education philanthropy to impact greater Boston's important education issues.

BEF serves a knowledge building and networking function, and many BEF members provide schools in greater Boston and community-based programs with significant resources aligned with the strategies of the Race to the Top proposal: 1) providing all of our students with a more personalized educational experience; 2) developing and retaining an effective, diverse, and culturally competent educator workforce; 3) allocating targeted instructional resources and more comprehensive support services to students and educators in our lowest-performing schools; and 4) increasing college and career readiness for all students.

BEF will continue to convene education grantmakers, providing a forum for our members to discuss school reform strategies in-depth with local and statewide education practitioners, leaders and policymakers. Our goal is to ensure that education-focused philanthropy effectively catalyzes and supports efforts to improve achievement for all students in the Commonwealth. We urge you to consider the Commonwealth of Massachusetts' Race to the Top proposal favorably.

Sincerely,

Boston Education Funders

Boston Education Funders
c/o GMA Foundations
77 Summer Street, 8th Floor
Boston, MA 02110

Among Boston Education Funders' many institutional and individual supporters of Massachusetts' Race to the Top application are the following members.

Barr Foundation
Boston After School and Beyond
Boston Foundation
Boston Plan for Excellence
Boston Schoolyard Funders Collaborative
Business Leaders for Education
Cabot Family Charitable Trust
Catholic Schools Foundation
Charlotte Foundation
Children's Investment Fund
Clipper Ship Foundation
Douglas Clowes
Community Matters
Community Foundation of Southeastern MA
Paul and Lori Deninger Foundation
EdVestors
EOS Foundation
Hyams Foundation
IBM
Klarman Family Foundation
Longfield Family Foundation
Lynch Foundation
Massachusetts Advocates for Children
Mott Philanthropic
Richard and Susan Smith Family Foundation
Simon Brothers Family Foundation
The Education Resources Institute, Inc.
Trefler Foundation
United Way of Massachusetts Bay and Merrimack Valley

January 15, 2010

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

Dear Mr. Secretary:

On behalf of the Race to the Top Coalition, I convey our strong support of the Commonwealth's application for the Race to the Top challenge. The Race to the Top Coalition, formed this fall, is a consortium of 15 business, civic, and community groups – most of whom are not the usual suspects - convened by the Boston Foundation to advocate for meaningful education reform to strengthen schools, close achievement gaps, and better qualify our state for federal funding.

As you know, Massachusetts has long defined itself by the quality of its public schools. Here in birthplace of public education, we take pride that our students lead the nation on the National Assessment of Education Progress and that Boston recently received the Broad Prize.

Yet, Massachusetts—like many other states—also suffers from pernicious and persistent achievement gaps that not only leave too many children behind but also pose a threat to our regional and national knowledge-based economies. Nowhere is this more pronounced than in our urban districts. One of the contributing factors is that not all teachers receive the preparation, training, and support they need to provide all students with high-quality educational experiences.

Our state's Race to the Top proposal would help us to bring more promising practices to scale to strengthen teacher training, close achievement gaps, and build on national models of excellence.

The Race to the Top Coalition has served as lead advocates for the groundbreaking education reform legislation passed yesterday by the Massachusetts House of Representatives and Senate. We are proud to have brought stakeholders together under a "big tent" and led an around-the-clock public affairs campaign to inform legislators amidst opposition from some unions. With Governor Patrick's signature, this important legislation will double the number of charter school seats in our neediest districts and will provide superintendents with the critical tools with which to intervene in underperforming schools.

This legislation is the unfinished business of education reform in our state, and we are thrilled by the House and Senate's courage in tackling some of the thorny union-management issues that too often thwart progress. Massachusetts is now poised to implement the ambitious plans outlined in the state's Race to the Top application. Thank you for your consideration.

Sincerely,

(b)(6)

Paul S. Grogan
President & CEO
The Boston Foundation

The Race to the Top Coalition

Black Leaders for Excellence in Education
The Boston Foundation
Bessie Tartt Wilson Initiative for Children, Inc.
Boston Leaders for Education
Boston Municipal Research Bureau
Greater Boston Chamber of Commerce
Leaders for Education
Massachusetts Charter Public School Association
Mass High Tech Council
Mass Insight
Metrowest Chamber of Commerce
Metro South Chamber of Commerce
Progressive Business Leaders Networks
Stand for Children
Strategic Grant Partners

Nellie Mae Education Foundation
Opening Doors to Tomorrow

January 11, 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 today on behalf of the Nellie Mae Education Foundation to endorse the Massachusetts Department of Education's Race to the Top application. We enthusiastically support its focus on providing all learners with a more student-centered educational experience; developing an effective, diverse and culturally competent workforce; allocating targeted instructional resources and more comprehensive support services to students and educators in the state's lowest-performing schools; and increasing college and career readiness for all students.

The Foundation is New England's largest public charity dedicated to improving academic achievement for the region's underserved communities. Our mission is to stimulate transformative change of public education systems across the region. We believe that developing a greater variety of higher quality education opportunities will enable all learners--especially and essentially those underserved--to obtain the skills, knowledge and supports necessary to become civically engaged, economically self-sufficient life-long learners.

Massachusetts' focus on a more student-centered experience is aligned with both our mission and our evolving work. We are currently transitioning to a new strategic focus. Moving forward, we will focus primarily on the promotion and integration of developmentally appropriate, rigorous, student-centered approaches to learning. These approaches takes into account the many ways students learn and are focused on a broad set of essential and relevant skills. It is the Foundation's goal to help grow these approaches into core facets of the education system.

The Foundation has partnered with the Massachusetts Department of Elementary and Secondary Education (DESE) and the Executive Office of Education (EOE) to support policy change in the state that is aligned with our mission. We have provided $75,000 in direct grant support to the Bridgespan Group for its lead role in RTTT proposal development, have offered input to administration officials, and helped fund recent efforts to adopt key legislation to qualify Massachusetts for RTTT funds. We are supporting DESE in its efforts to expand the state's required assessment to include curriculum-embedded tasks. Finally, we were a key early supporter of the Extended Learning Time Initiative and other efforts to expand learning opportunities for students during the school year and the summer months.

Thank you for the opportunity to contribute to this process. We look forward to continued collaboration with Massachusetts, the New England education community, and your department in order to improve education for all learners.

Regards,

(b)(6)

Nicholas C. Donohue
President and CEO, Nellie Mae Education Foundation

STRATEGIC GRANT PARTNERS

January 12, 2010

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

Dear Secretary Duncan,

We are honored to write this letter of support for Massachusetts' Race to the Top (RTT) application.

Founded in 2002, Strategic Grant Partners (SGP) represents fifteen family foundations that have dedicated a portion of their giving to support a coalition steeped in deep due diligence, strategic thinking and goal orientation to help fund systemic change to social problems. Since that time, SGP has granted $26,000,000 (almost exclusively within Massachusetts) in the areas of education, family self sufficiency, youth development and child welfare.

SGP's mission is to partner with outstanding leaders with game changing ideas that improve the lives of struggling individuals and families. Our goals are to:

1. Incubate promising ideas in Massachusetts with the potential for effectiveness;
2. Invest in Massachusetts nonprofits with evidence of effectiveness;
3. Help Massachusetts organizations with demonstrated effectiveness to disseminate their learnings and/or scale up their models for national impact;
4. Invest in national organizations with proven effectiveness expanding into Massachusetts;
5. Invest in work that alters public systems in ways that are directly tied to positive changes for children and families.

With those goals in mind, SGP enthusiastically joined forces with the Gates Foundation, the Nellie Mae Foundation and the Barr Foundation to support the state in its strategic planning efforts and Race to the Top application. We firmly believe that the state plays a critical role in ensuring an effective education for all students in the Commonwealth. While Massachusetts has made significant strides in school reform, there is still work to be done from a policy, capacity, systems and standards front. The Race to the Top application lays out a concrete plan for how the state plans to close existing gaps and bolster successful work.

We firmly believe that the Secretary and Commissioner of Education in Massachusetts are well poised to lead the state into an era of unprecedented reform. Being awarded the Race to the Top funds will accelerate this reform effort and help the state become a national and international exemplar of what a public education system can achieve.

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SGP

We agree with the four priority initiatives highlighted in the state's Race to the Top application. While each is extremely important on its own, they complement one another and together they are more powerful. Two initiatives specifically align almost directly with our current and future work:

1. "Develop and retain an effective, diverse, and culturally competent educator workforce".

   To date, SGP has given over $7 million to improving teacher preparation in the Commonwealth through grants that established the Boston Teacher Residency, the Lowell Teachers Academy and Urban Teachers Residency United. We are interested in working with the state to bring some of these programs to scale, as outlined in the RTT application, through expanding the teacher residency model beyond Boston, scaling the deep induction work happening in Lowell, and helping build capacity within districts to effectively recruit, select, train and evaluate teachers.

2. "Concentrate great instruction, additional support for students and families, and tools and resources for educators in the districts and schools that need it most".

   - Several areas within this initiative are extremely relevant to the work we are currently doing and plan to do in the future. The first, "Provide student supports (social, emotional, health and early literacy) and coordinate provision at municipal level" aligns well with Boston Connects, an initiative founded and incubated in Boston College. A grantee of ours since 2007, Boston Connects has achieved statistically significant achievement gains for students in some of the most challenging schools in Boston through a "broker" approach to services, ensuring that each and every child has the supports and enrichment services they need in order to achieve.

   - The bold approach to incubating and managing turnaround operators through a standalone 501c3 and the concept of a turnaround teaching corps are not areas in which we currently work, but in which we could envision working in the future.

SGP is supportive of this application for the Race to the Top funds. We believe that Massachusetts' plan, when fully implemented, will dramatically improve outcomes for all children in Massachusetts and act as a model and catalyst for change elsewhere.

Sincerely,

(b)(6)

Joanna Jacobson
Managing Partner

HARVARD
GRADUATE SCHOOL OF EDUCATION

OFFICE OF THE ACADEMIC DEAN

January 14, 2010

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

Dear Secretary Duncan:

I am writing in strong support of the Massachusetts Race to the Top application. I write not only as someone with a history of involvement in policymaking in Massachusetts (education policy advisor to Governor Dukakis, 1986-90; chair of the state's accountability council, 2004-06), but as someone with a national perspective as well. From 1997-2002, I served as the founding president of Achieve. In that role I had an opportunity to look at Massachusetts through a comparative lens. At Achieve, our core work was, at the invitation of states, to analyze the quality and rigor of their standards and assessments and the alignment between the two. Of the 14 states that requested such a review from Achieve during my tenure, Massachusetts was the clear winner. Given this strong foundation, along with the state's deep and sustained commitment to accompany its increasing performance demands on the system with a substantial infusion of new funds targeted at its highest need districts, it is no wonder that in the last few years Massachusetts has out-performed all other states on NAEP and nearly all other countries on TIMSS.

I was honored to be asked by Secretary Reville and Commissioner Chester to serve on the Advisory Committee for this application. In this role I had two opportunities, both early and late in the process, to review and comment substantively on the

submission. My suggestions, all relatively minor, are reflected in the final application, so I feel that my views were heard.

I would simply make four observations about this application. First, Massachusetts begins from a strong base. This is a state that set an extremely ambitious, comprehensive reform agenda for itself in 1993, funded it adequately, and has generally stayed on course with strong bi-partisan support for 17 years. As I suggested above, its standards/assessment/accountability framework is robust, and in Paul Reville and Mitchell Chester it has one of the strongest top leadership teams in the country.

Second, despite these very real accomplishments, performance is highly uneven across the state, and this application directly addresses two major lingering problems. During my term chairing the state accountability council, I was struck by the significant number of smaller districts, mostly in working class communities, that simply lacked capacity. They were unable to align their schools' curriculum to standards, to develop formative assessments, or to help their teachers analyze and use assessment results for instructional improvement. The investment the state is now proposing to make in curriculum and other instructional materials, diagnostic assessments, and aligned professional development is sorely needed and will significantly reduce the "Opportunity to Learn" gap that remain in too many small, beleaguered Massachusetts districts.

Third, significant racial and ethnic achievement gaps persist. Here I think Massachusetts should be applauded for reflecting on what has not worked and proposing something new. Like many states, Massachusetts has tended, with limited success, to go around the district and intervene directly in consistently failing schools. The strategy the state proposes now is more systemic. It will simultaneously build district capacity,

develop specially trained educators for its lowest performing schools, and provide targeted social services and other supports to students and their families. It will also draw from the Commonwealth's rich talent pool of individuals and organizations to develop a cadre of turnaround partners for schools that are unlikely to make progress on their own.

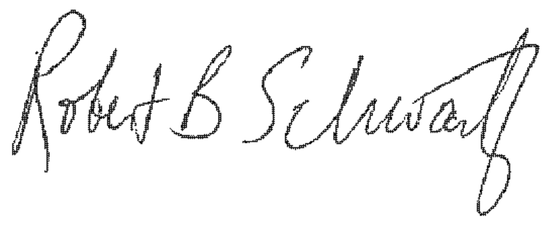
Finally, I like the nuanced way in which the state is addressing the challenge of improving teacher effectiveness. While not backing off from the need to incorporate measures of student growth into the teacher evaluation system, this commitment is embedded in a broader strategy, in which increased accountability for results is accompanied by increased investment in teacher support. In the early years of reform in Massachusetts, some state leaders, especially the former state board chair, indulged in needless teacher-bashing, creating a rift between policymakers and practitioners that was slow to heal. The current state leadership is much more sensitive to the need to engage teachers and principals as partners in reform. This does not mean that the administration has backed away from confronting entrenched union leadership when the union has opposed key reform initiatives, as evidenced by its successful attempt to loosen the cap on charters and strengthen the hand of superintendents to intervene in persistently low-performing schools. But the commitment to provide tools and training, open career pathways for outstanding teachers, and invest in professional development and support signals a recognition of the importance of teacher buy-in that enhances the likelihood of successful implementation of this ambitious plan.

I realize that you and your reviewers will be confronted with many excellent applications that promise bold innovations. At the end of the day, however, the most important question is, "Who has the capacity to deliver on their promises?" In my view

the best predictors of the answer to this question are past performance and current leadership. On these dimensions, I doubt there is a better bet than Massachusetts.

Very best regards, and congratulations on a terrific design for this competition.

Sincerely,



Robert B. Schwartz
Academic Dean
Professor of Practice

Appendix A12: Historic Data on Massachusetts
Student performance, high school graduation, college enrollment, and college course completion, plus exclusion rates and NAEP accommodations policy

NAEP

Grade 4 Mathematics				
Subgroup	**2003**	**2005**	**2007**	**2009**
All students	242	247	252	252
Male	244	248	254	253
Female	239	247	251	251
Asian/Pacific Island	248	258	259	264
Black	222	228	232	236
Hispanic	222	225	231	232
White	247	252	257	258
ELL	217	226	230	221
Free & reduced lunch eligible	226	231	237	237
Students with disabilities	224	230	238	237

Grade 4 Reading			
Subgroup	**2003**	**2005**	**2007**
All students	228	231	236
Male	225	230	233
Female	231	233	238
Asian/Pacific Island	229	234	241
Black	207	211	211
Hispanic	202	203	209
White	234	237	241
ELL	193	198	205
Free & reduced lunch eligible	210	211	214
Students with disabilities	200	208	213

Grade 8 Mathematics				
Subgroup	**2003**	**2005**	**2007**	**2009**
All students	287	292	298	299
Male	289	291	300	300
Female	284	292	296	298
Asian/Pacific Island	304	314	315	314
Black	260	263	264	272
Hispanic	255	265	270	271
White	292	297	305	305
ELL	242	242	251	238
Free & reduced lunch eligible	261	273	275	278
Students with disabilities	254	264	271	271

Grade 8 Reading			
Subgroup	**2003**	**2005**	**2007**
All students	273	274	273
Male	268	269	269
Female	278	278	278
Asian/Pacific Island	281	282	281
Black	252	253	253
Hispanic	246	246	251
White	278	279	278
ELL	222	222	232
Free & reduced lunch eligible	251	256	256
Students with disabilities	239	246	246

MCAS English Language Arts, All grades (3-8, 10)

	2003				2004				2005				2006				2007				2008				2009			
	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F
All Students	9%	52%	30%	8%	10%	54%	29%	7%	11%	51%	31%	7%	13%	51%	29%	7%	13%	54%	26%	7%	14%	52%	27%	7%	16%	52%	25%	6%
African-American	2%	34%	47%	17%	2%	38%	44%	16%	3%	35%	47%	15%	4%	38%	43%	15%	4%	41%	41%	14%	4%	41%	40%	15%	6%	43%	38%	13%
Asian	13%	50%	29%	8%	14%	51%	28%	8%	15%	49%	29%	7%	19%	49%	26%	6%	21%	51%	23%	5%	23%	49%	23%	6%	26%	49%	21%	5%
Hispanic	2%	29%	46%	23%	2%	31%	45%	22%	2%	29%	48%	21%	3%	32%	44%	21%	3%	36%	42%	19%	4%	36%	42%	19%	5%	39%	40%	17%
Native American	5%	45%	39%	11%	5%	48%	37%	9%	5%	47%	41%	7%	7%	48%	36%	9%	7%	50%	35%	9%	8%	46%	38%	8%	9%	49%	33%	9%
White	11%	58%	26%	5%	11%	59%	25%	4%	12%	57%	27%	4%	15%	56%	25%	4%	15%	59%	22%	4%	17%	56%	23%	4%	19%	56%	21%	4%
LEP/FLEP	2%	23%	44%	32%	2%	26%	45%	27%	2%	24%	47%	27%	3%	24%	44%	29%	2%	27%	44%	27%	3%	26%	44%	28%	3%	29%	43%	24%
Low Income	2%	34%	46%	18%	2%	37%	45%	17%	3%	35%	47%	16%	4%	37%	43%	16%	4%	40%	41%	15%	4%	39%	41%	16%	5%	42%	39%	14%
Special Education	1%	28%	47%	24%	1%	29%	47%	23%	1%	29%	48%	22%	2%	31%	46%	22%	1%	32%	45%	22%	2%	32%	44%	23%	2%	34%	43%	21%

MCAS Mathematics, All grades (3-8, 10)

	2003				2004				2005				2006				2007				2008				2009			
	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F	Adv.	Prof	N.I.	W/F
All Students	16%	27%	34%	23%	18%	28%	34%	20%	20%	28%	33%	20%	17%	31%	32%	20%	21%	33%	29%	17%	24%	33%	28%	16%	23%	34%	28%	15%
African-American	4%	14%	36%	47%	5%	16%	39%	41%	5%	17%	38%	41%	5%	19%	37%	40%	7%	23%	36%	34%	8%	24%	36%	32%	8%	25%	37%	30%
Asian	30%	27%	26%	16%	33%	28%	27%	13%	34%	28%	25%	12%	31%	33%	25%	12%	38%	32%	21%	9%	42%	31%	19%	8%	42%	32%	19%	8%
Hispanic	3%	13%	34%	50%	4%	14%	36%	45%	5%	16%	36%	44%	4%	17%	34%	44%	7%	22%	35%	37%	8%	23%	34%	35%	8%	24%	35%	32%
Native American	8%	24%	36%	32%	10%	24%	40%	27%	11%	25%	37%	27%	9%	29%	37%	25%	12%	29%	35%	24%	15%	29%	33%	23%	13%	30%	34%	22%
White	18%	31%	34%	17%	21%	31%	34%	14%	23%	31%	32%	14%	19%	35%	32%	14%	25%	36%	28%	12%	27%	35%	26%	11%	27%	37%	27%	10%
LEP/FLEP	6%	13%	30%	51%	7%	14%	33%	46%	6%	14%	34%	46%	6%	18%	32%	44%	8%	21%	32%	40%	9%	22%	32%	38%	9%	23%	33%	36%
Low Income	5%	16%	36%	43%	5%	17%	39%	39%	6%	18%	38%	38%	6%	20%	36%	38%	8%	24%	36%	32%	10%	25%	35%	31%	9%	26%	36%	28%
Special Education	2%	14%	31%	53%	2%	15%	35%	48%	3%	16%	34%	47%	3%	19%	32%	46%	4%	21%	33%	42%	4%	22%	32%	41%	4%	23%	34%	39%

Notes: "Adv." = Advanced, "Prof." = Proficient, "N.I." = Needs Improvement, "W/F" = Warning/Failing

MCAS Mathematics Composite Performance Index, All grades (3-8, 10)

	2003	2004	2005	2006	2007	2008	2009
All Students	69.4	71.4	72.4	72.5	76.2	77.7	78.5
African-American	49.2	52.8	53.4	54.9	59.5	61.2	62.6
Asian	77.5	80.3	81.0	81.9	85.6	86.8	87.3
Hispanic	47.0	49.9	51.2	52.4	57.7	60.1	61.4
Native American	61.9	63.6	65.5	67.3	68.1	69.8	70.1
White	74.5	76.3	77.3	77.3	80.9	82.2	83.0
LEP/FLEP	47.8	50.9	50.7	52.7	56.3	58.1	59.2
Low Income	51.6	54.3	55.6	56.4	61.0	63.1	64.5
Special Education	45.7	48.2	49.6	51.2	54.0	55.3	56.9

MCAS English Language Arts Composite Performance Index, All grades (3-8, 10)

	2003	2004	2005	2006	2007	2008	2009
All Students	83.2	84.2	83.7	84.4	85.8	85.2	86.5
African-American	69.5	71.9	71.1	72.5	74.6	74.1	76.2
Asian	83.3	84.4	84.8	86.2	88.0	88.0	89.3
Hispanic	64.4	66.5	66.1	67.3	70.2	70.1	72.6
Native American	78.1	80.3	80.3	80.8	81.1	79.8	81.7
White	87.6	88.2	87.9	88.5	89.7	89.1	90.2
LEP/FLEP	58.3	62.4	60.9	60.7	62.7	62.1	64.8
Low Income	69.2	71.1	70.6	71.6	73.7	73.2	75.5
Special Education	63.4	64.9	65.0	65.7	66.7	65.9	67.9

Notes: The Composite Performance Index (CPI) is a 100-point index that combines the scores of students; scores correspond to one of six performance rating categories: Very High (90 - 100); High (80 - 89.9); Moderate (70 - 79.9); Low (60 - 69.9); Very Low (40 - 59.9); and Critically Low (0 - 39.9).

Achivement gaps

Grade 4 Mathematics	2003	2005	2007	2009
Gender	4.6	1.6	2.8	2.4
Black/White	25.6	24.4	25.2	21.5
Hispanic/White	25.4	26.8	26.0	25.7
ELL/Non-ELL	25.9	23.0	23.9	33.1
Free & reduced lunch eligible/not	22.5	22.6	21.9	23.0
Students with disabilities/without	21.3	20.6	17.0	18.0

Grade 4 Reading	2003	2005	2007
Gender	5.4	2.8	4.9
Black/White	27.0	26.1	30.7
Hispanic/White	32.1	34.5	32.0
ELL/Non-ELL	36.2	34.9	31.9
Free & reduced lunch eligible/not	26.5	28.4	29.1
Students with disabilities/without	32.6	27.1	26.8

Grade 8 Mathematics	2003	2005	2007	2009
Gender	5.6	(1.5)	4.4	2.4
Black/White	32.8	34.4	40.1	33.1
Hispanic/White	37.2	32.3	34.7	33.9
ELL/Non-ELL	45.1	50.7	48.2	62.8
Free & reduced lunch eligible/not	33.7	26.0	31.4	29.3
Students with disabilities/without	38.1	31.7	29.9	33.0

Grade 8 Reading	2003	2005	2007
Gender	10.3	9.7	9.7
Black/White	26.1	25.9	24.9
Hispanic/White	31.6	32.5	27.4
ELL/Non-ELL	52.1	52.5	42.0
Free & reduced lunch eligible/not	29.4	24.1	23.5
Students with disabilities/without	39.4	31.7	31.8

MCAS Mathematics Composite Performance Index, All grades (3-8, 10)	2003	2004	2005	2006	2007	2008	2009
Black/White	25.3	23.5	23.9	22.4	21.4	21.0	20.4
Hispanic/White	27.4	26.5	26.1	24.9	23.2	22.1	21.6
Native American/White	12.6	12.7	11.8	10.1	12.8	12.4	12.9
LEP/Non-LEP	23.0	22.2	23.2	21.3	21.4	21.1	20.8
Low Income/Non-Low Income	24.4	23.6	23.4	22.8	21.7	20.9	20.5
SPED/Non-SPED	28.4	27.8	27.4	25.8	27.0	27.3	26.4

MCAS ELA Composite Performance Index, All grades (3-8, 10)	2003	2004	2005	2006	2007	2008	2009
Black/White	18	16	17	16	15	15	14
Hispanic/White	23	22	22	21	20	19	18
Native American/White	10	8	8	8	9	9	9
LEP/Non-LEP	27	24	25	25	25	25	23
Low Income/Non-Low Income	19	18	18	18	17	17	16
SPED/Non-SPED	24	23	23	23	23	24	23

4-year high school graduation rate	2006	2007	2008
All Students	79.9%	80.9%	81.2%
Asian	83.9%	83.7%	86.7%
Black	64.4%	65.2%	68.4%
Hispanic	56.9%	58.5%	58.3%
Native American	69.8%	68.4%	66.7%
Pacific Islander	50.5%	63.6%	70.3%
White	85.1%	86.4%	86.6%
Limited English Proficiency	54.5%	53.3%	55.8%
Low-Income	62.3%	65.2%	64.8%
Special Education	61.1%	62.8%	64.1%

Note: Only have data going back to 2006 (2003-2005 is not available)

College enrollment	HS Class of 2003	HS Class of 2004	HS Class of 2005	HS Class of 2006	HS Class of 2007	HS Class of 2008
All students	67.5%	67.9%	70.1%	71.7%	73.0%	71.1%
Asian	67.3%	68.9%	70.6%	74.4%	77.4%	76.4%
Black	57.4%	58.5%	61.8%	63.9%	66.3%	63.5%
Hispanic	47.1%	48.3%	50.9%	54.0%	55.6%	53.8%
Native American	55.5%	47.3%	62.4%	51.0%	57.4%	58.4%
White	70.2%	70.6%	72.7%	74.4%	75.6%	73.9%
Limited English Proficient in High School	45.6%	41.9%	40.8%	39.6%	45.8%	46.5%
Low Income in High School	49.7%	52.0%	54.9%	55.9%	58.1%	55.7%
Special Education in High School	45.7%	47.3%	48.8%	49.7%	51.9%	48.9%

College credit earning	HS grad year 2004	HS grad year 2005	HS grad year 2006	HS grad year 2007
All students	51.6%	50.4%	51.7%	51.1%
Male	47.7%	46.3%	48.4%	46.8%
Female	55.0%	53.8%	54.6%	54.8%
Racial/Ethnic Minority	33.6%	33.0%	35.1%	34.1%
Free/reduced eligible	35.4%	33.6%	36.5%	36.5%
LEP (ever)	37.5%	38.4%	35.2%	36.1%
SPED (in H.S.)	35.3%	36.7%	36.0%	36.4%

Note: Only have data going back to 2004 (2003 is not available); Data from Massachusetts Department of Higher Education and subgroup data is limited. As data systems are improved, we plan to revise goals. Two specific notes on the data: (1) Cohort is limited to students graduating from high school and enrolling in a state or community college in the same year and who enrolled as first-time, degree-seeking students (which represents 14,247 students in the 2008 cohort). (2) A typical full-time student enrolls in 15 credits per semester, so the equivalent of an academic year of credits is 30 credits. The credits used for this analysis exclude developmental/remedial credits which are earned in pre-college level courses and do not count towards degree or certificate completion.

NAEP Exclusion Rates for Students With Disablities (SD) and English Language Learners (ELL)
Percent of Sampled Students with Disabilities or ELL Excluded From Assessment

Mathematics	2003	2005	2007	2009
Grade 4 SD	2%	3%	5%	5%
Grade 4 ELL	1%	1%	1%	1%
Grade 8 SD	2%	6%	9%	5%
Grade 8 ELL	1%	1%	1%	1%

Reading	2003	2005	2007	2009
Grade 4 SD	3%	7%	5%	Not Released
Grade 4 ELL	2%	2%	2%	Not Released
Grade 8 SD	3%	6%	6%	Not Released
Grade 8 ELL	2%	1%	2%	Not Released

Science	2003	2005	2007	2009
Grade 4 SD	N/A	3%	N/A	Not Released
Grade 4 ELL	N/A	1%	N/A	Not Released
Grade 8 SD	N/A	3%	N/A	Not Released
Grade 8 ELL	N/A	1%	N/A	Not Released

Massachusetts NAEP accommodations policy

Note: For every student with a disability or English language learner chosen to participate in NAEP, the accommodations policy below determines if the student can take the test with accommodations. If an accommodation in the student's IEP is not allowed on NAEP, the child is excused from taking the test. We follow the same policies for NAEP accommodations as we do for accommodations on our ESEA tests (MCAS).

How will a student selected for 2009 NAEP participate in testing?
As part of the NAEP pre-assessment process, schools will work with their assigned NAEP field team representative to determine how each student selected for 2009 NAEP will participate in testing. Schools will make these decisions based on the NAEP subject (reading, mathematics, or writing) each student has been selected for and a review of how each student participates in MCAS.

1. In the NAEP subject, the student takes the standard MCAS test without accommodations.
The student will participate in NAEP without accommodations.

2. In the NAEP subject, the student takes the standard MCAS test with accommodations.
If NAEP provides the same accommodations that the student receives during MCAS testing, then the student will participate in NAEP with those accommodations.

If NAEP does NOT provide the same accommodations that the student receives during MCAS testing, the school must then determine whether the student can still meaningfully participate in NAEP without his/her required accommodations. Schools should consider whether other accommodations could reasonably be substituted. If not, the school will exclude the student from NAEP.

3. In the NAEP subject, the student participates in the MCAS alternate assessment.
NAEP does not offer an alternate assessment. Therefore, schools must determine whether a student who participates in the MCAS alternate assessment can meaningfully participate in the standard NAEP test with accommodations. If not, the school will exclude the student from NAEP.

Schools will complete the Students with Disabilities (SD) Questionnaire for each student that has an IEP or 504 plan. The questionnaire includes a SD Decision Tree to assist schools in determining how students will participate in NAEP.

On the following pages you will find tables that include descriptions of the accommodations most frequently provided by NAEP. Information on the accommodations, how to administer them, and whether the accommodation is allowable in Massachusetts is provided.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
1. Frequent Breaks	Breaks during test (Admin. Code: 80-BRK)	This accommodation requires that the student be allowed to take breaks as requested or at predetermined intervals during the assessment. This also could mean that the student is allowed to take the assessment in more than one sitting during a single day.	• This accommodation requires a separate accommodation session. • There are no specific NAEP requirements regarding the length of time for a break, how often the breaks are taken, or whether the student has contact with other students during the breaks.
2. Time of Day	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
3. Small Group	Small group (Admin. Code: 76-SMG)	A small group session includes no more than five students. A student can be assigned to a small group session because he/she requires one, or because one or more of the accommodations he/she typically requires must be administered in a separate session to minimize distractions to other students in the regular session.	• This is by definition a separate session. • While MCAS allows for up to 10 students in a small group setting, NAEP only allows for up to 5 students.
4. Separate setting	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
5. Individual	One-on-one (Admin. Code: 77-ONE)	This accommodation requires that a student is assessed individually in an area free of distractions.	• This is a session with one student and one AA or school staff member administering the session. • If a student regularly works with a facilitator provided by the school, that person should be available for the assessment.
6. Specified Area	Preferential seating, light, furniture (Admin. Code: 79-OTH)	This accommodation requires that a student sit in a designated area for the assessment; such as away from other students to limit distractions; a location where there is access to special equipment; or close to the front of the room so that a student can see or hear more easily. It may also include special light and furniture used by the school.	• This accommodation can be provided in the regular session.
	Study carrel (Admin. Code: 79-OTH)	This is a portable screen provided by the school used to limit distractions for a student.	• This accommodation can be provided in the regular session, although occasionally the location of the study carrel is in a separate location.
7. Familiar Test Administrator	School staff administers (Admin. Code: 82-SSA)	This accommodation requires that a school staff member familiar to the student administer the session. This accommodation requires a separate accommodation session.	• If a school staff member administers or assists in the session, he/she must read and sign the Accommodation Teacher Letter before the session begins.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
8. Noise buffers	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
9. Magnification or Overlays	Magnification equipment (Admin. Code: 81-MAG)	This is a lens or system provided by the school that enhances visual function. Magnification devices include eyeglass-mounted magnifiers, free-standing or hand-held magnifiers, enlarged computer monitors, or computers with screen enlargement programs.	• This accommodation can be provided in the regular classroom.
	Uses a template to respond (Admin. Code: 79-OTH)	This is an overlay (usually colored) provided by the school that is used to focus a student's attention on one part of a page by obscuring other parts of the page.	• This accommodation can be provided in the regular session.
10. Test Directions	*Note: Reading the script, instructions or directions aloud, when requested, so students understand where and how to record their answers is NOT considered an accommodation on NAEP. These instructions can be repeated or reworded in any way so students understand what to do.*		
	Directions only signed (Admin. Code: 79-OTH)	This accommodation requires that a qualified sign language interpreter at the school sign the instructions included in the session script. The interpreter may not sign any additional directions in the assessment booklet.	• This accommodation can be provided in the regular session or in the back of the room (wherever it is typically administered). • The interpreter will sit near the students so they are able to see the directions being signed.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
11. Large-Print	Large print version of test (Admin. Code: 73-LG)	NAEP provides large-print booklets to students who are visually impaired. These are assessment booklets that have been enlarged to 129 percent.	• This accommodation can be provided in the regular session.
12. Braille	Braille version of test (Admin. Code: 79-OTH)	NAEP provides a Braille version of the assessment booklet for visually impaired students. If a scribe is used in reading and mathematics, have the student work with the person with whom he/she typically works.	• This accommodation requires a separate accommodation session. • Students may require a Braille typewriter or a scribe to respond to the questions. A scribe is not allowed for the writing assessment.
13. Place Marker	Uses a template to respond (Admin. Code: 79-OTH)	This is a cutout or object (ruler or post-it notes) provided by the school that is used to focus a student's attention on one part of a page by obscuring other parts of the page.	• On MCAS, a straightedge or other device is used to move students to the next question or place their answers in the correct bubble.
14. Track Test Items	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• On MCAS, this is a test administrator who helps a student track from one item to the next or helps keep a student's attention on the test.
15. Amplification	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• This type of accommodation is allowed by NAEP as along as the school can provide the required equipment and/or personnel.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
16. Test Administrator Reads Test Aloud (except ELA Language & Literature Test or Reading Test)	Read aloud – occasional (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading test***	For this accommodation, students may request to have words, phrases, or sentences read aloud to them.	• The NAEP AA should quietly instruct the student before the start of the session to raise his/her hand if he/she needs to have a word, phrase, or sentence read aloud.
	Read aloud – most or all (Admin. Code: 75-REA) ***Note: Not allowed on the NAEP Reading test***	For this accommodation, students may request to have most or the entire assessment booklet read to them.	• This accommodation requires a separate accommodation session. • When more than one student requires this accommodation, the students can be grouped together (i.e., small group of up to 5 students) based on the subject they are originally assigned (writing or mathematics).

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
17. Test Administrator Signs Test (except ELA Language & Literature Test or Reading Test)	Test items signed (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading test***	This accommodation requires that a qualified sign language interpreter at the school sign some or all of the test questions and answer choices for the student.	• This accommodation requires a separate accommodation session. • The NAEP AA should instruct the student before the start of the session to raise his/her hand if he/she needs to have a word, phrase, or sentence signed.
	Responds in sign language (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Writing test***	This accommodation requires that students sign their responses to a qualified sign language interpreter provided by the school.	• This accommodation requires a separate accommodation session. • When more than one student requires this accommodation, the students can be grouped together (i.e., small group of up to five students) based on the subject they are originally assigned (reading or mathematics).
18. Electronic Text Reader (except ELA Language & Literature Test or Reading Test)	Other (Admin. Code: 79-OTH) ***Note: Not allowed on the NAEP Reading and Writing tests***	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form. • See www.kurzweiledu.com to note all of the Kurzweil 3000 features that are not permitted on NAEP, such as read aloud, writing tools, dictionary, and thesaurus.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
19. Scribe Test (except ELA Composition)	Responds orally to scribe (Admin. Code: 78-SCR) ***Note: Not allowed on the NAEP Writing test***	This accommodation requires that the student respond orally to a scribe provided by the school or respond by pointing to his/her answers. The scribe then records the student's responses in the assessment booklet.	• This accommodation requires a separate accommodation session. • The AA will administer the session by reading the grade-appropriate accommodation session script. • The scribe should show the student the written response after the student completes it, but NOT read the response to the student. The student will get one chance to make revisions, and then will need to move on to the next question. • If possible, have the student work with the scribe with whom he/she typically works.
20. Organizer, Checklist, Reference Sheet, or Abacus	***Note: Not allowed on NAEP***	NAEP does provide students with a Writing Brochure (grades 8 and 12), which is a comprehensive handout that contains ideas for planning and reviewing one's writing.	N/A
21. Student Reads Test Aloud	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• The school is responsible for providing the equipment (e.g., tape recorder) necessary for this accommodation. • Answers must be recorded in booklet.
22. Monitor Placement of Responses	Other (Admin. Code: 79-OTH)	This category includes accommodations regularly used by one or more students for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
23. Word Processor	Responds using computer or typewriter (Admin. Code: 78-SCR)	This accommodation requires that the student record his/her answers using a computer or typewriter provided by the school.	• This accommodation can be provided in the regular classroom if the computer or typewriter is quiet enough. • The AA will write the booklet ID number on all pages created by the computer and insert these pages into the student's booklet. • The AA is responsible for checking the computer prior to the start of the assessment and for monitoring the student during the assessment to be sure that the spelling/grammar check function and Internet access is disabled.
24. Answers Recorded in Test Booklet or using something other than the answer sheet (sheet of paper, Braille typewriter)	Responds using a Braille typewriter (Admin. Code: 79-OTH)	This accommodation requires that a visually impaired student record his/her answers using a Braille typewriter, a slate and stylus, or an electronic Brailler note taker provided by the school.	• This accommodation can be provided in the regular session, unless the Braille typewriters are very loud, which may require a separate session. • The AA will write the booklet ID number on all pages created by the Braille typewriter and insert these pages into the student's booklet.

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
25. Other Standard Accommodations	Bilingual dictionary without definitions (Admin. Code: 72-BID) ***Note: Not allowed on the NAEP Reading test***	This is a non-electronic bilingual dictionary provided by the school in any language that contains English translation of words but does not contain definitions.	• This accommodation is usually provided in the regular session, although students who need this accommodation will need to have extended time to look up words in the dictionary. • The Assessment Administrator (AA) is responsible for checking the dictionary prior to the start of the assessment to be sure it does not contain definitions.
	Other (Admin. Code: 79-OTH)	This category includes accommodations provided by the school that are not listed in the NAEP accommodations and are regularly used by one or more students sampled for the assessment.	• Communicate the type of accommodation required to the Assessment Administrator (AA) on the Assessment Information Form.
NON STANDARD ACCOMMODATIONS			
26. Test Administrator Reads Aloud ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		

MCAS Accommodation	Comparable NAEP Accommodation	Comments	How to Administer
27. Test Administrator Signs ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		
28. Electronic Text Reader for the ELA Language & Literature Test or Reading Test	***Note: This accommodation is not allowed on the NAEP Reading test.***		
29. Scribe ELA Composition	***Note: This accommodation is not allowed on the NAEP Writing test.***		
30. Calculation Devices	***Note: Calculators are not permitted on noncalculator sections of the NAEP mathematics test.***		
31. Spell- or Grammar-Checking Function on Word Processor or Word Prediction Software for ELA Composition	***Note: This accommodation is not allowed on the NAEP Writing test.***		
32. Other Nonstandard Accommodation			

ACCOMMODATIONS PROVIDED BY NAEP THAT ARE NOT ALLOWABLE IN MASSACHUSETTS

- Bilingual Mathematics and Science booklets: MCAS only provides a bilingual test booklet for Grade 10 Math.
- Directions read aloud in native language: In Massachusetts, this accommodation requires the student to use the bilingual English/Spanish mathematics booklet.
- Test items read aloud in native language: In Massachusetts, this accommodation requires the student to use the bilingual English/Spanish mathematics booklet.

Table of Contents for Appendices for Section (B)

Attachment Title	Relevant Selection Criterion	Page #
B1: Common Core State Standards MOA	(B)(1)(i)	B-1
B2: The List of Common Core Participants	(B)(1)(i)	B-5
B3: Common Core State Standards in ELA and Mathematics	(B)(1)(i)	B-6
B4: Evidence of International Benchmarking of Standards	(B)(1)(i)	B-186
B5: Massachusetts Scholars and Educators Represented on Common Core Teams	(B)(1)(i)	B-197
B6: Sample of Massachusetts' Comments on the Common Core Standards Drafts	(B)(1)(i)	B-198
B7: Legal Regulations for Adoption of State Standards in Massachusetts	(B)(1)(ii)	B-206
B8: Memo on the Timeline for Adoption of the Common Core Standards from the Commissioner to the Board of Education	(B)(1)(ii)	B-214
B9: List of Members of Massachusetts Common Core Adoption Working Groups	(B)(1)(ii)	B-216
B10: MOU for Balanced Assessment Consortium	(B)(2)(i)	B-217
B11: List of States Participating in the Balanced Assessment Consortium	(B)(2)(ii)	B-224
B12: MOU and List of Participating States for Achieve Common Assessment Consortium	(B)(2)(i) and (B)(2)(ii)	B-225
B13: Guiding Principles of the Achieve Common Assessment Consortium	(B)(2)(i)	B-226
B14: List of Accolades for Massachusetts State Standards	(B)(3)	B-227
B15: Projections for Massachusetts High School to College Pipeline	(B)(3)	B-228

Appendix B1: Common Core State Standards MOA

Draft/For Discussion Only/April 28, 2009

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:	

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News Release

09/01/2009

Fifty-One States And Territories Join Common Core State 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; Missouri; Montana; Nebraska; Nevada; New Hampshire; New Jersey; New Mexico; New York; North Carolina; North Dakota; Ohio; Oklahoma; Oregon; Pennsylvania; Puerto Rico; Rhode Island; South Carolina; South Dakota; Tennessee; Utah; Vermont; Virgin Islands; Virginia; Washington; West Virginia; Wisconsin; Wyoming.**

English Language Arts

K–12

Introduction

The *Standards for English Language Arts K–12* are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of English language arts (ELA) standards. Its companion document, *Standards for Literacy in History and Science 6–12*, extends the same principle to communication skills in other content areas. 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. The *Standards* also draw upon 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 to be 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, and speaking and listening as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, served as a touchstone for the present work. While the format, structure, content, and purpose of that earlier document differ in some ways from this document, the basic aims and concepts are clearly connected. The main difference is that while the earlier CCR document defined a goal toward which education efforts should aim—college and career readiness for all students—the current document describes the progressive development of skills and understandings across the grades necessary for all students to reach that goal. Just as feedback on the September 2009 CCR draft has greatly influenced the design and development of the K–12 standards, so too will the response to the K–12 standards help guide subsequent revisions to the CCR standards. In their final forms, both documents—CCR and K–12—will be tightly aligned and mutually supporting.

While the *Standards* treat college and career readiness for all students as the end point—an ambitious goal in its own right—many students will reach this point before the end of high school. For them, advanced work in literature, composition, language, history, science, and so on should be available. It is beyond the scope of the *Standards* to describe what such advanced work should consist of, but it needs to 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 must demonstrate have broad applicability outside of the classroom or workplace. The *Standards* insist upon the sort of close, attentive reading that is at the heart of understanding and appreciating the aesthetics of literature. They require the sort of critical reading that is necessary to sift carefully through the staggering amount of information available today in print and online. They demand the sort of wide, deep, and thoughtful engagement with high-quality literary and informational text that builds knowledge, enlarges experience, and broadens world views. They mandate the sort of cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, they promote the development of skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.

Key design considerations

A blend of cross-cutting and specific standards

The Reading, Writing, and Speaking and Listening strands include two levels of standards. The cross-cutting Core Standards are the same across the two *Standards* documents, their commonality emphasizing the broad responsibility within the school for meeting the standards and also facilitating schoolwide professional development. Then there are specific Standards that are unique to a given content area, which respects the particular demands of reading, writing, speaking, and listening in ELA and in other disciplines.

A focus on results rather than means

The *Standards* define what all students must learn, not everything that teachers are allowed to teach. 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. The *Standards* require, for example, that all students be able to produce writing in a variety of situations, including those that allow time for revision. The *Standards* do not, however, specify a particular writing process that students must use (although certain elements common to process-writing approaches, particularly revision, are embedded in the requirements). Teachers are thus freed—and obligated—to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for those assignments that allow for multiple drafts. Similarly, the *Standards*, with their emphasis on observable outcomes, do not enumerate various metacognitive strategies that students may need to use to monitor and direct their thinking and learning.

Shared responsibility for literacy

The *Standards for English Language Arts K–12* and the *Standards for Literacy in History and Science 6–12* together establish the requirement that instruction in reading, writing, speaking, listening, and language use be a shared responsibility. The *Standards* present reading instruction in K–5 as fully integrative, including a rich blend of narratives, drama, poetry, and informational text. ELA-specific instruction in grades 6 and above includes fiction, poetry, and drama but also a particular form of informational text: literary exposition and argument (e.g., speeches, essays, and historical documents with significant cultural importance and literary merit). Teachers in other content areas must use their unique disciplinary expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language use in their respective field. Progress toward college and career readiness and building a rich knowledge base require that at least half of the reading students do must focus on history, science and related disciplines. This distributed approach honors the unique place of English language arts instruction in literacy development while ensuring that students have communication skills tailored to the demands of other disciplines. It also reflects the reality that students must communicate effectively in a wide range of disciplines, not just ELA.

Grade bands to describe growth, grades to focus instruction

Evidence consulted in creating the *Standards* suggests that beyond the earliest grades, major developments in students' literacy skills typically occur across spans of grades rather than within individual grades. This document stays true to that evidence by organizing standards after grade 3 into multiyear bands (grades 4–5, 6–8, 9–10, and 11–CCR). At the same time, the work of educating students does proceed on a day-to-day, year-to-year basis. Any standards document must therefore provide guidance to educators on what each year's instruction and assessment should look like. To make the grade specific focuses for instruction clear, after the descriptions of the standards in each area of ELA, we provide a one page summary of the grade specific focuses for each grade from fourth grade onwards, including how the grade specific focus in each area relates to the grade band requirements. The Standards offer that focus through several grade-specific elements:

- Single-grade standards in many areas of kindergarten and grades 1, 2, and 3
- Text complexity expectations in Reading, beginning at grade 2
- Areas of focus in Writing, beginning at grade 4

- Areas of focus in the Conventions section of Language Development, beginning at grade 4

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Research and media skills integrated into the standards as a whole

To be ready to meet the challenges of the twenty-first century, students need a mix of the communication skills that have served literate people for millennia and new competencies necessary in an information- and media-saturated world. 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. Just as the need to research and to consume and produce media are embedded into every element of today's curriculum, so too are the associated skills and understandings embedded throughout the *Standards* rather than treated separately. Web links to sample media texts are included selectively among the reading text exemplars in Appendix B to reinforce the point that print and online materials can be used together instructionally to enhance students' understanding.

An integrated model of English language arts

Although the *Standards* divide the English language arts into Reading, Writing, Speaking and Listening, and Language Development strands for conceptual purposes, the processes of communication are in theory and practice an undivided whole. As illustrated in the graphic that introduces each grade or grade band and as embodied in the content of the standards themselves, reading, writing, speaking, listening, and language development are tightly interrelated and often reciprocal.

Central features of the document

Reading and Literature: Text complexity and the growth of comprehension

As students advance through the grades, they must be able to handle independently texts of steadily increasing complexity and be able to gain more from what they read. Beginning formally at grade 2, the *Standards* specify what proportion of texts students read should be within grade band and, at some grades, above grade band. (Additional material in Appendix A of the *Standards* defines and explains text complexity in more detail.) Whatever texts they are reading, students must also show a steadily increasing ability to discern more from and make fuller use of text. This means, for example, finding and 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. The *Standards* place growing demands on students' comprehension at each higher grade or grade band to ensure that all students are college- and career-ready readers no later than the end of high school.

Writing and Research: Text types, grade-level focuses, and research

While some writing skills, such as the ability to reflect audience, purpose, and task in what one writes, are important for many types of writing, others are more properly part of writing in specific text types: narrative, informative and explanatory text, and argument. Beginning at grade 4, the *Standards* specify the sorts of writing over extended and shorter timeframes that students in each grade must be able to produce in response to sources. Although conducting research calls upon reading, speaking, listening, and language skills, writing is typically central to analyzing information and presenting findings. The *Standards* pair writing and research to signal that close connection.

Speaking and Listening: Flexible communication

Including but not limited to skills necessary for formal presentations, the Speaking and Listening strand requires students to develop a range of broadly useful oral communication and interpersonal skills: listening attentively, participating productively, exchanging information, and speaking effectively. 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 Development: Conventions and vocabulary

The Conventions standards in the Language Development 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. Thus, standards pertaining to grammar and usage, mechanics, and the fundamentals of language and writing are accompanied by standards on word choice and style. The Vocabulary standards focus both on understanding words and their nuances and on acquiring new words through conversation and reading and by being taught them directly. Rather than require that students use one particular skill or another to determine a word's meaning, the Vocabulary standards insist only that students get the proper meaning, with the means (context, word analysis, and so on) to be chosen flexibly based on the situation.

Appendices

The *Standards* include a range of supporting materials that help explain and enrich the main document:

- Appendix A contains a model of text complexity, including both qualitative and quantitative measures of how easy or hard a text is to read, as well as supplementary statements about instruction in writing, language conventions, and vocabulary
- Appendix B consists of text exemplars at all grades/bands to illustrate appropriate complexity and quality in the text types required by the Reading standards
- Appendix C consists of annotated writing samples to show how grade- or grade-band-appropriate writing embodies the relevant Writing standards

January 2010

DRAFT

Student Practices in Reading, Writing, Speaking, Listening, and Language Use

The following Student Practices in reading, writing, speaking, listening, and language use undergird and help unify the rest of the *Standards*. The Student Practices are not themselves standards: every idea introduced here is subsequently represented in one or more places within the larger document. They are, rather, the "premises"—broad statements about the nature of college and career readiness in reading, writing, speaking, listening, and language use—that underlie the individual standards and cut across the various sections of the document.

* * *

As students progress toward being college and career ready, they exhibit with increasing fullness and regularity the following capacities in their reading, writing, speaking, listening, and language use:

1. They demonstrate independence as readers, writers, speakers, listeners, and language users.

Students can, without significant scaffolding or support, comprehend and evaluate complex text 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 as well as ask questions, build on others' ideas, and articulate their own ideas. They apply language conventions without prompting. On their own, they determine the meaning of words in context and acquire and use new words.

2. They build strong content knowledge.

Students build a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They demonstrate their ability to become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and the discipline-specific expertise needed to comprehend subject matter and solve problems in different fields. They refine their knowledge and share it through substantive writing and speaking.

3. They respond to the varying demands of audience, task, purpose, and discipline.

Students consider their reading, writing, speaking, listening, and language use in relation to the contextual factors of audience, task, purpose, and discipline. They appreciate nuances, such as how the composition and familiarity of the audience should affect tone 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).

4. They comprehend as well as critique.

Students are engaged and open-minded—but skeptical—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.

5. They privilege 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.

6. They care about precision.

Students are mindful of the impact of specific words and details, and they consider what would be achieved by different choices. Students pay especially close attention when precision matters most, such as in the case of reviewing significant data, making important distinctions, or analyzing a key moment in the action of a play or novel.

7. They craft and look for structure.

Students attend to structure when organizing their own writing and speaking as well as when seeking to understand the work of others. They understand and make use of the ways of presenting information typical of different disciplines. They observe, for example, how authors of literary works craft the structure to unfold events and depict the setting.

8. They use technology 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.

9. They come to understand other perspectives and cultures.

Students appreciate that the twenty-first-century classroom and workplace are diverse settings in which people from often widely divergent backgrounds must learn and work together. They actively seek to understand other perspectives and cultures through reading and listening. They do not simply adopt other points of view as their own but rather evaluate them critically and constructively. Literature can play a special role in expanding students' horizons in this way: through reading great classic and contemporary works, students can vicariously inhabit worlds and experiences much different than their own.

CCSS DRAFT

English Language Learners

The *Standards* articulate rigorous grade-level expectations in the areas of speaking, listening, reading and writing to prepare students to be college and career ready. English language learners (ELLs) must be held to the same high standards expected of students who are already proficient in English. However, because these students are acquiring English language proficiency and content area knowledge concurrently, some students will require additional time and all will require appropriate instructional support and aligned assessments.

ELLs are a heterogeneous group with differences in ethnic background, first language, socio-economic status, quality of prior schooling, and levels of English language proficiency. Effectively educating these students requires adjusting instruction and assessment in ways that consider these factors. For example ELLs who are literate in a first language that shares cognates with English can apply first-language vocabulary knowledge when reading in English; likewise ELLs with high levels of schooling can bring to bear conceptual knowledge developed in their first language when reading in a second language. On the other hand, ELLs with limited or interrupted schooling will need to acquire background knowledge prerequisite to educational tasks at hand. As they become acculturated to US schools, ELLs who are newcomers will need sufficiently scaffolded instruction and assessments to make sense of content delivered in a second language and display this content knowledge.

While some ELLs are economically and educationally advantaged, this is not the case for many of these students. Moreover, once in the U.S., the majority of ELLs attend high poverty schools with high percentages of other ELLs. These schools often lack the resources and capacity needed to help ELLs reach high academic standards. However, schools and districts can be assisted in providing a positive learning environment that capitalizes on the linguistic and cultural diversity of the student body.

To help ELLs meet high academic standards in reading, writing, speaking, listening and language use it is essential that ELLs have access to:

- The requisite coursework to prepare them for post-secondary education or the workplace;
- Coursework that is made comprehensible for students learning content in a second language, through specific pedagogical techniques and additional resources;
- Teachers, as well as school-level and district personnel, who are well prepared and qualified to support English-language learners;
- Well designed opportunities for classroom discourse and interaction to enable ELLs to develop communicative strengths in language arts
- Speakers of English who know the language well enough to provide the ELLs with models and support; and
- Ongoing assessment and feedback to guide learning.

It is also worth noting that instruction for these students is additionally guided by language proficiency standards that language arts teachers can use in conjunction with the English language arts standards to help ELLs become fully proficient and literate in English.

Access for Students with Disabilities

The *Standards* articulate rigorous expectations in the areas of reading, writing, speaking, listening, and language use in order to prepare students to be college and career ready. These standards identify the knowledge and skills students must acquire in order to be successful. Research shows that students with disabilities are capable of high levels of learning and should not be limited by low expectations and watered down curriculum. The vast majority of this population of students, including students with intellectual impairments,[1] *can* achieve proficiency when they receive high-level instruction and accommodations. It is imperative that these highly capable students—regardless of their disability—are held to the same expectations articulated in the Core Standards as other students.

However, *how* these high standards are taught is of the utmost importance in reaching students with special needs. When acquiring the knowledge and skills represented in the Core Standards, students with disabilities may need accommodations[2] or—in exceptional cases—modified goals, incorporated in an individualized education program (IEP),[3] to help them access information or demonstrate their knowledge. In instances when a standard asks students to perform actions they are physically incapable of, students will need to be presented with alternative options to demonstrate similar knowledge and skills within the range of their abilities. Accommodations based on individual needs allow students of all disability levels to learn within the framework of the *Standards*.

Meeting English Language Arts (ELA) Standards

Reading, writing, speaking, listening, and language use standards—given the nature of the standards themselves—often require accommodations for students with disabilities. For example, a standard that calls for "listening" should be interpreted to include reading sign language. "Speaking" should be read broadly to include "communication" or "self-expression." "Reading" should allow for students' use of Braille, screen reader technology, or other assistive devices to demonstrate comprehension skills. In a similar vein, "writing" should not preclude the use of a scribe, computer, or speech-to-text technology. With appropriate accommodations and support, students with all levels of disabilities can participate in the general education curriculum and achieve grade-level proficiency with regard to the ELA content and skills articulated in the *Standards*.

In short, while the *Standards* set and retain high expectations for all students, they may need to be translated and occasionally modified to apply appropriately to students with disabilities, including all levels of intellectual impairment. Promoting a culture of high expectations for all students is a fundamental goal of the *Standards*. Achieving this goal requires the inclusion of students with disabilities.

DRAFT

[1] Less than two percent of the population of all students and less than 20% of the population of students with disabilities.

[2] See the Council of Chief State School Officers, (2003). *Training District and State Personnel on Accommodations: A Study of State Practices, Challenges, and Resources* at http://www.ccsso.org/publications/details.cfm?PublicationID=221 for further explanation and evidence around accommodations.

[3] According to the Individuals with Disabilities Act (IDEA), an IEP includes appropriate accommodations that are necessary to measure the individual achievement and functional performance of a child.

How to Read This Document

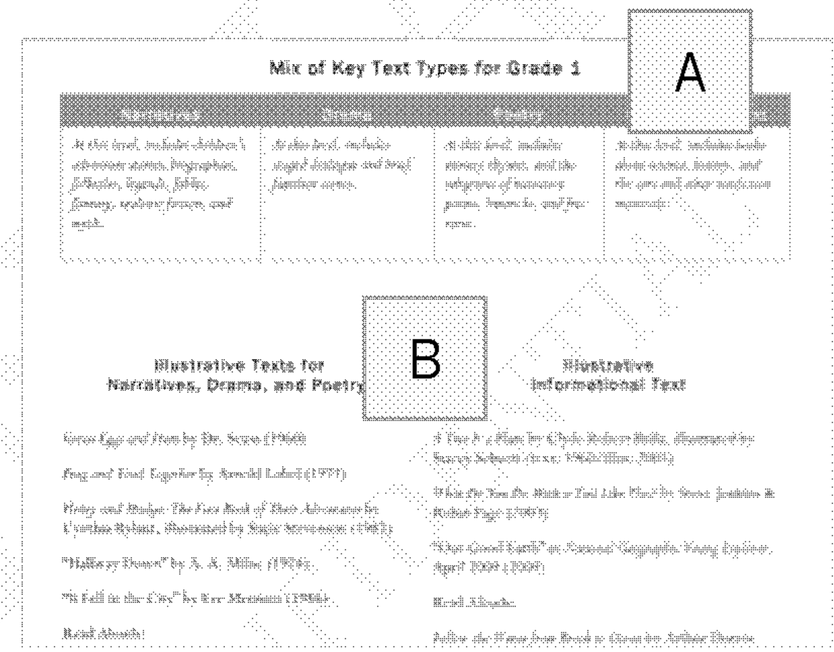
The *Standards* are divided into an ELA-specific document (*Standards for English Language Arts K–12*) and a literacy document for history and science (*Standards for Literacy in History and Science 6–12*). The ELA document includes standards for and examples of history and science reading in K–5.

The ELA-specific document is organized by grade (kindergarten and grades 1, 2, and 3) and grade band (grades 4–5, 6–8, 9–10, and 11–CCR). The *Standards for Literacy in History and Science* are organized by grade band (grades 4–5, 6–8, 9–10, and 11–CCR). Each grade/band is divided into strands—Reading, Writing, Speaking and Listening, and Language Development.

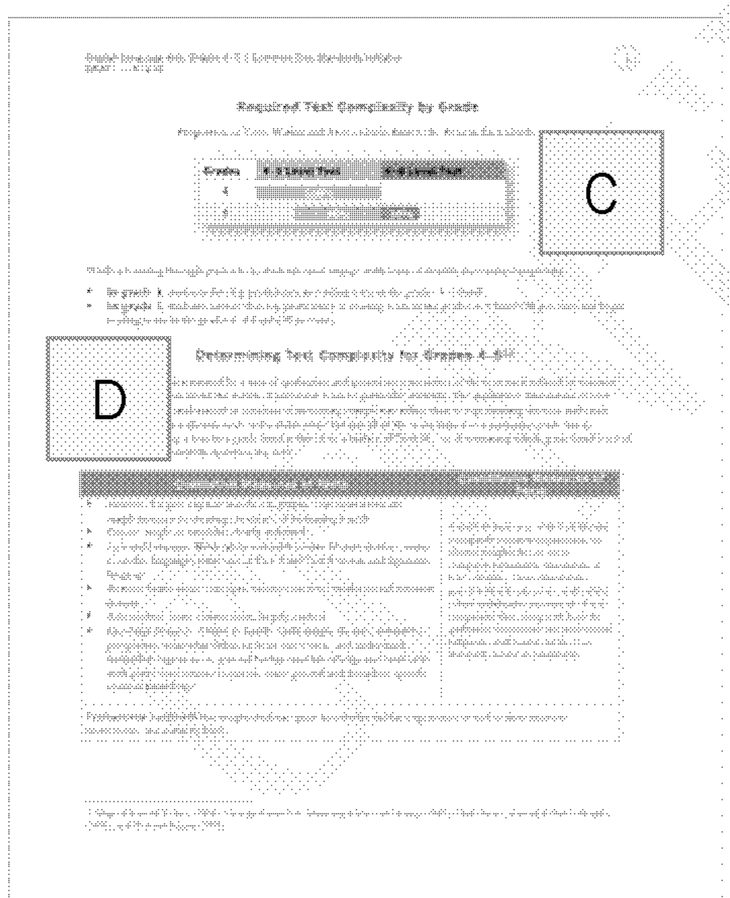
While all strands contain standards statements, each strand also has its own specific features.

Reading and Literature (ELA)/Reading (History/Science)

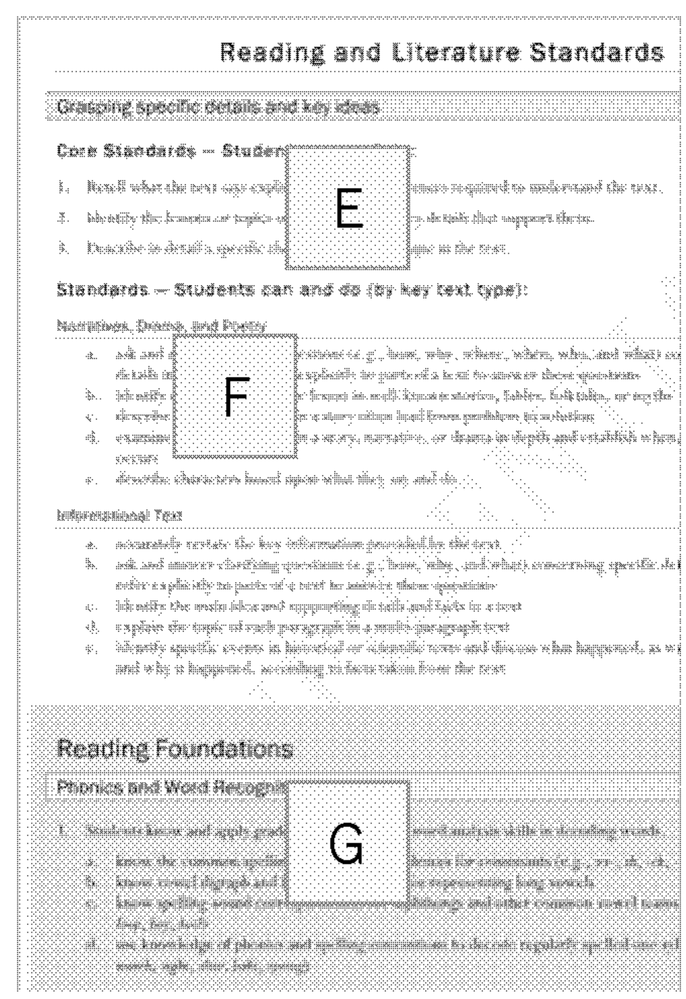
Kindergarten and grade 1 begin with the **mix of key text types (A)**, which identifies the genres and subgenres of reading material appropriate for each grade. This is followed by a list of **illustrative texts (B)** in the key text types. This list is suggestive of the sorts of texts appropriate for the grade in terms of complexity and quality; excerpts appear in Appendix B.



Grades 2, 3, 4–5, 6–8, 9–10, and 11–CCR include this information immediately after a graphic specifying **required text complexity by grade (C)**—in brief, the proportion of texts within and above grade band that students must read each year. (For example, 70% of the texts that grade 3 students read should come from the grades 2–3 text complexity band, while the other 30% should come from the grades 4–5 band.) An overview of the method for **determining text complexity (D)** in the particular grade band follows. (A fuller treatment is provided in Appendix A.)

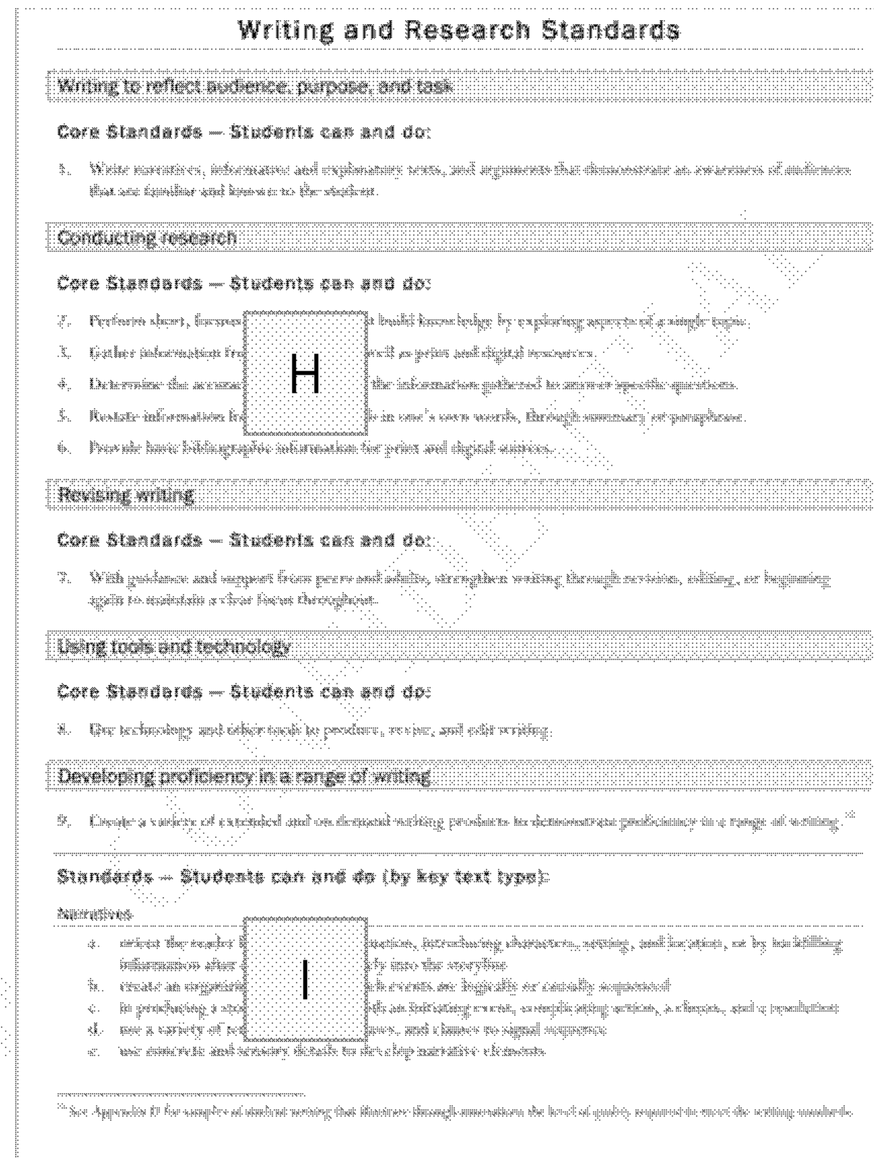


All grades/bands organize standards under a number of boxed subheadings (e.g., "Grasping specific details and key ideas"). The standards at all grade levels are divided into cross-cutting **Core Standards (E)**, which are numbered and applicable to many types of reading, and more specific **Standards (F)**, which are lettered and organized by text type (e.g., "Narratives, Drama, and Poetry"). Kindergarten and grades 1, 2, and 3 also include boxed sections of **reading foundations (G)**, which enumerate basic concepts of print and other foundational skills in reading that very young students must acquire.



Writing and Research

Cross-cutting **Core Standards (H)**, which are numbered and apply to many types of writing, are organized under a number of boxed subheadings (e.g., "Writing to reflect audience, purpose, and task"). **Standards (I)** specific to writing in particular text types—narrative, informative and explanatory text, and argument—are lettered and follow in a separate section. In kindergarten through grade 5, writing arguments takes the form of opinion writing, hence the parenthetical notation next to "Arguments" in those grades/bands.

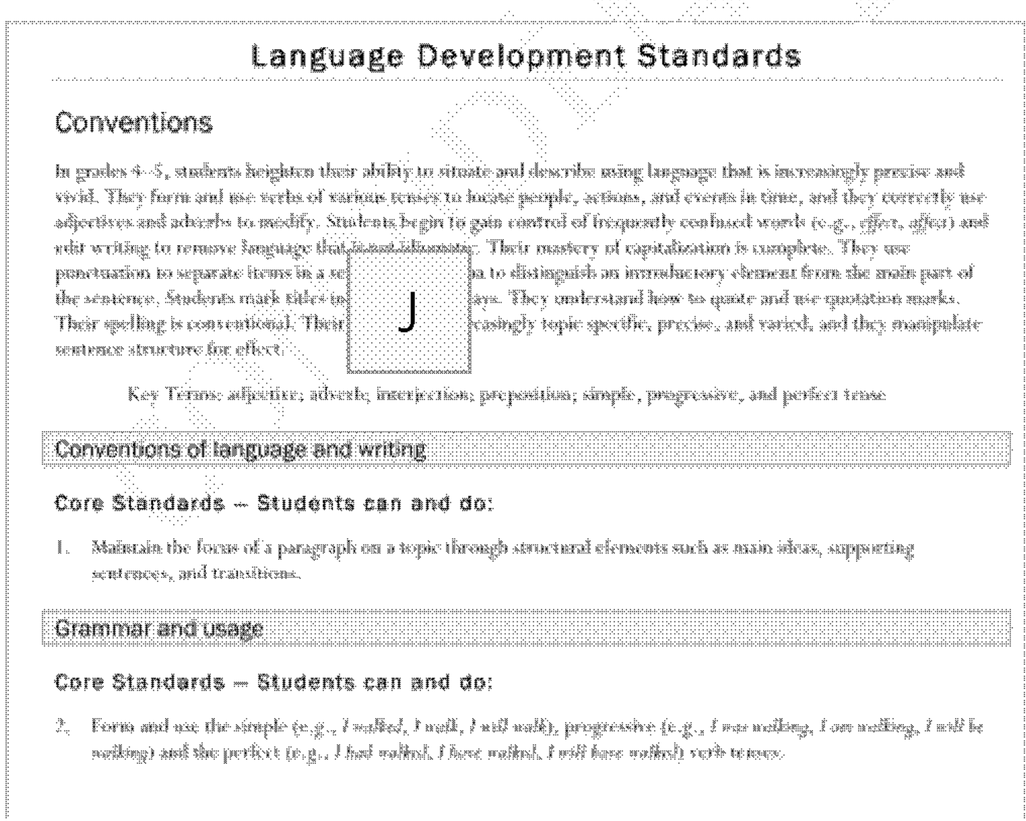


Speaking and Listening

Cross-cutting **Core Standards**, which are numbered and apply to speaking and listening in many situations, are grouped with lettered **Standards**, which set requirements for speaking and listening in key communication (e.g., "Presentation of Ideas and Information").

Language Development

This strand is organized differently in the ELA and history/science documents. The ELA strand comprises two full sections: Conventions and Vocabulary. Each section includes numbered **Core Standards** organized under a number of boxed subheadings (e.g., "Mechanics") and introduced by a brief summative paragraph and list of **key terms (J)** intended to be taught explicitly in grade-appropriate ways. ELA Vocabulary consists of three subsections—determining the meaning of words, understanding the nuances of words, and acquiring vocabulary—under each of which numbered Core Standards appear. Language Development in the history/science document consists of the summative paragraphs for Conventions and all of the Vocabulary section found in ELA except for nuances in word meaning.

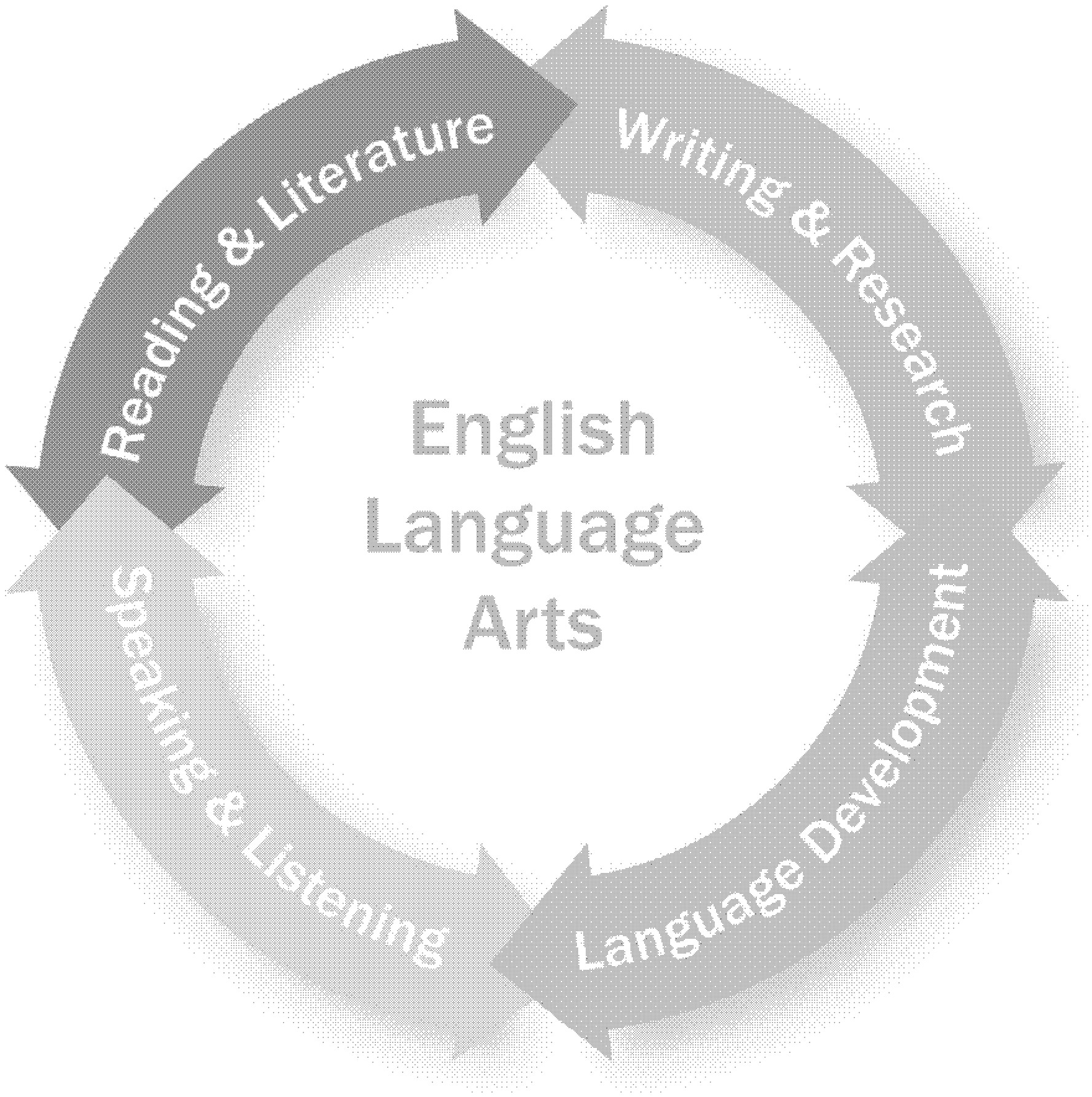


Focus for Instruction

Beginning with grade 4, a page summarizing grade-level responsibility, including grade-specific areas of focus, is provided to help distinguish responsibilities within multiyear bands.

English Language Arts

Kindergarten



Mix of Key Text Types for Kindergarten

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue and brief familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[4]

Are You My Mother? by P.D. Eastman (1960)

Put Me in the Zoo by Robert Lopshire (1960)

"Mix a Pancake" by Christina Rosetti (1986)

Wouldn't You?" by John Ciardi (1986)

Illustrative Informational Texts

My Five Senses by Aliki (1962)

Read Alouds:

Amazing Whales! by Sarah L. Thomson (2005)

The Year at Maple Hill Farm by Alice and Martin Provensen (1978)

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[4] See Appendix B for other texts illustrative of Kindergarten-Grade 1 text complexity. This list includes read-alouds.

Reading and Literature Standards[5]

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell key details and information drawn from the text.
2. Explain the subject of the text or the problem the characters face.
3. Answer questions about characters and events that take place in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. retell the beginnings, middles, and endings of stories
b. ask and answer questions about details of a text
c. identify the problems that characters face in a story and the lessons learned
d. identify the feelings of characters and the reasons for their actions
e. differentiate between realistic and fantastical elements within a story

Informational Text

a. restate key information (e.g., events, subject, ideas) from a text
b. ask and answer questions about details of a text

Reading Foundations

Print Concepts

1. Students demonstrate understanding of the organization and basic features of print.

a. identify basic features and conventions of books and other written texts (e.g., front cover, back cover, title, author)
b. understand that print is left to right, top to bottom, and page by page
c. understand that words are separated by spaces in print
d. recognize and name all upper- and lowercase letters of the alphabet

Linguistic Awareness

2. Students gain awareness of spoken words, syllables, and phonemes.

a. recognize, recite, and produce rhyming words
b. count, pronounce, blend, and segment syllables in spoken words
c. recognize, blend, and segment onset and rimes of spoken words [*/g/ - /oat/; /bl/ - /ock/)*
d. count or place tokens for individual words in spoken phrases or simple sentences
e. orally blend and segment individual phonemes in simple, one-syllable words
f. demonstrate phonemic awareness by isolating and pronouncing the initial and final phonemes (sounds) in three-phoneme /CVC/ words without consonant blends (e.g., */road/*, */save/*, */ham/*)
g. add or substitute individual phonemes in simple, one-syllable words to make new words (e.g., */at/* → */sat/* → */mat/* → */map/*)

[5] The expectation is that students can fulfill these standards with texts they read independently as well as texts that are read aloud to them.

Observing craft and structure

Core Standards — Students can and do:

4. Identify the meanings of words and phrases as they are used in the text.
5. Identify important parts or sections of texts.
6. Compare and contrast characters or events from different stories.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. identify words and phrases that suggest feelings or appeal to the senses
b. identify similarities in beginning and ending sounds of words in children's poems and songs
c. identify parts of a story and parts of a poem as well as sections of informational picture books and tell how they are different
d. identify common characteristics of folktales and fairy tales, including their use of rhyme, rhythm, and repetition
e. participate (e.g., react, speculate, read along, act out) when familiar texts are read aloud
f. compare and contrast characters or events from different stories written by the same author or written about similar subjects

Informational Text

a. identify basic text features and what they mean, including titles and subtitles, table of contents, and chapters

Reading Foundations, continued

Phonics and Word Recognition

3. Students know and apply grade-level phonics and word analysis skills in decoding words.
   a. demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant
   b. identify which letters represent the five major vowels and know the long and short sound of each
   c. blend letter-sounds to decode short-vowel CVC words (e.g., *cat*, *mop*, *sun*)
   d. read at least 25 very high frequency words by sight (e.g., *of*, *to*, *he*, *she*, *is*, *do*, *does*)

Developing Fluency

4. Students read with sufficient accuracy and fluency to support comprehension.
   a. read rebus and preprimer texts with purpose and understanding
   b. demonstrate increased accuracy and fluency on successive readings of a text

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Use text illustrations to predict or confirm what the text is about.
8. Identify words in a text that link ideas and events together.
9. Identify who is telling a story or providing information in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. use pictures, illustrations, and context to make predictions about and confirm story content
b. identify words in a story that link events together (e.g., *first/second, then, next, before/after, later, finally*)
c. identify who is the speaker in a story or poem

Informational Text

a. identify words that link ideas together (e.g., *also, in addition, for example, but*)
b. identify the author and sources of information when provided by the text

Developing habits for reading text

Core Standards — Students can and do:

10. Begin to read independently and/or with a partner, sustaining effort necessary to build understanding.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, add details to strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[6]

Narratives

a. establish a situation in time and/or place
b. recount several loosely linked actions in a short, familiar event, controlling for chronological order
c. provide a reaction to what happened

Informative and Explanatory Texts

a. establish the topic in a title or first sentence
b. supply facts and information relevant to the topic

Arguments (opinions)

a. introduce the topic directly, or use the title of a book when writing about a text
b. express preferences or opinions (e.g., *My favorite book is . . .*) relevant to the topic
c. provide a reason for preference or opinion (e.g., *It reminded me of when I met my friend Carlos*)
d. use linking words that express causality (e.g., *I like . . . because . . .*)

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in group activities requiring speaking and listening.
2. Listen closely to and sustain attention on texts read aloud as well as other sources of information presented orally, visually, or multi-modally and confirm understanding by restating the information and answering pertinent questions.

Standards — Students can and do (by key communication type):

Classroom discussions and participating productively

a. initiate and participate in conversations with peers and adults through multiple exchanges, attending to the comments of others
b. confirm understanding by restating information or answering questions about what has been discussed
c. ask questions to get information, ask for help, or clarify something that is not understood
d. follow norms for conversation, such as listening to others and taking turns to speak

Exchanging information and speaking effectively

Core Standards — Students can and do:

[6] See Appendix D for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

3. Share experiences and ideas that demonstrate an awareness of their listeners.
4. Speak audibly and clearly.

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. describe people, places, things, and events with relevant facts and examples
b. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

Language Development Standards

Conventions

In kindergarten, students learn to form letters and words in print and to relate sounds (phonemes) to one or more letters. They understand the notion of a sentence, that a sentence performs one of a few basic functions (make a statement, ask a question, or issue a command), and that end punctuation can signal the sentence's function or intensity. With prompting and assistance, they form and expand basic sentences in order to express thoughts, beginning the sentence with a capital letter. Students have a sense of what a noun is, of what singular and plural nouns are, and of how plural nouns are often formed. They also know how to use the most frequently occurring prepositions.

Key Terms: exclamation point, capital/uppercase and lowercase letter, singular and plural noun, period, punctuation, question mark, sentence

Conventions of language and writing

Core Standards — Students can and do:

1. Print all upper- and lowercase letters.
2. Write a letter or letters for each consonant and short-vowel sound (phoneme).

Grammar and usage

Core Standards — Students can and do:

3. Produce and expand complete sentences in shared writing and language activities.
4. Use and understand question words (e.g., *what*, *where*, *when*, *who*, *which*, *how*).
5. Form regular plural nouns by adding /s/ or /es/ (e.g., *dog*, *dogs*; *wish*, *wishes*; *baby*, *babies*).
6. Demonstrate understanding of the most frequently occurring prepositions (e.g., *to/from*, *in/out*, *on/off*, *for*, *of*, *by*, *with*).

Mechanics

Core Standards — Students can and do:

7. Capitalize the first word in a sentence and the pronoun *I*.
8. Identify end punctuation, including periods, question marks, and exclamation points.

9. Spell simple words phonetically using knowledge of sound-letter relationships.

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In kindergarten, students learn about words in terms of like versus unlike and "similar but not quite the same," using objects and movements as aids. They learn to use descriptive language to distinguish one object from another and order and position words to describe sequences and spatial relationships. They acquire new words through interactive language use, including informal talk, discussion, listening to and responding to texts read aloud as well as by being taught the words directly.

Determining the meaning of words

Core Standards — Students can and do:

1. Sort common objects into categories (e.g., shapes, foods).

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

2. Act out the meaning of verbs describing the same general action (e.g., *walk*, *march*, *strut*, *prance*) to gain a sense of their different meanings.
3. Demonstrate understanding of common adjectives by relating them to their opposites (antonyms).
4. Use common adjectives to distinguish objects (e.g., the *small blue* square, the *shy white* rabbit).

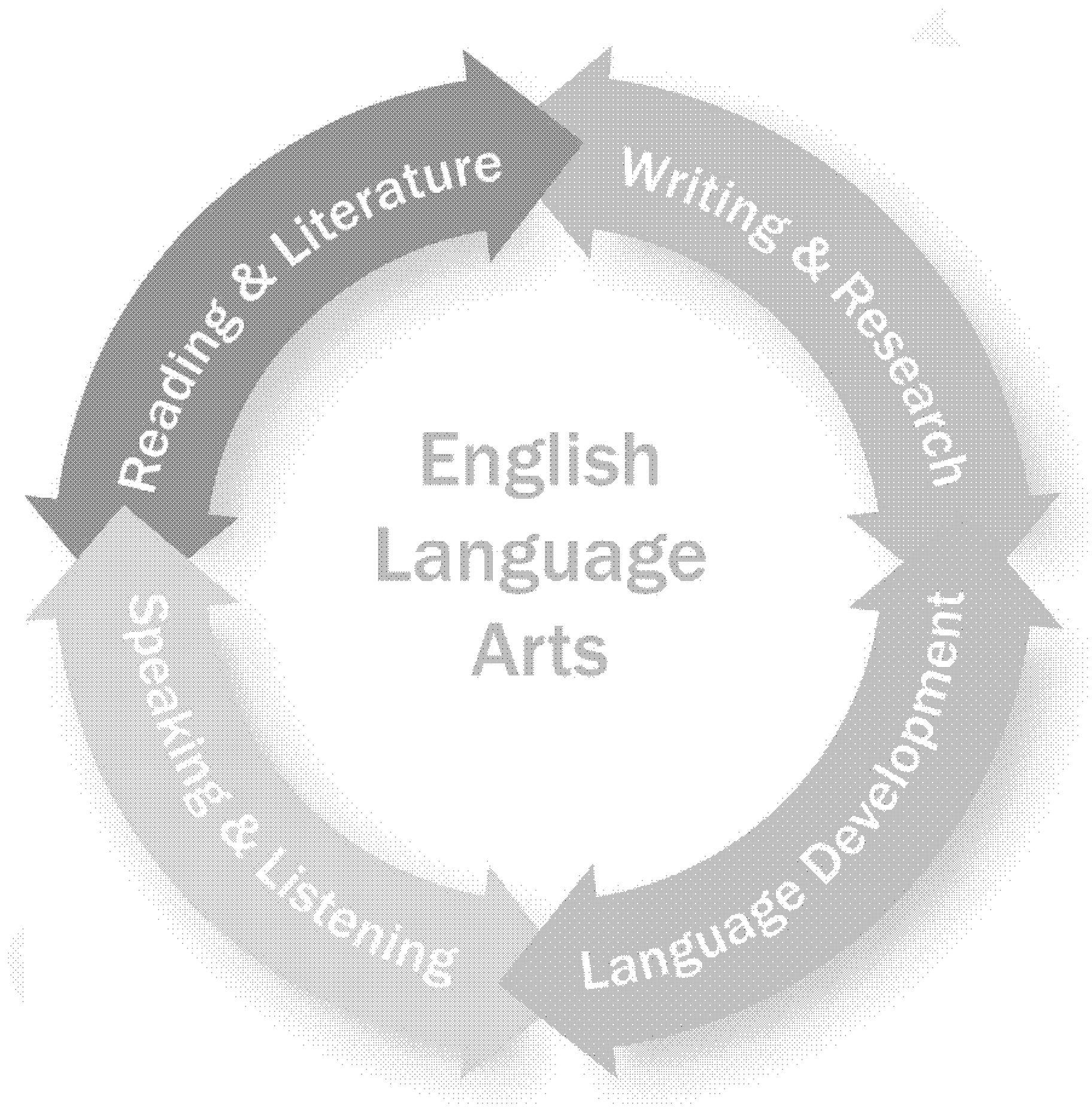
Acquiring vocabulary

Core Standards — Students can and do:

5. Demonstrate meaning of new vocabulary taught directly and gained through conversations and hearing texts read aloud.
6. Demonstrate understanding of words that express order and position (e.g., *first*, *middle*, *last*; *before*, *after*; *under*, *over*).

English Language Arts

Grade 1



Mix of Key Text Types for Grade 1

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue and brief, familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[7]

Green Eggs and Ham by Dr. Seuss (1960)

Frog and Toad Together by Arnold Lobel (1971)

Henry and Mudge: The First Book of Their Adventures by Cynthia Rylant, illustrated by Suçie Stevenson (1987)

"Halfway Down" by A. A. Milne (1924)

"It Fell in the City" by Eve Merriam (1986)

Read alouds:

Little House in the Big Woods by Laura Ingalls Wilder, illustrated by Garth Williams (1932)

Zin! Zin! Zin! a Violin by Lloyd Moss, illustrated by Marjorie Priceman (1995)

Illustrative Informational Texts

A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (text: 1960/illus: 2001)

What Do You Do With a Tail Like This? by Steve Jenkins & Robin Page (2003)

"Our Good Earth" in *National Geographic Young Explorer*, April (2009)

Read alouds:

Follow the Water from Brook to Ocean by Arthur Dorros (1991)

Living Sunlight: How Plants Bring the Earth to Life by Molly Bang & Penny Chisholm, illustrated by Molly Bang (2009)

[7] See Appendix C for other texts illustrative of Kindergarten-Grade 1 text complexity. This list includes read-alouds.

Reading and Literature Standards[8]

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell key details and information drawn from the text.
2. Explain the subject of the text or the problem the characters face.
3. Answer questions about characters and events that take place in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. retell the beginnings, middles, and endings of stories
b. ask and answer questions about details of a text
c. identify the problems that characters face in a story and the lessons learned
d. identify the feelings of characters and the reasons for their actions
e. differentiate between realistic and fantastical elements within a story

Informational Text

a. restate key information (e.g., events, subject, ideas) from a text
b. ask and answer questions about details of a text

Reading Foundations

Linguistic Awareness

1. Students gain awareness of spoken words, syllables, and phonemes.
   a. aurally distinguish long from short vowel sounds in spoken single-syllable words (e.g., */tap/* vs. */tape/*; */sock/* vs. */soak/*; */sit/* vs. */sight/*)
   b. produce single-syllable words by orally blending phonemes, including consonant blends (e.g., */cats/*, */black/*, */blast/*)
   c. isolate and pronounce initial, medial vowel, and final phonemes (sounds) in single-syllable words (e.g., *fast*, *fast*, *fast*)
   d. orally segment single-syllable words into their complete sequence of individual phonemes

[8] The expectation is that students can fulfill these standards with texts they read independently as well as texts that are read aloud to them.

Observing craft and structure

Core Standards — Students can and do:

4. Identify the meanings of words and phrases as they are used in the text.
5. Identify important parts or sections of texts.
6. Compare and contrast characters or events from different stories.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. identify words and phrases that suggest feelings or appeal to the senses
b. identify similarities in beginning and ending sounds of words in children's poems and songs
c. identify parts of a story and parts of a poem as well as sections of informational picture books and tell how they are different
d. identify common characteristics of folktales and fairy tales, including their use of rhyme, rhythm, and repetition
e. participate (e.g., react, speculate, read along, act out) when familiar texts are read aloud
f. compare and contrast characters or events from different stories written by the same author or written about similar subjects

Informational Text

a. identify basic text features and what they mean, including titles and subtitles, table of contents, and chapters

Reading Foundations, continued

Phonics and Word Recognition

2. Students know and apply grade-level phonics and word analysis skills in decoding words.

a. know the common spelling-sound correspondences for consonants (e.g., *wr-*, *sh*, *-ck*, *-ll*)
b. know vowel digraph and final-*e* conventions for representing long vowels
c. know spelling-sound correspondences for diphthongs and other common vowel teams (e.g., *loud*, *cow*, *look*, *loop*, *boy*, *boil*)
d. use knowledge of phonics and spelling conventions to decode regularly spelled one-syllable words (e.g., *sick*, *march*, *sight*, *slice*, *bake*, *spring*)
e. understand that every syllable must have a vowel sound and use that knowledge to determine the number of syllables in a word
f. decode two-syllable words following basic patterns (e.g., *rabbit*, *magnet*, *napkin*, *pickle*, *butter*)
g. read words with inflectional endings (e.g., *-s*, *-es*, *ies*, *-ed*, *ied*, *-ing*, *-er*, *-est*)
h. use phonics to decode visually new words when reading
i. recognize grade-appropriate, irregularly spelled words by sight

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Use text illustrations to predict or confirm what the text is about.
8. Identify words in a text that link ideas and events together.
9. Identify who is telling a story or providing information in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. use pictures, illustrations, and context to make predictions about and confirm story content
b. identify words in a story that link events together (e.g., *first/second, then, next, before/after, later, finally*)
c. identify who is the speaker in a story or poem

Informational Text

a. identify words that link ideas together (e.g., *also, in addition, for example, but*)
b. identify the author and sources of information when provided by the text

Developing habits for reading text

Core Standards — Students can and do:

10. Begin to read independently and/or with a partner, sustaining effort necessary to build understanding.

Reading Foundations, continued

Developing Fluency

3. Students read with sufficient accuracy and fluency to support comprehension.

a. demonstrate increased accuracy, fluency, and expression on successive readings of a text
b. use context to confirm or self-correct word recognition and understanding, rereading as necessary
c. read aloud, alone, or with a partner at least 15 minutes each day, in school or out

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Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, add details to strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[9]

Narratives

a. establish a situation in time and/or place that is appropriate for the sequence of events to follow
b. develop appropriately sequenced actions within one or more events using linking words, phrases, or clauses to signal chronological ordering
c. provide a reaction to what happened
d. include dialogue if appropriate, and some details
e. provide a sense of closure and/or a reflective statement

Informative and Explanatory Texts

a. include some sort of beginning to establish the topic (beyond using the title of the piece)
b. supply facts and information relevant to the topic
c. use simple additive linking words (e.g., *and*, *first*, *second*) to create connections between the facts
d. provide examples relevant to the topic
e. provide a sense of closure

Arguments (opinions)

a. introduce the topic or book directly, or use the title of the book as an introduction
b. state opinions (e.g., *My best friend is . . .*) relevant to the topic
c. provide reasons for opinions and details to support them

[9] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

d. use linking words that express causality (e.g., *I like . . . because . . .*)
e. refer to the content of the text when writing about literature

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in group activities requiring speaking and listening.
2. Listen closely to and sustain attention on texts read aloud as well as other sources of information presented orally, visually, or multi-modally and confirm understanding by restating the information and answering pertinent questions.

Standards — Students can and do (by key communication type):

Classroom discussions and participating productively

a. initiate and participate in conversations with peers and adults through multiple exchanges, attending to the comments of others
b. confirm understanding by restating information or answering questions about what has been discussed
c. ask questions to get information, ask for help, or clarify something that is not understood
d. follow norms for conversation, such as listening to others and taking turns to speak

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences and ideas that demonstrate an awareness of their listeners.
4. Speak audibly and clearly.

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. describe people, places, things, and events with relevant facts and examples
b. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

Language Development Standards

Conventions

In grade 1, students gain increasing skill and independence in sentence formation and development. They have a sense of what a verb is and that its form changes to signal different time periods (past, present, and future). Their repertoire of prepositions continues to expand, and they use pronouns with regularity. Students capitalize names, places, and dates. They use end punctuation as well as commas in dates and in simple series of words. Their range of word-formation and spelling strategies grows.

Key Terms: comma, pronoun, verb

Grammar and usage

Core Standards — Students can and do:

1. Produce and expand complete sentences in response to questions and prompts.
2. Use subject, object, and possessive pronouns (e.g., *I*, *me*, *my*; *they*, *them*, *their*).
3. Use verbs to convey a sense of past, present, and future in writing and speaking (e.g., *Today I walk home*; *Yesterday I walked home*; *Tomorrow I will walk home*).
4. Demonstrate understanding of frequently occurring prepositions (e.g., *during*, *beyond*, *toward*).

Mechanics

Core Standards — Students can and do:

5. Capitalize names, places, and dates.
6. Use end punctuation for sentences, including periods, question marks, and exclamation points.
7. Use commas in dates and to separate single words in a series.
8. Form new words through addition, deletion, and substitution of sound and letters (e.g., *an* → *man* → *mat* → *mast* → *must* → *rust* → *crust*).
9. Use conventional spelling for words with common spelling patterns and common irregular words.
10. Use phonetic spellings for untaught words, drawing on phonemic awareness and spelling conventions.

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In grade 1, students begin to sort words themselves into categories rather than the objects that they name. They are able to define familiar words (e.g., *duck*) in a two-step process of identifying a category (bird) to which it belongs and naming one or more attributes that distinguish this category member from others (able to swim). Students grasp that many words they know can mean different things depending on how the word is used, and they make distinctions between and among closely related verbs and adjectives in terms of manner and intensity. They acquire new words through interactive language use, including informal talk, discussion, listening to and responding to texts read aloud as well as by being taught the words direct.

Determining the meaning of words

Core Standards — Students can and do:

1. Sort words into categories (e.g., colors, clothing).
2. 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).
3. Demonstrate understanding of the concept of multiple-meaning words (e.g., *match*, *kind*, *play*) by identifying various meanings of some grade-appropriate examples of such words.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

4. Define, choose, or act out the meaning of closely related verbs that differ in manner (e.g., *look*, *peek*, *glance*, *stare*, *glare*, *scowl*; *speak*, *shout*, *mumble*, *whine*, *whimper*, *murmur*).
5. Distinguish among closely related adjectives that differ in intensity (e.g., *large*, *gigantic*; *hot*, *scalding*; *tasty*, *delicious*; *quiet*, *silent*).

Acquiring vocabulary

Core Standards — Students can and do:

6. Acquire and use new vocabulary taught directly and gained through conversations and hearing texts read aloud.

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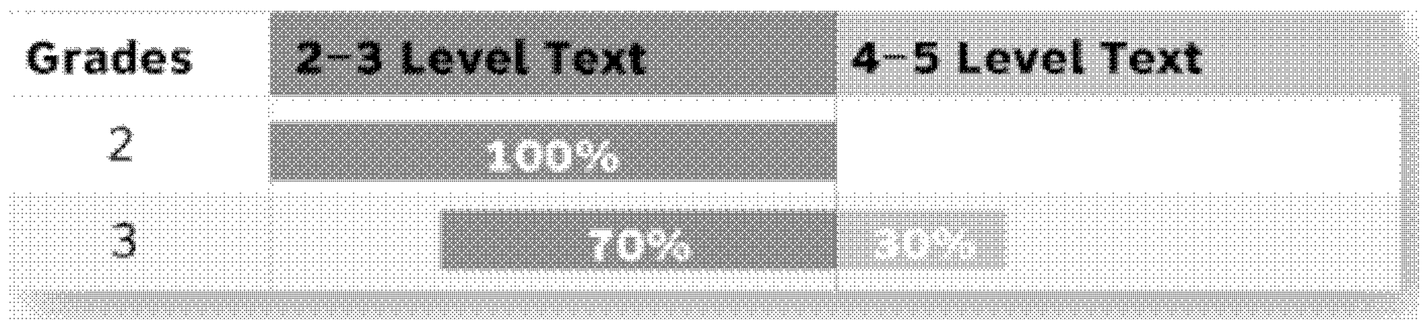
English Language Arts

Grade 2

Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grade



While advancing through the grades, students must engage with texts of steadily increasing complexity.

- **In grade 2**, students focus on reading texts in the 2–3 grade band level with scaffolding likely required for texts at the high end of the range.

Determining Text Complexity for Grades 2–3

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts[10]	Quantitative Measures of Texts
• *Structure:* Explicit, simple, conventional; simple graphic representations are supplementary to meaning; texts are relatively short • *Purpose:* Single; explicitly stated • *Style and Language:* Familiar, accessible, plain; few literary devices; mostly clear, everyday language; limited use of Tier 2 and 3 words and figurative language • *Richness:* A few ideas/concepts; concrete; low information density • *Relationships:* A few connections; explicit • *Knowledge Demands:* Ability to handle simple themes and fantastical elements as well as draw upon common, everyday experiences; general background knowledge and familiarity with genre conventions required; some everyday and general content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

[10] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for Grade 2

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue, scenes, and brie, familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[11]

Crow Boy by Taro Yashima (1955)

The Stories Julian Tells by Ann Cameron (1981)

Tops and Bottoms by Janet Stevens (1995)

"Grandpa's Stories" by Langston Hughes (1958)

"Weather" by Eve Merriam (1969)

Read alouds:

The Cricket in Times Square by George Selden, illustrated by Garth Williams (1960)

"Fireflies" by Paul Fleischman, illustrated by Eric Beddows (1988)

Illustrative Informational Texts

Maps & Globes by Jack Knowlton, pictures by Harriet Barton (1985)

Sunshine Makes the Seasons by Franklyn M. Branley (1985)

From Seed to Plant by Gail Gibbons (1991)

Boy, Were We Wrong About Dinosaurs by Kathleen V. Kudlinski, illustrated by S.D. Schindler (2005)

[11] See Appendix B for other texts illustrative of Grades 2-3 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell what the text says explicitly and make inferences required to understand the text.
2. Identify the lessons or topics of the text and the key details that support them.
3. Describe in detail a specific character, event, or topic in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. ask and answer clarifying questions (e.g., how, why, where, when, who, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
b. identify or infer the moral or lesson in well-known stories, fables, folktales, or myths
c. describe how major events in a story often lead from problem to solution
d. examine a specific incident in a story, narrative, or drama in depth and establish when, where, and why it occurs
e. describe characters based upon what they say and do

Informational Text

a. accurately restate the key information provided by the text
b. ask and answer clarifying questions (e.g., how, why, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
c. identify the main idea and supporting details and facts in a text
d. explain the topic of each paragraph in a multi-paragraph text
e. identify specific events in historical or scientific texts and discuss what happened, as well as where, when, and why it happened, according to facts taken from the text

Reading Foundations

Phonics and Word Recognition

1. Students know and apply grade-level phonics and word analysis skills in decoding words.

   a. know the common spelling-sound correspondences for consonants (e.g., *wr-*, *sh*, *-ck*, *-ll*)
   b. know vowel digraph and final-*e* conventions for representing long vowels
   c. know spelling-sound correspondences for diphthongs and other common vowel teams (e.g., *loud*, *cow*, *look*, *loop*, *boy*, *boil*)
   d. use knowledge of phonics and spelling conventions to decode regularly spelled one-syllable words (e.g., *sick*, *march*, *sight*, *slice*, *bake*, *spring*)

Observing craft and structure

Core Standards — Students can and do:

4. Explain the meanings of words and phrases as they are used in the text.
5. Gain familiarity with different ways of presenting stories and information in text.
6. Compare and contrast different versions of the same story or informational texts on the same subject.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. recognize sensory details and how they are used to describe events, feelings, and objects
b. describe the different ways poets use rhyme, rhythm, and sensory images to convey a topic or message
c. identify repetitions in phrases, refrains, or sounds in poems and songs
d. describe story elements, including characters, setting, the problem, and how it is resolved
e. discuss stories written by the same author about similar characters or compare different versions of similar well-known tales and myths from various cultures

Informational Text

a. locate key words, facts, or other details using features of texts (e.g., captions, headings, glossaries, indexes, electronic menus, and icons)
b. distinguish between writing that is based on real events and writing that is based on fantasy or fictional events
c. combine information from two different parts of a text and identify how they are related (e.g., chronology, causation)
d. after reading two passages on the same subject, combine the information to more fully describe a topic

Reading Foundations, continued

Developing Fluency

2. Students read with sufficient accuracy and fluency to support comprehension.

a. demonstrate increased accuracy, fluency, and expression on successive readings of a text
b. use context to confirm or self-correct word recognition and understanding, rereading as necessary
c. read alone or with a partner at least 20 minutes each day, in school or out

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Locate and use information from graphs, illustrations, and electronic sources.
8. Identify and understand words and phrases that indicate logical relationships.
9. Identify who is telling the story or providing information at any given point in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. efficiently navigate stories in print and electronic text and explain how images and illustrations connect to and clarify the content
b. identify who is telling the story or who is speaking in a drama

Informational Text

a. use information from visual elements of print and electronic texts (e.g., graphs, maps, charts, illustrations, photographs, diagrams) and explain how they help a reader understand the text
b. identify words (e.g., *such as*, *because*, *therefore*, *in order to*, *since*) that logically connect ideas in sentences and paragraphs

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding text.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[12]

Narratives

a. establish a situation in time and/or place that is appropriate for the sequence of events to follow
b. recount a single well-elaborated event or sequence of events, managing chronological sequence with temporal words, phrases, and clauses
c. tell what the narrator thought or felt
d. include dialogue if appropriate and specific details
e. provide closure through reaction, commentary, or summation

Informative and Explanatory Texts

a. produce a brief introduction
b. create an organizational structure that presents similar information together, frequently patterned after chapter book headings or picture books
c. use adequate and specific facts and definitions to develop points
d. use linking words, such as *also*, *another*, *and*, and *more*, to connect ideas within categories of information, and headers to signal groupings
e. include a concluding sentence or section

Arguments (opinions)

a. introduce the topic or book(s) directly
b. state opinion(s) relative to the topic
c. provide reasons for opinions and details to support them
d. create a list-like structure for organization
e. use words to link and organize opinions and reason(s) (e.g., *because*, *another*, *and*, *also*)
f. refer to the text(s) when writing about literature
g. close with a concluding statement or recommendation

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in small groups and as a class, engaging in a series of oral exchanges about texts and topics.

[12] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by paraphrasing the information.

Standards — Students can and do (by key communication type):

Classroom discussions and participating productively

a. engage in conversations on familiar topics
b. paraphrase the key information or ideas of others presented orally or through other media
c. inquire about oral or visual presentations to deepen understanding or clarify comprehension
d. link additions to conversation to the previous remarks of others
e. participate productively by listening politely to the ideas of others, taking turns speaking, and extending their ideas in light of discussions

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences and ideas, thinking about the needs of their listeners.

4. Speak audibly and clearly at an understandable pace.

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. recount stories or experiences with descriptive details by answering who, what, where, when, how, and why questions about them
b. report on a topic, including appropriate facts and details
c. use appropriate tone to express ideas, feelings, and needs clearly
d. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

Language Development Standards

Conventions

In grade 2, students create sentences of expanding length and complexity, though their control over these sentences is likely to be imperfect. Their command of noun and verb formation extends to common irregular forms. Students capitalize correctly in most situations. Their use of punctuation has grown to include commas in greetings and closings of letters as well as apostrophes to form contractions and to signal possession. Their spelling is increasingly conventional, and they now consult references, such as beginning dictionaries, to aid them when needed.

Key Terms: apostrophe, contraction, regular and irregular nouns and verb, possessive

Grammar and usage

Core Standards — Students can and do:

1. Generate and expand sentences with embedded, dependent, or conjoined clauses (e.g., *After we came home from school, I fed the gerbil and my sister cleaned the cage*).

2. Form common irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*, *women*).

3. Form the past tense of common irregular verbs (e.g., *sat*, *hid*, *told*).

Mechanics

Core Standards — Students can and do:

4. Capitalize holidays, product names, geographic names, and important words in titles.
5. Use commas in greetings and closings of letters.
6. Use apostrophes to punctuate contractions and to form common possessives.
7. Use conventional spelling for high-frequency and other studied words.
8. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*; *paper* → *copper*).
9. Use spelling rules for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*).
10. Consult reference materials, including beginning dictionaries, to check and correct spellings.

Vocabulary

In grade 2, students use a repertoire of strategies for dealing with unknown words. They can analyze the word itself, consider how it is used, consult reference materials, use the components of a compound word as clues to the word's meaning, or employ some combination of these strategies to determine or clarify word meanings. They figure out which meaning of a multiple-meaning word is most likely intended in a particular circumstance, and they differentiate among the connotations of related verbs and adjectives. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly.

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - identifying its base word when it has affixes (e.g., *happiness*, *finally*, *grimy*, *busily*)
   - determining how it is used in a sentence when reading, including whether it names or describes a thing or an action
   - consulting reference materials, including glossaries and beginning dictionaries, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Explain the meaning of grade-appropriate compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*).

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

4. Distinguish among related verbs (e.g., *toss*, *throw*, *hurl*) to gain a sense of their shadings of meaning.
5. Distinguish among related adjectives (e.g., *thin*, *slender*, *skinny*, *scrawny*; *irritated*, *mad*, *angry*, *furious*) to gain a sense of their shadings of meaning.

Acquiring vocabulary

Core Standards — Students can and do:

6. Acquire and use new vocabulary taught directly and gained through reading and conversations.

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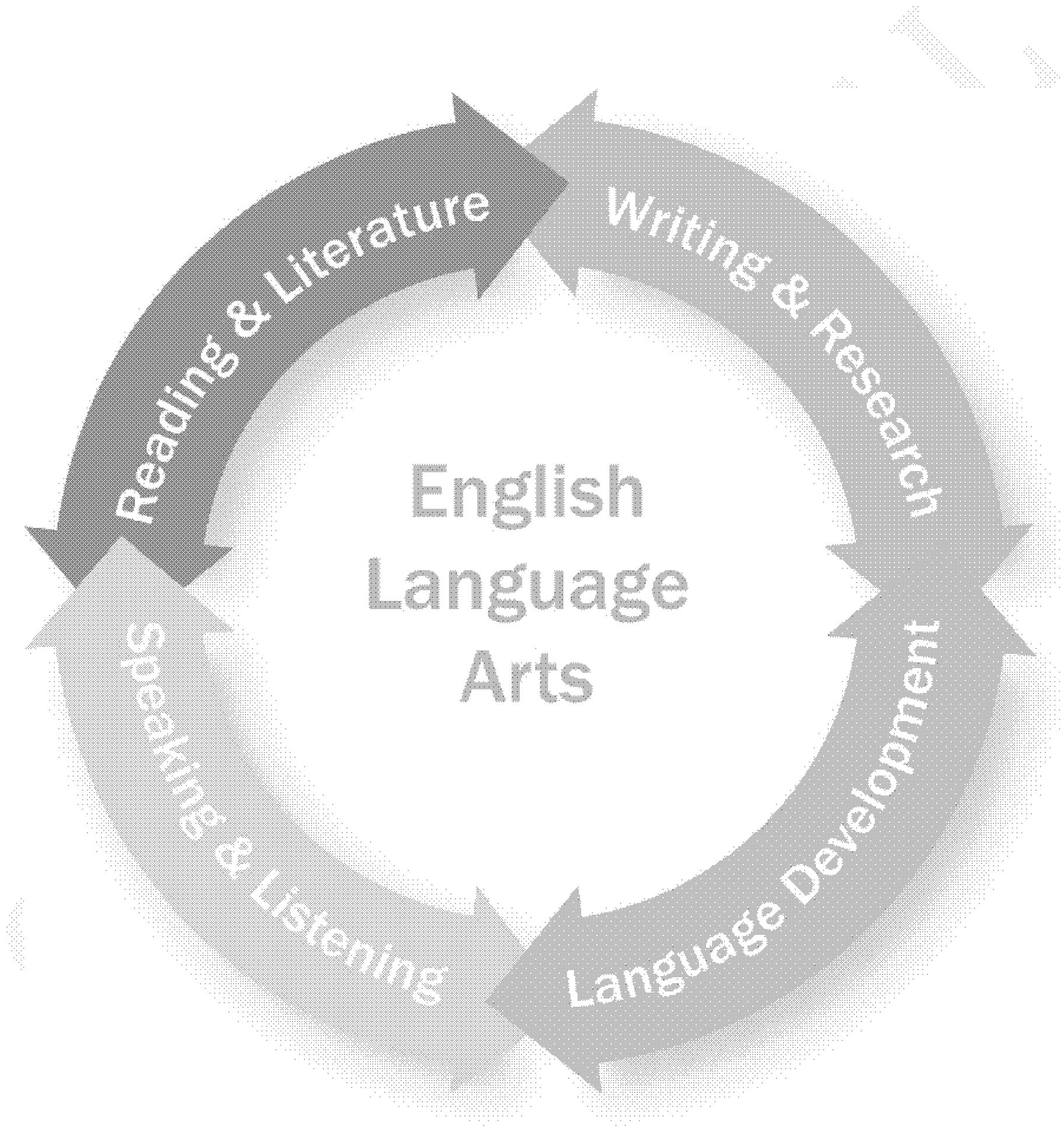
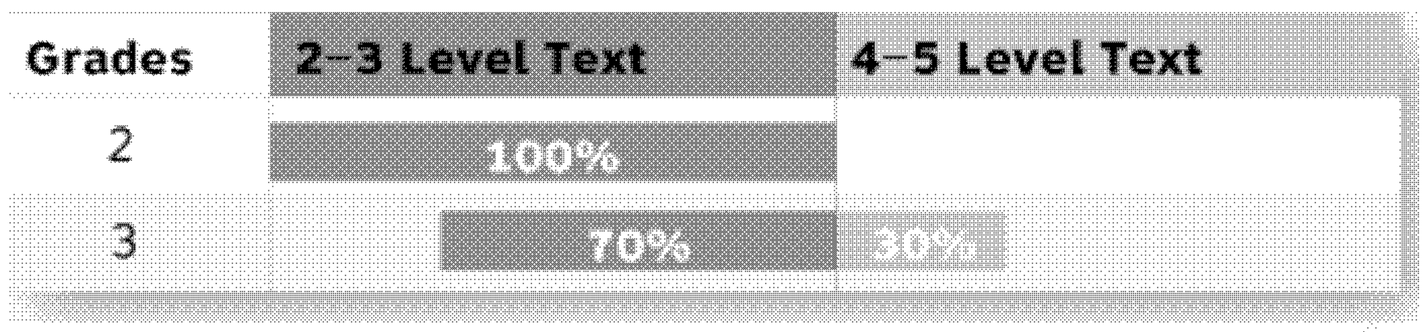
English Language Arts

Grade 3



Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grade



While advancing through the grades, students must engage with texts of steadily increasing complexity.

- **In grade 3**, students focus on reading texts in the 2–3 grade band level text (70 percent) independently and are introduced to texts in the 4–5 grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 2–3

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts[13]	Quantitative Measures of Texts
• *Structure:* Explicit, simple, conventional; simple graphic representations are supplementary to meaning; texts are relatively short • *Purpose:* Single; explicitly stated • *Style and Language:* Familiar, accessible, plain; few literary devices; mostly clear, everyday language; limited use of Tier 2 and 3 words and figurative language • *Richness:* A few ideas/concepts; concrete; low information density • *Relationships:* A few connections; explicit • *Knowledge Demands:* Ability to handle simple themes and fantastical elements as well as draw upon common, everyday experiences; general background knowledge and familiarity with genre conventions required; some everyday and general content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

[13] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for Grade 3

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue, scenes, and brief familiar scenes.*	*At this level, includes nursery rhymes, and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[14]

My Father's Dragon by Ruth Stiles Gannett, illustrated by Ruth Chrisman Gannett (1948)

Sarah, Plain and Tall by Patricia MacLachlan (1985)

The One-Eyed Giant (Book One of Tales from the Odyssey) by Mary Pope Osborne (2002)

"Knoxville, Tennessee" by Nikki Giovanni (1968)

"Eating While Reading" by Gary Soto (1995)

Read Alouds:

"How the Camel Got His Hump" in *Just So Stories* by Rudyard Kipling (1902)

Illustrative Informational Text

A Medieval Feast by Aliki (1983)

So You Want to Be President? by Judith St.George, illustrated by David Small (2000)

Bat Loves the Night by Nicola Davies, illustrated by Sarah Fox-Davies (2008)

Moonshot: The Flight of Apollo 11 by Brian Floca (2009)

[14] See Appendix B for other texts illustrative of Grades 2-3 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell what the text says explicitly and make inferences required to understand the text.
2. Identify lessons or topics of the text and the key details that support them.
3. Describe in detail a specific character, event, or topic in the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. ask and answer clarifying questions (e.g., how, why, where, when, who, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
b. identify or infer the moral or lesson in well-known stories, fables, folktales, or myths
c. describe how major events in a story often lead from problem to solution
d. examine a specific incident in a story, narrative, or drama in depth, and establish when, where, and why it occurs
e. describe characters based upon what they say and do

Informational Text

a. accurately restate key information provided by the text
b. ask and answer clarifying questions (e.g., how, why, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
c. identify the main idea and supporting details and facts in a text
d. explain the topic of each paragraph in a multi-paragraph text
e. identify specific events in historical or scientific texts and discuss what happened, as well as where, when, and why it happened, according to facts taken from the text

Reading Foundations

Phonics and Word Recognition

1. Students know and apply grade-level phonics and word analysis skills in decoding words.

   a. identify and know the meaning of the most common prefixes and derivational suffixes (e.g., *un-*, *re-*, *mis-*, *-ful*, *-tion*, *-able)*
   b. decode regularly spelled single-syllable and multi-syllable words (e.g., *vocabulary*, *refrigerator*, *terrible*, *frightening*)
   c. read grade-appropriate irregularly spelled words by sight
   d. use phonics and word analysis to identify visually new words when reading

Observing craft and structure

Core Standards — Students can and do:

4. Explain the meanings of words and phrases as they are used in the text.
5. Gain familiarity with different ways of presenting stories and information in text.
6. Compare and contrast different versions of the same story or informational texts on the same subject.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. recognize sensory details and how they are used to describe events, feelings, and objects
b. describe the different ways poets use rhyme, rhythm, and sensory images to convey a topic or message
c. identify repetitions in phrases, refrains, or sounds in poems and songs
d. describe story elements, including characters, setting, the problem, and how it is resolved
e. discuss stories written by the same author about similar characters or compare different versions of similar well-known tales and myths from various cultures

Informational Text

a. locate key words, facts, or other details using features of texts (e.g., captions, headings, glossaries, indexes, electronic menus, and icons)
b. distinguish between writing that is based on real events and writing that is based on fantasy or fictional events
c. combine information from two different parts of a text and identify how they are related (e.g., chronology, causation)
d. after reading two passages on the same subject, combine the information to more fully describe a topic

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Locate and use information from graphs, illustrations, and electronic sources.
8. Identify and understand words and phrases that indicate logical relationships.
9. Identify who is telling the story or providing information at any given point in the text.

Reading Foundations, continued

Developing Fluency

2. Students read with sufficient accuracy and fluency to support comprehension.

   a. demonstrate increased accuracy, fluency, and expression on successive readings of a text
   b. use context to confirm or self-correct word recognition and understanding, rereading as necessary
   c. read at least 20 minutes each day, in school or out

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. efficiently navigate stories in print and electronic text and explain how images and illustrations connect to and clarify the content
b. identify who is telling the story or who is speaking in a drama

Informational Text

a. use information from visual elements of print and electronic texts (e.g., graphs, maps, charts, illustrations, photographs, diagrams) and explain how they help a reader understand the text
b. identify words (e.g., *such as*, *because*, *therefore*, *in order to*, *since*) that logically connect ideas in sentences and paragraphs

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding text.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[15]

Narratives

a. set the time, indicate a location, introduce characters, or enter immediately into the story line to engage the reader
b. recount a single, well-elaborated event or a sequence of events that unfold naturally using temporal words, phrases, and clauses
c. tell what the narrator thought or felt
d. develop a focus, provide pacing, and include only relevant information
e. develop a character through the description of external behavior
f. provide descriptive details
g. employ dialogue and other narrative strategies
h. provide a satisfying conclusion that is reflective and/or that effectively ties up loose ends

Informative and Explanatory Texts

a. produce an introduction that names the topic and provides at least one general detail about it
b. create an organizational structure that presents similar information together, frequently patterned after chapter book headings or picture books
c. use adequate, relevant, and specific facts and definitions to develop points
d. logically categorize details and facts drawn from personal experience and other sources
e. use linking words, such as *also*, *another*, *and*, and *more*, to connect ideas within categories of information, and use headers to signal groupings
f. include only appropriate information
g. include a concluding sentence or section

Arguments (opinions)

a. introduce the topic or book(s) directly, and attempt to capture the reader's interest
b. state an opinion relative to the topic (e.g., *This is a good book* or *John is a good friend*)
c. provide facts and details to support the opinion
d. create a list-like organizing structure that provides reasons for the opinion
e. use appropriate words to link and organize opinions and reason(s) (e.g., *because*, *another*, *and*, *also*)
f. refer to the text(s) when writing about literature
g. provide a concluding statement, reflection, and/or recommendation

[15] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

Speaking and Listening Standards

Listening critically and participating productively

Core Standards — Students can and do:

1. Participate productively in small groups and as a class, engaging in a series of oral exchanges about texts and topics.
2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by paraphrasing the information.

Standards — Students can and do (by key communication type):

Classroom discussions and participating productively

a. engage in conversations on familiar topics
b. paraphrase the key information or ideas of others presented orally or through other media
c. inquire about oral or visual presentations to deepen understanding or clarify comprehension
d. link additions to conversation to the previous remarks of others
e. participate productively by listening politely to the ideas of others, taking turns speaking, and extending their ideas in light of discussions

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences and ideas, thinking about the needs of their listeners.
4. Speak audibly and clearly at an understandable pace.

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. recount stories or experiences with descriptive details by answering who, what, where, when, how, and why questions about them
b. report on a topic, including appropriate facts and details
c. use appropriate tone to express ideas, feelings, and needs clearly
d. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

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Language Development Standards

Conventions

By grade 3, students have learned the foundations of written and spoken language, including letter, word, and sentence formation and crucial forms of punctuation. They ensure agreement between subject and verb and between pronoun and antecedent in simple situations. Students use quotation marks to indicate dialogue. They know most of the conventions of spelling and consult references to look up words when they still have difficulty. They use precise everyday language to describe and begin to consider the effects of word choice in writing and speaking.

Key Terms: subject-verb and pronoun-antecedent agreement, comma splice, fragment, run-on, quotation mark

Conventions of language and writing

Core Standards — Students can and do:

1. Group related ideas into a paragraph.

Grammar and usage

Core Standards — Students can and do:

2. Generate complete sentences, avoiding fragments, comma splices, and run-ons.*
3. Ensure subject-verb and pronoun-antecedent agreement.*

Mechanics

Core Standards — Students can and do:

4. Use quotation marks in dialogue.
5. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing regular words.
6. Consult reference materials, including dictionaries, to check and correct spellings.

Word choice and style

Core Standards — Students can and do:

7. Use precise everyday language.
8. Choose words for effect.*[16]

[16] Conventions standards noted with an asterisk (*) need to be revisited by students in subsequent grades. See Appendix A for a full listing.

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In grade 3, students use their repertoire of strategies to determine and clarify the meaning of unknown and multiple-meaning words. They know that words are sometimes used in nonliteral ways and can use that knowledge to help them understand common idioms. They learn and can paraphrase many common idioms and sayings. They recognize that words have nuances in meaning and rely on context and background knowledge to sort among related words that describe abstract concepts. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly.

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - using prefixes and suffixes when it is a multimorpheme word (e.g., *thoughtless*, *recycle*, *unforgettable*)
   - determining how it is used in a sentence when reading
   - consulting reference materials, including glossaries and dictionaries, both print and digital
2. Determine the meaning of multiple-meaning words by using context.
3. Distinguish between literal and nonliteral uses of language.
4. Paraphrase the meaning of common idioms and sayings.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

5. Distinguish among related words that describe states of mind, degrees of certainty, or other abstract concepts (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*).

Acquiring vocabulary

Core Standards — Students can and do:

6. Acquire and use new vocabulary taught directly and gained through reading and conversations.

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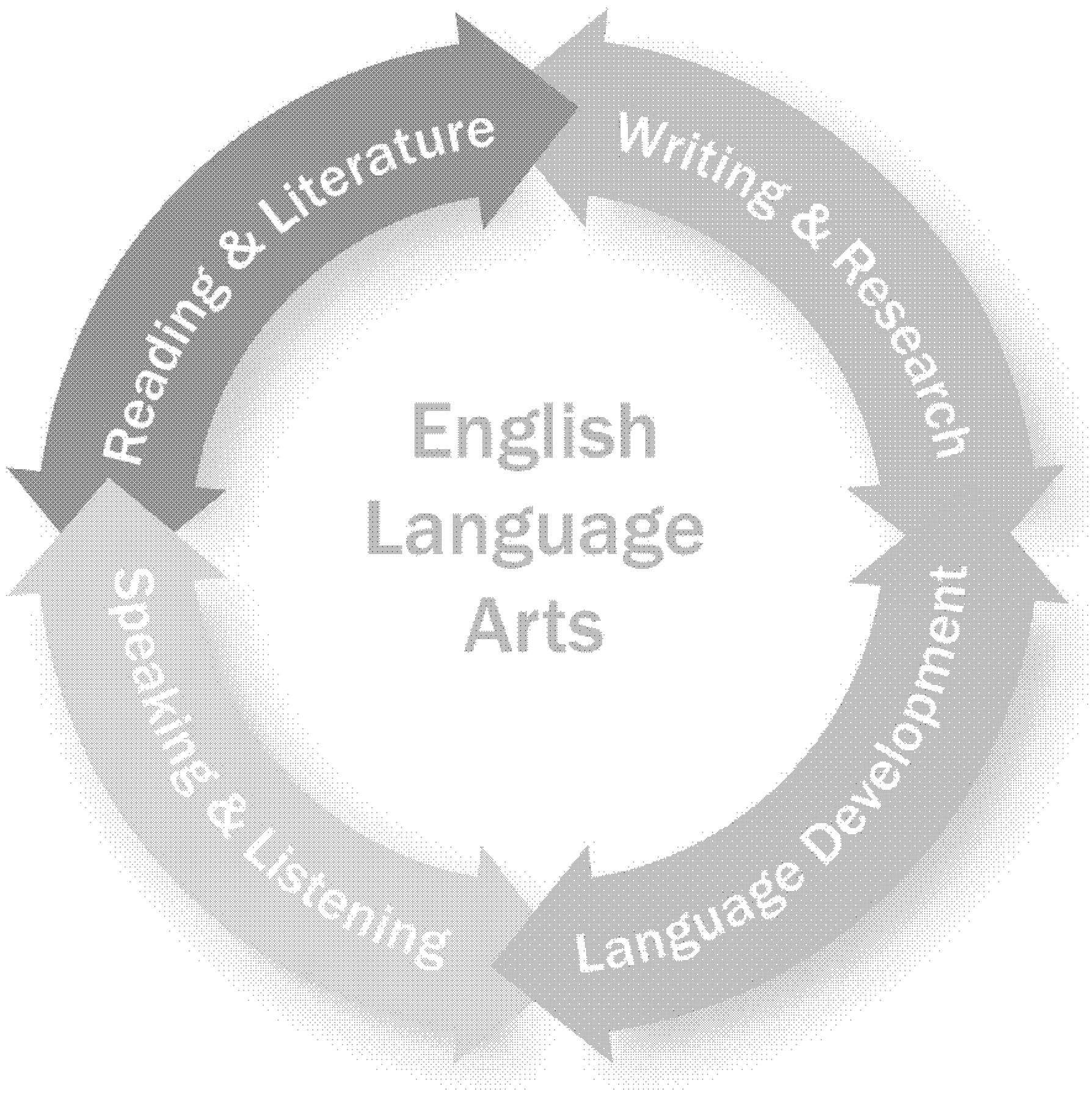
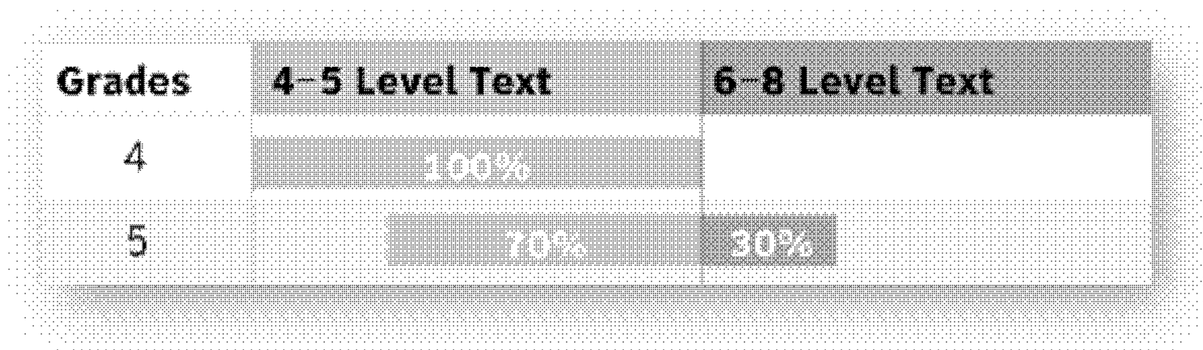
English Language Arts

Grades 4–5



Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grade



While advancing through grades 4–5, students must engage with texts of steadily increasing complexity.

- **In grade 4**, students focus on reading texts in the 4–5 grade band level with scaffolding likely required for texts at the high end of the range.
- **In grade 5**, students focus on reading in the 4–5 grade band level (70 percent) independently and are introduced to texts in the 6–8 grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 4–5[17]

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts	Quantitative Measures of Texts
• *Structure:* Largely explicit and direct; graphic representations are supplementary to meaning; texts are of increasing length • *Purpose:* Single or twofold; clearly indicated • *Style and Language:* Moderately accessible; some literary devices; some everyday language; some use of Tier 2 and Tier 3 words and figurative language • *Richness:* Some ideas/concepts; mostly concrete; moderate information density • *Relationships:* Some connections; largely explicit • *Knowledge Demands:* Ability to handle fairly simple themes, consider a perspective somewhat different from one's own, and understand unfamiliar experiences; general background knowledge and familiarity with genre conventions required; some general and discipline-specific content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

[17] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for Grades 4–5

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue and brief familiar scenes.*	*At this level, includes nursery rhymes, and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials and digital media sources on a range of topics.*

Illustrative Texts for Narratives, Drama, and Poetry[18]	Illustrative Informational Texts
Alice in Wonderland by Lewis Carroll (1865) *The Little Prince* by Antoine de Saint-Exupery (1943) *Bud, Not Buddy* by Christopher Paul Curtis (1999) "The Echoing Green" from *Songs of Innocence* by William Blake (1789) "Casey at the Bat" by Ernest Lawrence Thayer (1888) "Words Free As Confetti" by Pat Mora (1996) *Where the Mountain Meets the Moon* by Grace Lin (2009)	*Discovering Mars* by Melvin Berger (1992) *Hurricanes: Earth's Mightiest Storms* by Patricia Lauber (1996) "Ancient Mound Builders" by E. Barrie Kavash from *Cobblestone* (2003) *Volcanoes* by Seymour Simon (2006) "Kenya's Long Dry Season" by Nellie Gonzalez Cutler from *Time for Kids* (2009) "Seeing Eye to Eye" by Leslie Hall from *National Geographic Explorer* (2009)

[18] See Appendix B for other texts illustrative of Grades 4-5 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Determine what the text says explicitly and make inferences required for understanding; explain how those inferences stem from the text.
2. Articulate the main ideas and themes of the text and provide a summary that captures the key supporting details.
3. Describe in detail two or more characters, events, or topics in the text and explain how they are related to one another.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. determine the theme of a story or drama, basing the understanding of theme on how characters adapt or change in response to the challenges posed in the plot
b. summarize accurately the significant events of a play or narrative in chronological order, describing where, when, why, and how specific actions take place
c. describe characters based on evidence from their thoughts, words, deeds, and interactions with others
d. describe the setting in detail, drawing on evidence of the time, place, and other cues
e. determine the theme of a poem, basing the understanding of theme on the key observations, images, or statements in a poem

Informational Text

a. outline the main and supporting ideas in the text and provide an accurate summary
b. identify the topic sentence and gist of each paragraph in a multi-paragraph text
c. describe related events in a history text or related topics in a science text and explain the relationships between the events or topics

Observing craft and structure

Core Standards — Students can and do:

4. Explain the meanings of words and phrases in the text, distinguishing literal and figurative uses.
5. Comprehend literature and information presented in a range of structures.
6. Compare and contrast texts written on the same topic or theme and explain how they are different and similar.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. describe the sensory details in texts and distinguish the use of literal versus figurative language
b. observe and explain how words with similar meanings can have different connotations
c. identify the meaning of figurative phrases and culturally significant characters found in mythology that are integral to understanding other works of literature and texts (e.g., *Herculean*, *Pandora's box*)
d. identify how narratives and plays are structured to describe the progress of characters through a series of events and challenges

e. identify rhymes and other repetitions of sounds that supply rhythm and pattern in poems and narrative prose
f. compare a narrative or a play with a presentation in another format, such as film, stage, or interactive text, and note what is surprising or different about the alternative version
g. compare works of literature on the same topic or with a similar theme

Informational Text

a. explain the meaning of key words and terms as they are used in the text
b. understand information drawn from a variety of texts with different structures, such as chronological, compare-and-contrast, or as a chain of causes and effects
c. identify and use text features (e.g., bold print, key words, topic sentences, hyperlinks, electronic menus, and icons) to locate information quickly and aid in comprehension
d. compare and contrast related accounts on the same or similar topics by different authors, by analyzing their content and perspectives

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Explain and use information presented graphically or visually in print, videos, or electronic texts.
8. Outline the information or evidence used to support an explanation or argument, determining which points support which key statements.
9. Determine the point of view or purpose that guides how events or ideas are described.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. identify the narrator of a story and explain how different stories are narrated from different perspectives
b. compare accounts of historical events and figures or natural phenomena with their depiction in a fictional work

Informational Text

a. explain how factual information presented graphically or visually (e.g., maps, charts, diagrams, timelines, animations, and other interactive visual elements) aids in the comprehension of print and electronic texts
b. explain how authors support their specific claims with evidence, including which evidence supports which claims
c. determine the author's purpose and how that is reflected in the description of the events and ideas

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding texts.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and arguments that demonstrate an awareness of audiences that are familiar and known to the student.

Conducting research

Core Standards — Students can and do:

2. Perform short, focused research tasks that build knowledge by exploring aspects of a single topic.
3. Gather information from experience, as well as print and digital resources.
4. Determine the accuracy and relevance of the information gathered to answer specific questions.
5. Restate information from source materials in one's own words, through summary or paraphrase.
6. Provide basic bibliographic information for print and digital sources.

Revising writing

Core Standards — Students can and do:

7. With guidance and support from peers and adults, strengthen writing through revision, editing, or beginning again to maintain a clear focus throughout.

Using tools and technology

Core Standards — Students can and do:

8. Use technology and other tools to produce, revise, and edit writing.

Developing proficiency in a range of writing

9. Create writing over extended timeframes (time for reflection and revision) and shorter timeframes (a single sitting or a day or two), responding to specific sources.

   Focus by grade level:

   Grade 4: Describing the content of literary or informational sources at the 4-5 grade band level of text complexity and content

   Grade 5: Comparing the contents of literary or informational sources at the 4-5 grade band level of complexity and content

Standards — Students can and do (by key text type):[19]

Narratives

a. orient the reader by establishing a situation, introducing characters, setting, and location, or by backfilling information after entering immediately into the storyline
b. create an organizing structure in which events are logically or causally sequenced
c. in producing a story, create a plot with an initiating event, complicating action, a climax, and a resolution
d. use a variety of temporal words, phrases, and clauses to signal sequence
e. use concrete and sensory details to develop narrative elements
f. develop the narrative using techniques such as dialogue, pacing, and reporting the narrator's thoughts
g. show both external behaviors and the internal responses of characters to events
h. provide closure and a realistic outcome of the narrative's events

Informative and Explanatory Texts

a. state the topic clearly and provide a general observation and focus
b. develop the subject using relevant facts, concrete details, quotations, or other information and examples
c. group related information logically in basic structures (paragraphs, sections) and provide headings or illustrations when useful
d. employ specialized vocabulary and a formal, objective style when appropriate
e. use appropriate links to join ideas
f. include only relevant appropriate information to demonstrate focus
g. provide a conclusion related to the information or explanation offered

Arguments (opinions)

a. introduce an opinion about a concrete issue or topic
b. support opinions with relevant reasons
c. support reasons with specific details
d. link the reasons together using words, phrases, and clauses (e.g., *because*, *since*)
e. adopt a relatively formal style for sharing and defending an opinion when appropriate to the discipline or context
f. provide a concluding statement or section that offers reflections, restatement, or recommendations consistent with the opinion presented

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively one on one, in small groups, and as a whole class, joining in discussions and making relevant points about what they have read, heard, or written.
2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by summarizing the main ideas and supporting details.

Standards — Students can and do (by key communication type):

[19] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

Classroom discussions and collaboration

a. come to discussions having read required material and, in conversation, build upon background knowledge from that material and other information known about the topic
b. demonstrate understanding of the content and ideas presented or discussed by distilling them into an accurate summary
c. ask questions to clarify or follow up on ideas or information presented orally or through other media
d. respond to questions and make comments that contribute to the topic and ideas of previous speakers
e. explain information presented graphically or visually in conjunction with other information presented orally
f. engage productively and respectfully with others during discussions, including listening actively, gaining the floor respectfully, and qualifying or justifying what they think after listening to others' questions or accounts

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences, opinions or other information, choosing material that is relevant to the topic and to the listeners.

4. Speak audibly and clearly at an appropriate and understandable pace, using formal English when indicated or appropriate (e.g., presenting ideas versus class discussion).

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. speak coherently about events, topics, or texts that focus and organize ideas in a logical sequence and include facts, details, or other information that support the main ideas
b. use appropriate volume, phrasing, and pace for clarity
c. read aloud prose and poetry, with appropriate emotion and fidelity to the text

Language Development Standards

Conventions

In grades 4–5, students heighten their ability to situate and describe using language that is increasingly precise and vivid. They form and use verbs of various tenses to locate people, actions, and events in time, and they correctly use adjectives and adverbs to modify. Students begin to gain control of frequently confused words (e.g., *effect*, *affect*) and edit writing to remove language that is not idiomatic. Their mastery of capitalization is complete. They use punctuation to separate items in a series and a comma to distinguish an introductory element from the main part of the sentence. Students mark titles in conventional ways. They understand how to quote and use quotation marks. Their spelling is conventional. Their language is increasingly topic specific, precise, and varied, and they manipulate sentence structure for effect.

Key Terms: adjective; adverb; interjection; preposition; simple, progressive, and perfect tense

Conventions of language and writing

Core Standards — Students can and do:

1. Maintain the focus of a paragraph on a topic through structural elements such as main ideas, supporting sentences, and transitions.

Grammar and usage

Core Standards — Students can and do:

2. Form and use the simple (e.g., *I walked*, *I walk*, *I will walk*), progressive (e.g., *I was walking*, *I am walking*, *I will be walking*) and the perfect (e.g., *I had walked*, *I have walked*, *I will have walked*) verb tenses.
3. Recognize and correct inappropriate shifts in verb tense.*
4. Form and choose between adjectives and adverbs (including comparative and superlative forms), placing them appropriately within the sentence.*
5. Correctly use frequently confused words.*
6. Use idiomatic language.*

Mechanics

Core Standards — Students can and do:

7. Capitalize the first word in quotations as appropriate and other important words, such as section headers.
8. Use punctuation to separate items in a series.*
9. Use a comma to separate an introductory element from the rest of the sentence.
10. Use underlining, quotation marks, or italics to indicate titles of works.
11. Use quotation marks to mark direct speech and quotations from a text.
12. Spell grade-appropriate words correctly, consulting references as needed.*

Word choice and style

Core Standards — Students can and do:

13. Use specialized, topic-specific language to convey ideas precisely.*
14. Use figurative language to create images or make comparisons and connections between people, objects, or ideas.*
15. Use punctuation for effect.*
16. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.*[20]

Focus by Grade-Level
Grade 4: Distinguish one idea or thing from another (Conventions Standards #'s1-3, #8, #9, #11)
Grade 5: Word choice (Conventions Standards #'s 4-6, #13, #14)

[20] Conventions standards noted with an asterisk (*) need to be revisited by students in subsequent grades. See Appendix A for a complete listing.

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In grades 4–5, students are capable of selecting among a wide range of strategies—analyzing the word itself, using localized context clues (particularly at the sentence level), and consulting reference materials—to determine and clarify the meaning of unknown and multiple-meaning words. They develop the habit of verifying their inferences of word meanings. They are able to interpret simple figurative language found in what they read. They learn and can paraphrase many common idioms, proverbs, and adages. They make distinctions among words based on connotation. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly. This includes a focus on "Tier 2" words and phrases (those that commonly appear in writing but not in spoken language), "Tier 3" words and phrases (those that are specific and important to particular disciplines).[21]

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - analyzing the word's sounds, spelling, and meaningful word parts
   - using semantic clues in sentences, such as definitions, examples, or restatements included within the text
   - using syntactic clues, such as using its position within the sentence as a guide to whether it represents a thing or an action
   - consulting reference materials, including glossaries, dictionaries, and thesauruses, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or by looking up the word in a dictionary).
4. Interpret figurative language, including simple similes and metaphors.
5. Paraphrase the meaning of common idioms, adages, and proverbs.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

6. Distinguish a word from other words with similar but not identical meanings (synonyms).

Acquiring vocabulary

Core Standards — Students can and do:

7. Acquire and use a grade-appropriate vocabulary of Tier 2[22] words taught directly and gained through reading.
8. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.
9. Know and use words and phrases that signal contrast, addition, or other logical relationships (e.g., *however*, *although*, *nevertheless*, *similarly*, *moreover*, *in addition*).

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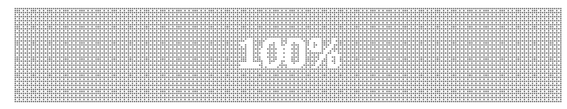
[21] Beck I. L., McKeown, M.G. & Kucan, L. (2002). *Brining Words to Life; Robust Vocabulary Instruction*, New York; Guilford Press

Grade 4 English Language Arts: Focus for Instruction

Reading and Literature

In grade 4, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read text at the 4-5 grade band level independently, with scaffolding likely required for texts at the high end of the range.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 100% text at the 4-5 grade band level



Writing and Research

In grade 4, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by describing the contents of literary or informational sources at the 4-5 grade band level of complexity and content

Speaking and Listening

In grade 4, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentation of ideas and information

Language Development

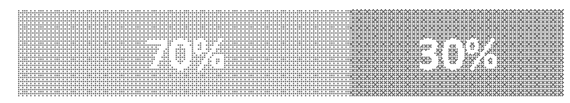
In grade 4, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Distinguish one idea or thing from another:
  - Maintain the focus of a paragraph on a topic… (Conventions Standard #1)
  - Form and use the simple, progressive and perfect verb tenses … (Conventions Standard #2)
  - Recognize and correct inappropriate shifts in verb tense. (Conventions Standard #3)
  - Use punctuation to separate items in a series … (Conventions Standard #8)
  - Use a comma to separate an introductory element … (Conventions Standard #9)
  - Use quotation marks to mark direct speech and quotations … (Conventions Standard #11)

Grade 5 English Language Arts: Focus for Instruction

Reading and Literature

In grade 5, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read text at the 4-5 grade band level independently and are introduced to 6-8 grade band "stretch" texts, which will likely require scaffolding.



- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 70% text at the 4-5 grade band level, 30% text at the 6-8 grade band level

Writing and Research

In grade 5, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. There also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by comparing the contents of literary or informational sources at the 4-5 grade band level of complexity and content.

Speaking and Listening

In grade 5, students apply the speaking and listening standards in different contexts.

- Speaking and listening Standards applied in different contexts: classroom discussion and collaboration as well as in presentation of ideas and information.

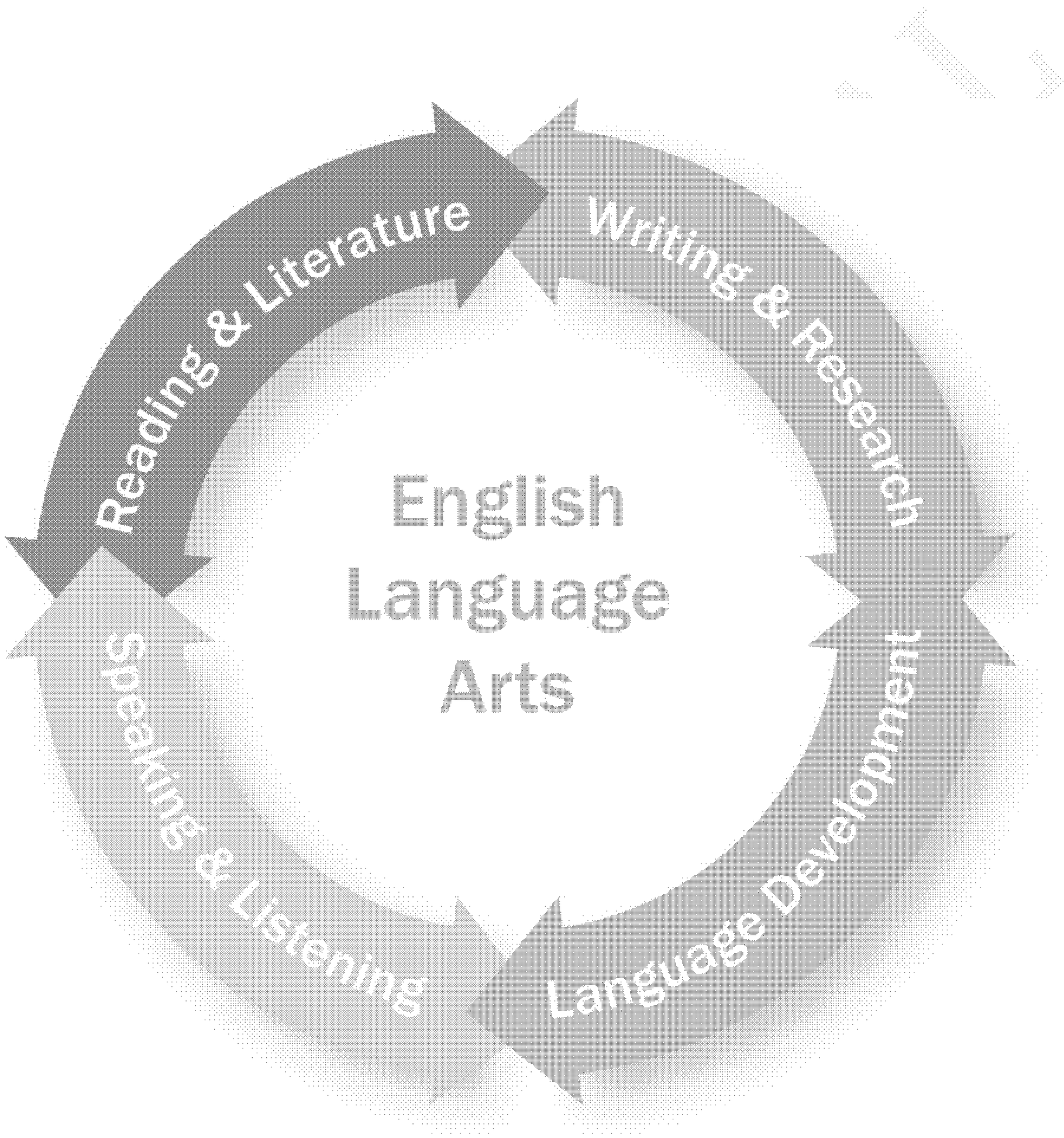
Language Development

In grade 5, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions,

- Vocabulary standards applied to both reading, writing, speaking and listening
- **Grade-specific conventions focus:** Word choice
  - Form and choose between adjectives and adverbs. (Conventions Standard #4)
  - Correctly use frequently confused words. (Conventions Standard #5)
  - Use idiomatic language. (Conventions Standard #6)
  - Use specialized, topic specific language to convey ideas precisely. (Conventions Standard #13)
  - Use figurative language to create images … (Conventions Standard #14)

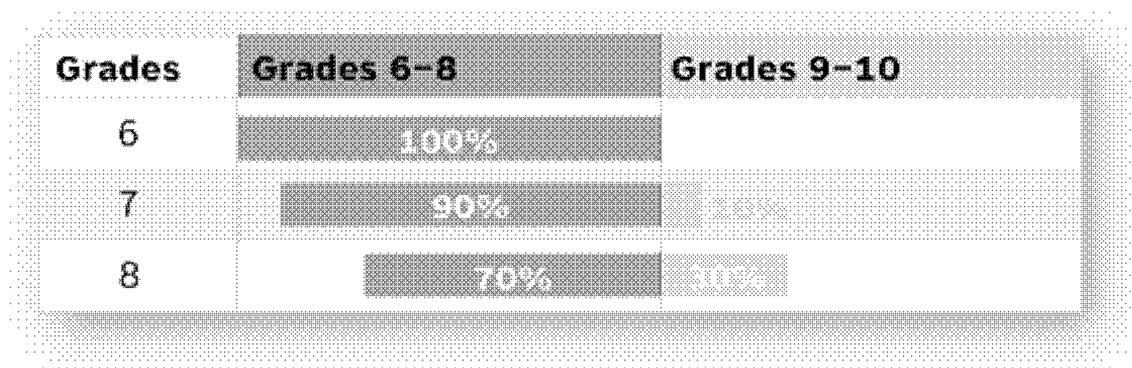
English Language Arts

Grades 6–8



Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grade



While advancing through grades 6–8, students must engage with texts of steadily increasing complexity.

- **In grade 6**, students focus on reading texts in the 6–8 grade band level with scaffolding likely required for texts at the high end of the range.
- **In grade 7**, students focus on reading texts in the 6–8 grade band level (90 percent) independently and are introduced to texts in the 9–10 grade band level as "stretch" texts (10 percent), which will likely require scaffolding.
- **In grade 8**, students focus on reading texts in the 6–8 grade band level (70 percent) independently as well as sustained practice with texts in the 9–10 grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 6–8[23]

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts	Quantitative Measures of Texts
• *Structure:* Largely implicit and subtle; graphic representations are essential to meaning; texts are of increasing length • *Purpose:* Single or multiple; subtly stated • *Style and Language:* Moderately demanding; several literary devices; consistent use of Tier 2 and 3 words and figurative language • *Richness:* Several ideas/concepts; mostly abstract; moderate information density • *Relationships:* Several connections; largely implicit • *Knowledge Demands:* Ability to handle fairly challenging themes, consider multiple perspectives, and understand unfamiliar experiences; cultural and historical knowledge useful for understanding characters, settings, and allusions; some discipline-specific content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

[23] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for Grades 6–8

Narratives	Drama	Poetry	Informational Text
At this level, includes the subgenres of adventure stories, biographies, memoirs, historical fiction, mysteries, folktales, legends, fables, tall tales, myths, fantasy, science fiction, realistic fiction, and graphic novels.	*At this level, includes one-act and multi-act plays both as text and film.*	*At this level, includes the subgenres of narrative poems, lyrical poems, free verse, odes, ballads, and epics.*	*At this level, includes such subgenres as exposition and argument in the form of essays, opinion pieces, speeches, opinion pieces as well as other documents and digital media sources on a range of topics.*

Illustrative Texts for Narratives, Drama, and Poetry[24]	Illustrative Informational Texts
Little Women by Louisa May Alcott (1869) *The Adventures of Tom Sawyer* by Mark Twain (1876) *A Wrinkle in Time* by Madeline L'Engle (1962) *The Dark Is Rising* by Susan Cooper (1973) *Black Ships before Troy: The Story of the Iliad* by Rosemary Sutcliff (1993) *A Midsummer Night's Dream* by William Shakespeare (1596) "Oh Captain, My Captain" by Walt Whitman (1865) "Stopping by a Wood on a Snowy Evening" by Robert Frost (1923) "I, Too" by Langston Hughes (1925)	*Preamble and First Amendment to the United States Constitution* by United States (1787, 1791) ** *Narrative of the Life of Frederick Douglass an American Slave* by Frederick Douglass (1845) "Gettysburg Address"** by Abraham Lincoln (1863) "Blood, Toil, Tears and Sweat" by Winston Churchill (1940) *Travels with Charley: In Search of America* by John Steinbeck (1962) *I Know Why the Caged Bird Sings* by Maya Angelou (1969)

Seminal historical texts that all students are expected to read

[24] See Appendix B for other texts illustrative of Grades 6-8 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Read the text closely to determine what the text says explicitly and to make logical inferences from it; cite text evidence to support understanding in discussion and in writing.
2. Articulate the text's main ideas and themes and provide a summary that captures the key supporting details, without taking a position or expressing an opinion.
3. Explain in detail how events, ideas, and characters unfold in the text and interact with one another.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. infer themes when they are not explicitly stated and provide evidence on which those inferences are based
b. analyze the development of the narrative, describing how particular incidents advance or foreshadow the plot
c. recognize how the setting unfolds over the course of the text and describe its significance to the work
d. build on an author's explicit descriptions and other evidence to draw reasonable conclusions about characters and how they interact, change, and influence the central events
e. describe how a play unfolds and how particular lines of dialogue propel the action, reveal aspects of a character, or provoke a decision
f. analyze how patterns of imagery in a poem contribute to its overall theme or meaning

Informational Text

a. summarize a text without expressing a personal opinion by drawing on the author's specific description of events or information
b. determine how key ideas or concepts build on one another to reveal an overarching theme or idea

Observing craft and structure

Core Standards — Students can and do:

4. Interpret the meanings of words and phrases, including connotative and figurative meanings, and explain how specific word choices shape the meaning of the text.
5. Explain the text's structure, including how specific sentences, paragraphs, and larger portions build on each other and contribute to the whole of the text.
6. Compare and contrast how two or more texts written on similar topics or themes differ in their focus and key details.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. analyze how the author's choice of specific words or details contributes to the understanding of events and characters or to the tone of a narrative
b. trace the specific comparisons made by similes, metaphors, and analogies and explain how they contribute to the meaning of the text
c. compare similar ideas and themes as well as character types in myths, folktales, and legends from different cultures

d. analyze the impact of line breaks and stanzas on the meaning of a poem and acts, scenes, and stage directions on the meaning of a drama
e. compare the events, characters, ideas, and themes in texts written by the same author or on similar topics or themes

Informational Text

a. interpret the connotative meaning of closely related words and phrases as they are used in the text (e.g., *angry* versus *irate*)
b. describe how an author organizes the explanation or argument, as well as the ways in which the text's structure, language, and examples support its purpose
c. examine the structure of a Web site or other electronic text and describe how it organizes information and links to additional sources

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Interpret information presented graphically or visually in print, videos, or electronic texts and explain how this information clarifies and contributes to the text.

8. Analyze the structure and content of an argument, including its main claims or conclusions, supporting premises, and evidence.

9. Determine the point of view or purpose represented in the text, assessing how it shapes the content.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. compare the points of view from which different novels and poems are told, as well as the viewpoints of different characters in a drama
b. compare the fictional portrayal of a time, place, or character to historical sources from the period to determine which historical details have been emphasized, deleted, or changed in the fictional portrayal

Informational Text

a. interpret factual and quantitative data presented in diverse formats (including maps, charts, and diagrams as well as electronic media) and explain how this information clarifies or contributes to the text
b. distinguish between fact, opinion, and reasoned judgment presented in essays, speeches, and critiques
c. evaluate the strength of an argument's premises and specific claims as well as the degree to which each is supported by evidence
d. compare and contrast the viewpoints and use of evidence of two different authors writing about the same topic

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding texts.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and arguments that match purpose to task and address familiar as well as somewhat distant audiences (e.g., mayor, readers of school or neighborhood newspaper).

Conducting research

Core Standards — Students can and do:

2. Perform short, focused research projects that demonstrate understanding of the material under investigation and generate additional related questions for research.
3. Gather information independently using a variety of relevant print and digital resources.
4. Assess the credibility, reliability, consistency, and accuracy of the information and sources gathered.
5. Represent and cite accurately the data, conclusions, and opinions of others, quoting and paraphrasing them into one's own work while avoiding plagiarism.
6. Provide full bibliographic information for print and digital sources in a standard format and document quotations, paraphrases, and other information.

Revising writing

Core Standards — Students can and do:

7. With some guidance and support from peers and adults, strengthen writing through revising, editing, or beginning again to ensure logical organization, precision of word choice, and coherence.

Using tools and technology

Core Standards — Students can and do:

8. Use technology and other tools to produce, revise, and distribute writing, as well as interact online with others about writing, including responding to and providing feedback

Developing proficiency in a range of writing

9. Create writing over extended timeframes (time for reflection and revision) and shorter timeframes (a single sitting or a day or two), responding to specific sources.

   Focus by grade level:

   Grade 6: Conveying the main ideas and key details of literary or informational sources at the 6-8 grade band level of text complexity and content
   Grade 7: Analyzing the contents of literary or informational sources at the 6-8 grade band level of complexity and content
   Grade 8: Comparing or evaluating the contents of literary or informational sources at the 6-8 grade band level of complexity and content

Standards — Students can and do (by key text type):[25]

Narratives

a. orient the reader by establishing a situation, introducing characters, setting, and location, or by backfilling information after entering immediately into the storyline
b. create an organizing structure in which events are logically or causally sequenced
c. in producing a story, create a plot with well-structured episodes (e.g., initiating event, complicating action, resolution)
d. use a variety of temporal words, phrases, and clauses to convey sequence, to shift from one time frame to another, and to show the relationships among events
e. use relevant, specific details and literary devices, such as imagery and metaphor, purposefully to develop setting, plot, and character
f. use techniques such as pacing, dialogue, or foreshadowing to highlight the significance of events or create particular effects (e.g., tension or suspense)
g. show internal mental processes to develop complex characters and convey their needs, motives, and emotional responses
h. provide an engaging conclusion, such as a surprise ending, a reflection, or a conclusion that returns to the beginning

Informative and Explanatory Texts

a. establish the topic in an introduction that provides a sense of what's to follow
b. develop the subject through relevant and specific facts, concrete details, quotations, or other information and examples
c. organize specific information under broader concepts or categories and provide headings, figures, tables, or diagrams when useful
d. use factual, precise language and maintain a formal, objective style when appropriate
e. use strategies appropriate to informational and explanatory texts such as defining, classifying, comparing/contrasting, and cause/effect
f. use appropriate links to join ideas and create cohesion
g. provide only accurate and relevant information
h. provide a conclusion that follows logically from the information or explanation presented

Arguments

a. introduce a claim about a topic or concept
b. support claims with logical reasons
c. support reasons with detailed and relevant evidence

[25] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

d. signal the relationship between reasons, or between reasons and evidence, using words, phrases, and clauses (e.g., *another reason, such as, therefore, in addition*)
e. sustain an objective style and tone appropriate for making a case when appropriate to the discipline or context
f. include only relevant information and evidence in support of claims
g. provide a concluding statement or section that offers reflections, a restatement, or recommendations that follow from the argument

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively one on one, in small groups, and as a whole class, joining in discussions and remaining flexible and adaptable as participants.
2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by drawing well-supported inferences about the purpose and meaning of the information.

Standards — Students can and do (by key communication type):

Classroom discussions and collaboration

a. come to discussions having completed reading or other preparation in advance and draw on that material explicitly in discussions
b. determine a speaker's attitude or point of view toward a topic presented orally or through other media
c. ask questions to check understanding to clarify the main ideas and the supporting evidence of material presented orally or through other media
d. advance a discussion by answering questions precisely and sharing specific factual knowledge and observations supported by credible evidence
e. interpret information presented in visual and digital formats and explain how this data clarifies and contributes to a discussion or information presented orally
f. support productive teamwork by setting clear goals and deadlines, monitoring progress and participation of each team member, and taking different views into account and modifying own views when indicated in light of what others say

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences, opinions, and other information, gaining and maintaining the interest and response of listeners.
4. Use appropriate tone and phrasing for emphasis, demonstrating a growing command of formal English when indicated or appropriate (e.g., presenting ideas versus class discussion).

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. organize and present information about situations, topics, or texts that emphasize salient points and clarify and support claims and findings with pertinent and specific descriptions, facts, and examples in ways that are accessible and verifiable to listeners
b. use gesture, tone, phrasing, and pace for emphasis
c. incorporate visual displays and electronic media when helpful and in a manner that strengthens the presentation
d. perform dramatic readings of various prose and poetry speaking with clarity, fidelity, and responsiveness to the text, noting changes in the situation, mood, or tone of text

Language Development Standards

Conventions

In grades 6–8, students develop a firm command of sentence structure. They are able to form sentences of varying structures, place phrases and clauses properly within a sentence, and use a variety of coordinating and subordinating conjunctions to express relationships between sentence parts. Students have also mastered pronoun use, ensuring proper case, number, and person and avoiding vagueness. They understand and use verb voice and mood, and identify and correct inappropriate shifts in pronouns and verbs. Students set off nonrestrictive or parenthetical elements from the rest of the sentence with proper punctuation and use a comma before a coordinating conjunction in a compound sentence. They vary sentence patterns for effect and edit writing for redundancy and wordiness.

Key Terms: conjunction; dash; nonrestrictive/parenthetical element; indicative, imperative, interrogative, conditional, and subjunctive mood; parentheses; phrase and clause; pronoun case, number, and person; simple, compound, complex, and compound-complex sentence; active and passive voice

Grammar and usage

Core Standards — Students can and do:

1. Form compound, complex, and compound-complex sentences.
2. Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.*
3. Ensure that pronouns are in the proper case (subjective, objective, possessive).
4. Recognize and correct inappropriate shifts in pronoun number and person.*
5. Recognize and correct vague pronouns with unclear or ambiguous antecedents.*
6. Form and use verbs in the active and passive voice.
7. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.
8. Avoid inappropriate shifts in verb voice and mood.*

Mechanics

Core Standards — Students can and do:

9. Use punctuation to set off nonrestrictive/parenthetical elements with commas, parentheses, or dashes.*
10. Use a comma before a coordinating conjunction in a compound sentence.

Word choice and style

Core Standards — Students can and do:

11. 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).
12. Vary sentence patterns for meaning, reader/listener interest, and style.*
13. Choose words and phrases to express ideas precisely and concisely, avoiding wordiness and redundancy.*[26]

Grade-Level Focus
Focus by Grade-Level
Grade 6: Pronouns (Conventions Standards #s 3-5)
Grade 7: Sentence structure (Conventions Standards #1, #2, #12)
Grade 8: Verb voice and mood (Conventions Standards #s 6-8, #11)

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In grades 6–8, students continue to make use of a range of strategies to determine and clarify the meaning of unknown and multiple-meaning words. This repertoire now includes considering the word's use in a broader context that includes the content of the paragraph in which the word appears and the overarching structure of the text. They habitually verify their inferences of word meanings. They interpret a variety of figurative language found in what they read. They make distinctions among words based on connotation. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly. This includes a continuing focus on "Tier 2" words and phrases (those that commonly appear in writing but not in spoken language), "Tier 3" words and phrases (those that are specific and important to particular disciplines).

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - using knowledge of roots, prefixes, and suffixes
   - using semantic clues, such as sentence and paragraph context as well as the organizational structure of the text (e.g., cause and effect, comparison and contrast)
   - using syntactic clues, such as using its position within the sentence as a guide to whether it is a subject, verb, or object
   - consulting reference materials, including glossaries, dictionaries, and thesauruses, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or by looking up the word in a dictionary).
4. Interpret figurative language, including metaphors, similes, and idioms.

[26] Conventions standards noted with an asterisk (*) need to be revisited by students in subsequent grades. See Appendix A for a complete listing.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

5. Distinguish a word from other words with similar but not identical meanings (synonyms).

Acquiring vocabulary

Core Standards — Students can and do:

6. Acquire and use a grade-appropriate vocabulary of Tier 2 words taught directly and gained through reading.
7. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

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Grade 6 English Language Arts: Focus for Instruction

Reading and Literature

In grade 6, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read text at the 6-8 grade band level independently, with scaffolding likely required for texts at the high end of the range.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 100% text at the 6-8 grade band level

100%

Writing and Research

In grade 6, students apply the writing standards to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter time frames, responding to specific sources by conveying the main ideas and key details of literary or informational sources at the 6-8 grade band level of complexity and content.

Speaking and Listening

In grade 6, students apply the core speaking and listening standards in different contexts.

- Speaking and listening Standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 6, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions

- Vocabulary standards applied to both reading, writing, speaking and listening
- **Grade-specific conventions focus:** Pronouns
  - Ensure that pronouns are in the proper case… (Conventions Standard #3)
  - Recognize and correct inappropriate shifts… (Conventions Standard #4)
  - Recognize and correct vague pronouns… (Conventions Standard #5)

Grade 7 English Language Arts: Focus for Instruction

Reading and Literature

In grade 7, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read text at the 6-8 grade band level independently and are introduced to 9-10 grade band level "stretch" texts, which will likely require scaffolding.

- Reading Standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 90% at the 6-8 grade band level, 10% at the 9-10 grade band level

Writing and Research

In grade 7, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 6-8th grade band level of complexity and content.

Speaking and Listening

In grade 7, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 7, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

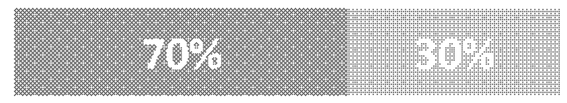
- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Sentence structure
  - Form compound, complex… (Conventions Standard #1)
  - Place phrases and clauses… (Conventions Standard #2)
  - Vary sentence patterns… (Conventions Standard #12)

Grade 8 English Language Arts: Focus for Instruction

Reading and Literature

In grade 8, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on reading text at the 6-8 grade band level independently as well as on sustained practice with 9-10 grade band level "stretch" texts, which may require scaffolding.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 70% at the 6-8 grade band level, 30% at the 9-10 grade band level



Writing and Research

In grade 8, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 6-8th grade band level of complexity and content.

Speaking and Listening

In grade 8, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

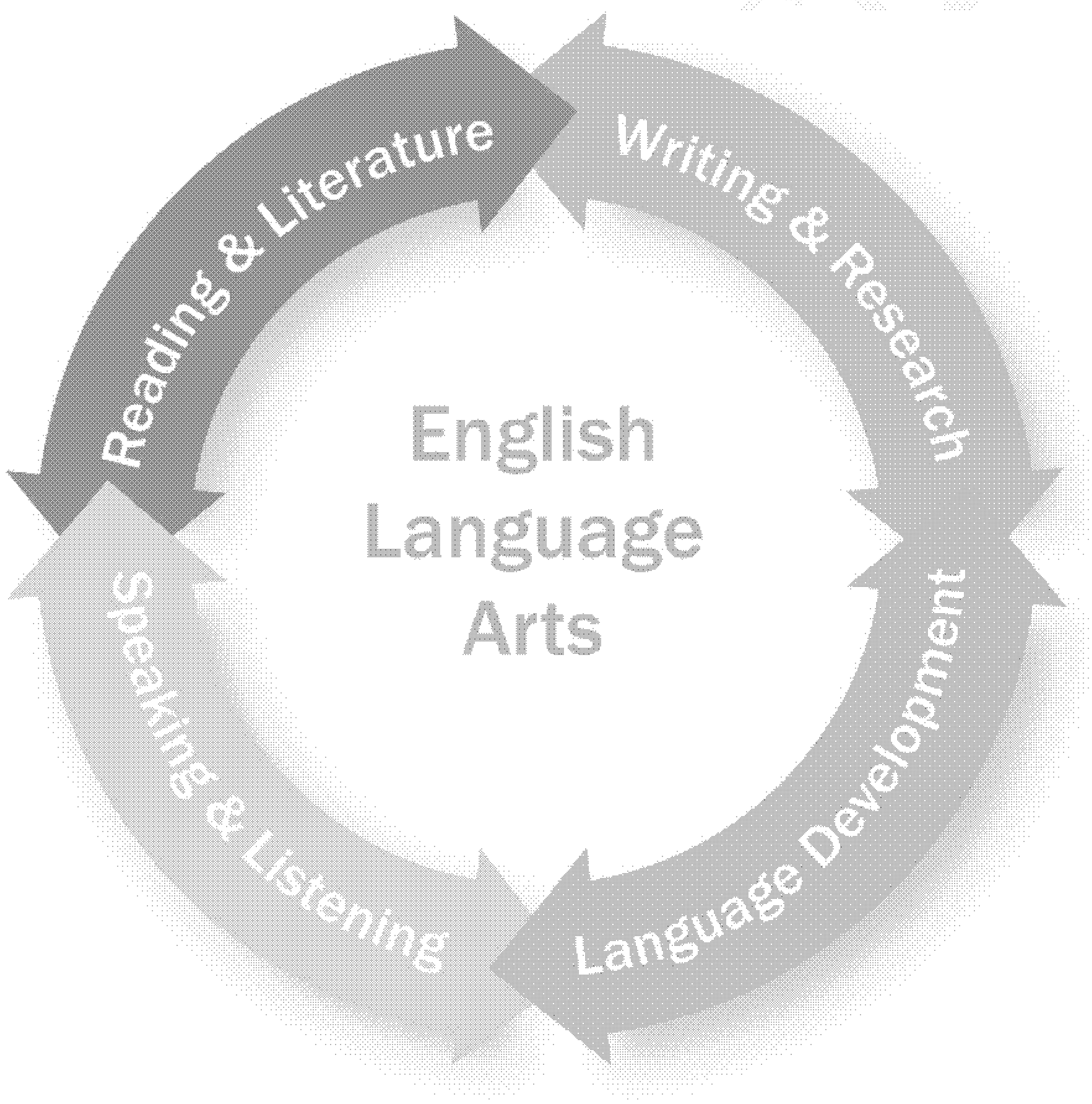
Language Development

In grade 8, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Verb voice and mood
  - Form and use verbs in the active and passive voice (Conventions Standard #6)
  - Form and use verbs in the indicative… (Conventions Standard #7)
  - Avoid inappropriate shifts… (Conventions Standard #8)
  - Use verbs in the …voice …mood… (Conventions standard #11)

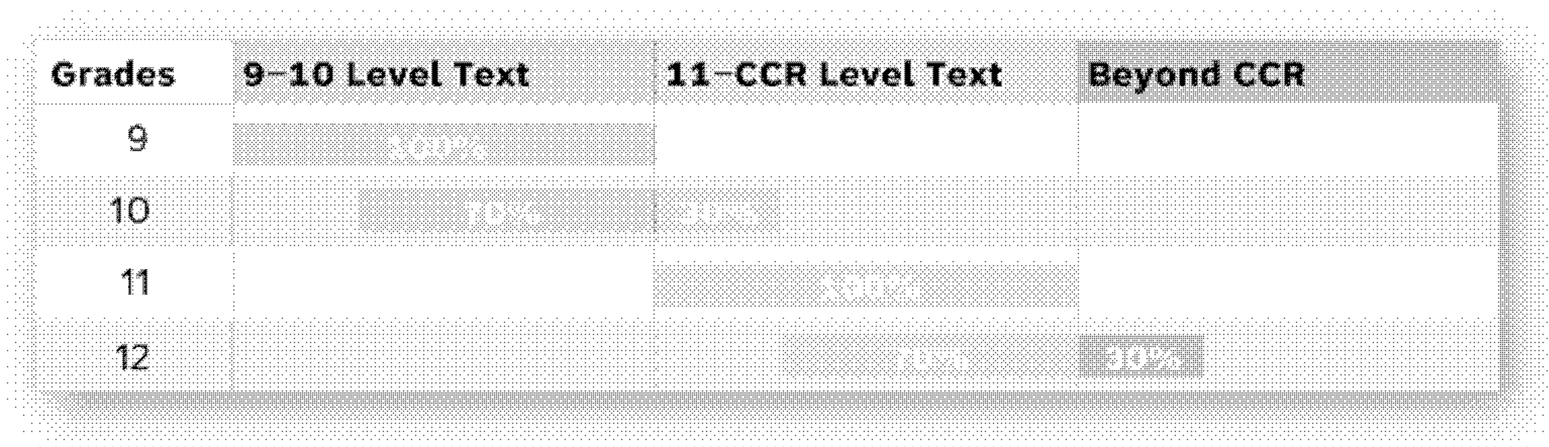
English Language Arts

Grades 9–10



Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grade



While advancing through grades 9–10, students must engage with texts of steadily increasing complexity.

- **In grade 9**, students focus on reading texts in the 9–10 grade band level with scaffolding likely required for texts at the high end of the range.
- **In grade 10**, students focus on reading texts in the 9–10 grade band level (70 percent) independently and are introduced to texts in the 11–CCR grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 9–10[27]

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts	Quantitative Measures of Texts
• *Structure:* Implicit, subtle; graphic representations are essential to meaning; texts of increasing length • *Purpose:* Multiple; often implicit • *Style and Language:* Demanding; many literary devices; extensive use of Tier 2 and 3 words and figurative language • *Richness:* Several ideas/concepts; abstract • *Relationships:* Several connections; implicit • *Knowledge Demands:* Ability to handle challenging themes, consider multiple perspectives, and understand experiences distinctly different from one's own; cultural and historical knowledge useful for understanding characters, settings, and allusions; extensive discipline-specific content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

[27] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for 9–10

Narratives	Drama	Poetry	Informational Text
At this level, includes the subgenres of adventure stories, biographies, memoirs, historical fiction, mysteries, science fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels.	*At this level, includes one-act and multi-act plays both in written form and on film.*	*At this level, includes the subgenres of narrative poems, lyrical poems, free verse, odes, ballads, and epics.*	*At this level, Includes such subgenres as exposition and argument in the form of essays, speeches, opinion pieces as well as other documents and digital media sources on a range of topics.*

Illustrative Texts for Narratives, Drama, and Poetry[28]

The Odyssey by Homer (8th century B.C.E.) translated by Robert Fagles

The Grapes of Wrath by John Steinbeck (1939)

The Killer Angels by Michael Shaara (1975)

In the Time of the Butterflies by Julia Alvarez (1994)

The Glass Menagerie by Tennessee Williams (1944)

"Song" by John Donne (1635)

"The Raven" by Edgar Allen Poe (1845)

"Loveliest of Trees" by A.E. Houseman (1896)

"I Am Offering This Poem to You" by Jimmy Santiago Baca (1977)

Seminal historical texts that all students are expected to read

Illustrative Informational Texts

"Second Inaugural Address" by Abraham Lincoln (1865)**

"State of the Union Address" by Franklin Delano Roosevelt (1941)

"Remarks to the Senate in Support of a Declaration of Conscience" by Margaret Chase Smith (1950)

"Address at the March on Washington" by Martin Luther King, Jr. (1963)**

"A Quilt of a Country" by Anna Quindlen (2001)

[28] See Appendix B for other texts illustrative of Grades 9–10 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Read the text closely to determine what the text says explicitly and to make logical inferences from it; cite text evidence to support analyses in discussion and in writing.
2. Articulate the theses and themes and summarize how they develop over the course of the text and how they are expressed by the key details.
3. Analyze in detail how complex and multifaceted events, ideas, and characters unfold and interact over the course of the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. draw on specific details to describe how the events, characters, or setting develops over the course of the drama, narrative poem, or story
b. summarize the development of a theme and describe how that theme resonates throughout the text
c. weave together the details of texts to form a comprehensive understanding of its characters, including their overlapping or competing motivations
d. describe how the accumulation of specific phrases and images within poems contributes to a theme as a whole

Informational Text

a. demonstrate a command of the precise details of the exposition or argument, drawing on specific points to support an understanding of a part or the text as a whole
b. analyze the development of theses or explanations in texts and summarize succinctly the key relationships among ideas and supporting details

Observing craft and structure

Core Standards — Students can and do:

4. Interpret the meanings of words and phrases, including connotative and figurative meanings, and explain how specific word choices shape the meaning and tone of the text.
5. Analyze the structure of complex text and its parts, including how specific sentences, paragraphs, and larger portions build on each other and contribute to the whole of the text.
6. Compare and contrast the content and style of two or more texts written on similar topics or themes.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. analyze how the precise choice of words and phrases creates vivid images and sets the tone, mood, and theme of the text; compare the impact of words selected by the author to similar words with different connotations

b. explain how authors manipulate time (e.g., flashbacks, foreshadowing, pacing) to create suspense, mystery, or humor
c. evaluate how playwrights use soliloquies to portray the internal thinking and feeling of characters
d. compare and contrast similarities and differences in styles and forms of poems on a similar theme or topic

Informational Text

a. analyze how the author uses specific words and metaphors to establish tone or to make illuminating comparisons in an argument, explanation, or description
b. explain how the author structures information or an argument to emphasize key points and advance a point of view
c. analyze how different authors organize and categorize similar information and describe the impact of those different approaches

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Synthesize information presented graphically or visually in print, videos, or electronic texts with the information provided by the text.
8. Follow and evaluate the logic and reasoning of the text, including assessing whether the evidence provided is sufficient to support the claims.
9. Analyze the point of view or purpose represented in the text, assessing how it shapes the content, style, and tone.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. explain how a story unfolds when it is told by alternating or multiple narrators with different points of view
b. analyze literature in terms of its connection to related historical and cultural events and contexts

Informational Text

a. interpret complex, multifaceted, quantitative, or technical information presented in maps, charts, illustrations, graphs, and time lines
b. provide an account of an author's precise claims, including how specific assertions are defined and distinguished from opposing statements
c. analyze the explicit and implicit premises of an argument and determine if the conclusions reached are logically justified by the evidence presented in the text
d. compare how different authors construct and develop different points of views or perspectives on similar events or issues by assessing their assumptions, evidence, and reasoning

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding texts.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write informative and explanatory texts and arguments that match purpose to task and address familiar as well as more distant, unknown and general audiences (e.g., peers, elected officials and policy makers, community members).

Conducting research

Core Standards — Students can and do:

2. Demonstrate proficiency at performing short, focused research projects as well as more sustained inquiries that demonstrate an increasing command of the subject under investigation.
3. Assemble evidence independently from authoritative and credible print and digital sources.
4. Assess the credibility, reliability, consistency, and accuracy of the information and sources gathered and determine the strengths and limitations of each source and avoiding over-reliance on any one source.
5. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.
6. Cite print or electronic sources correctly and document quotations, paraphrases, graphics, and other information using a standard format.

Revising writing

Core Standards — Students can and do:

7. Strengthen writing through revision, editing, or beginning again to ensure to ensure logical organization, precision of word choice, and coherence.

Using tools and technology

Core Standards — Students can and do:

8. Use technology and other tools to produce, revise, and distribute writing, as well as to interact online with others about writing, including responding to and providing feedback.

Developing proficiency in a range of writing

9. Create writing over extended timeframes (time for reflection and revision) and shorter timeframes (a single sitting or a day or two), responding to specific sources.

   Focus by grade level:

   Grade 9: Analyzing the content of literary or informational sources at the 9-10 grade band level of text complexity and content
   Grade 10: Comparing or evaluating the contents of literary or informational sources at the 9-10 grade band level of complexity and content

Standards — Students can and do (by key text type):[29]

Narratives

By high school, students are most often using narrative writing as a technique embedded within other genres. They use narrative writing to inform and persuade. They may, for example, provide a brief anecdote to support a point made in an argument or a scenario to illustrate an explanation. In such cases, narrative writing is a technique rather than a form in itself.

Informative and Explanatory Texts

a. provide a clear and coherent introduction that establishes the subject and conveys a knowledgeable stance
b. develop a complex subject through relevant and specific facts, concrete details, quotations, or other information and examples
c. organize complex information into categories that make clear distinctions and provide headings, figures, tables, and diagrams when useful
d. employ discipline-specific and technical vocabulary and maintain a formal, objective style
e. adapt strategies to present information and explanations (e.g., if/then, extended definitions, classification, comparison/contrast, and cause/effect) and employ them to manage the complexity of a topic
f. link ideas with transitions and by varying sentence structures to express relationships between ideas and create cohesion
g. emphasize the most significant information and confirm the accuracy of key points
h. provide a conclusion that articulates the implications and significance of the information or explanation

Arguments

a. establish a substantive claim and distinguish it from alternate or opposing claims
b. support claims with logical reasons
c. provide relevant and sufficient evidence from credible sources in support of the reasons
d. explain how the evidence links to the claim
e. develop the argument in part based on knowledge of the audience (e.g., building bridges by opening with areas of agreement)
f. convey relationships between reasons, as well as between reasons and evidence, and signal alternative claims using words, phrases, and clauses (e.g., *on the other hand*, *however*, *but*, *nevertheless*, *because*, *therefore*, *in addition*).
g. maintain a formal style when appropriate to the discipline or context
h. enhance the reliability of the argument by employing strategies such as paraphrasing or quoting explicitly from a credible, authoritative source
i. provide a concluding statement or section that enhances the argument, using strategies such as articulating the implications, summing up the key factors, or weighing the evidence to support the claim

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in a range of structured interactions—both interpersonally and in groups—exchanging information constructively and with confidence.

[29] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

2. Sustain concentration on complex information presented orally, visually, or multi-modally and confirm understanding by summarizing, analyzing, and elaborating on key ideas.

Standards — Students can and do (by key communication type):

Classroom discussions and collaboration

a. come to discussions having researched, studied, and taken notes on topics or issues under study and draw upon that preparation in discussions
b. determine the key ideas as well as the tone and mood of communications presented orally or through other media
c. ask questions to test the evidence that supports a speaker's claims and conclusions presented orally or through other media
d. build on essential information from others' input and respond constructively by making cogent and verifiable comments that aid in the furthering and deepening of discussions
e. integrate multiple streams of data presented through a variety of multi-modal media into a cohesive, meaningful understanding of the information
f. support productive teamwork by identifying the comments and claims made on all sides of an issue; evaluating the degree to which each claim is supported by evidence; sifting, summarizing, and putting to use the most important ideas developed by the group; and determining what additional information, research, and tasks are required in order to move the group towards its goals

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Present information and points of view, structuring and organizing comments to support their purposes and guide the listener.
4. Vary intonation and phrasing for emphasis and effect, demonstrating command of formal English when indicated or appropriate (e.g., presenting ideas versus class discussion).

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. organize and present complex information about situations, topics, or texts so that listeners can follow the line of thought by grouping related ideas, using transitional markers, and clarifying one's claims with evidence that is verifiable and accessible
b. align verbal (tone, phrasing, pacing) and nonverbal strategies (gestures and facial expressions) for emphasis and effect
c. make strategic use of multimedia elements and visual displays of data to enhance understanding
d. perform dramatic readings of various prose and poetry, speaking with clarity, fidelity, and responsiveness to the text, reflecting on syntax and diction for cues regarding emphasis and rhythm

Language Development Standards

Conventions

In high school, students gain a broad range of sophisticated language skills to enhance meaning, achieve stylistic effect, and create subtle links between and among ideas. They maintain parallel structure. They acquire a more conceptual understanding of usage and the limits of "rules." They use a full range of punctuation, including ellipses, semicolons,

colons, and hyphens, and have a fuller understanding of how to employ commas and dashes. They make use of a wide range of phrases and clauses for effect. They maintain a consistent style and tone, using a style manual appropriate to the discipline in which they are working to help conventionalize their writing.

Key Terms: colon, ellipses, hyphen, semicolon, parallel structure, verbal

Grammar and usage

Core Standards — Students can and do:

1. Use parallel structure in writing.
2. Consult references (e.g., *Merriam-Webster's Dictionary of English Usage*) as needed to resolve particular usage issues, particularly when the usage is contested.

Mechanics

Core Standards — Students can and do:

3. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore a light*[,] *blue suit*).
4. Use a comma, ellipses, or dash to indicate a pause or break.
5. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.
6. Use a colon to introduce a list or a quotation.
7. Observe the conventions concerning using hyphens to join words.

Word choice and style

Core Standards — Students can and do:

8. 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.
9. Maintain consistency in style and tone.
10. Write and edit work so that it conforms to the guidelines in a style manual.

Focus by Grade-Level
Grade 9: Style (Conventions Standards #9, #10)
Grade 10: Advanced punctuation use (Conventions Standards #s 3-7)

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In high school, students continue to make use of a range of strategies to determine and clarify the meaning of unknown and multiple-meaning words. This repertoire now includes considering multiple levels of context (sentence, paragraph, and text levels) and the word's history. They habitually verify their inferences of word meanings. They interpret a wide range of figurative language found in what they read and consider its contribution to the text. Possessing a highly developed sense of the shadings among words with similar denotations,

they evaluate an author's or speaker's choice of words as well as alternatives to the words chosen. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly. This includes a continuing focus on "Tier 2" words and phrases (those that commonly appear in writing but not in spoken language), "Tier 3" words and phrases (those that are specific and important to particular disciplines).

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - using knowledge of roots, prefixes, and suffixes
   - using context, including syntactic and semantic clues, at the sentence, paragraph, and text levels
   - consulting reference materials, including general and specialized dictionaries and thesauruses, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or by looking up the word in a dictionary).
4. Interpret figurative language and analyze its role within the text.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

5. Assess and explain the merits of the choice of one word over another in reading, writing, speaking, and listening.
6. Gain a clearer sense of a word's meaning and use by comparing it to other words with similar but not identical meanings (synonyms).

Acquiring vocabulary

Core Standards — Students can and do:

7. Acquire and use a grade-appropriate vocabulary of Tier 2 words taught directly and gained through reading.
8. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

CCSS DRAFT

Grade 9 English Language Arts: Focus for Instruction

Reading and Literature

In grade 9, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 9-10 grade band text independently, with scaffolding likely required for texts at the high end of the range.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 100% 9-10 Band Text

100%

Writing and Research

In grade 9, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus: Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 9-10th grade band level of complexity and content.

Speaking and Listening

In grade 9, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 9, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

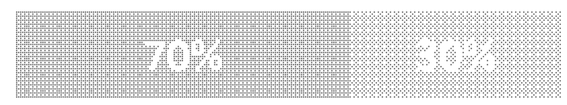
- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Style
  - Maintain consistency … (Conventions Standard #9)
  - (Style manual)… (Conventions Standard #10)

Grade 10 English Language Arts: Focus for Instruction

Reading and Literature

In grade 10, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 9-10 grade band text independently as well as on sustained practice with 11-CCR band "stretch" texts, which will likely require scaffolding.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 70% 9-10 Band Text; 30% 11-CCR text



Writing and Research

In grade 10, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 9-10th grade band level of complexity and content.

Speaking and Listening

In grade 10, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

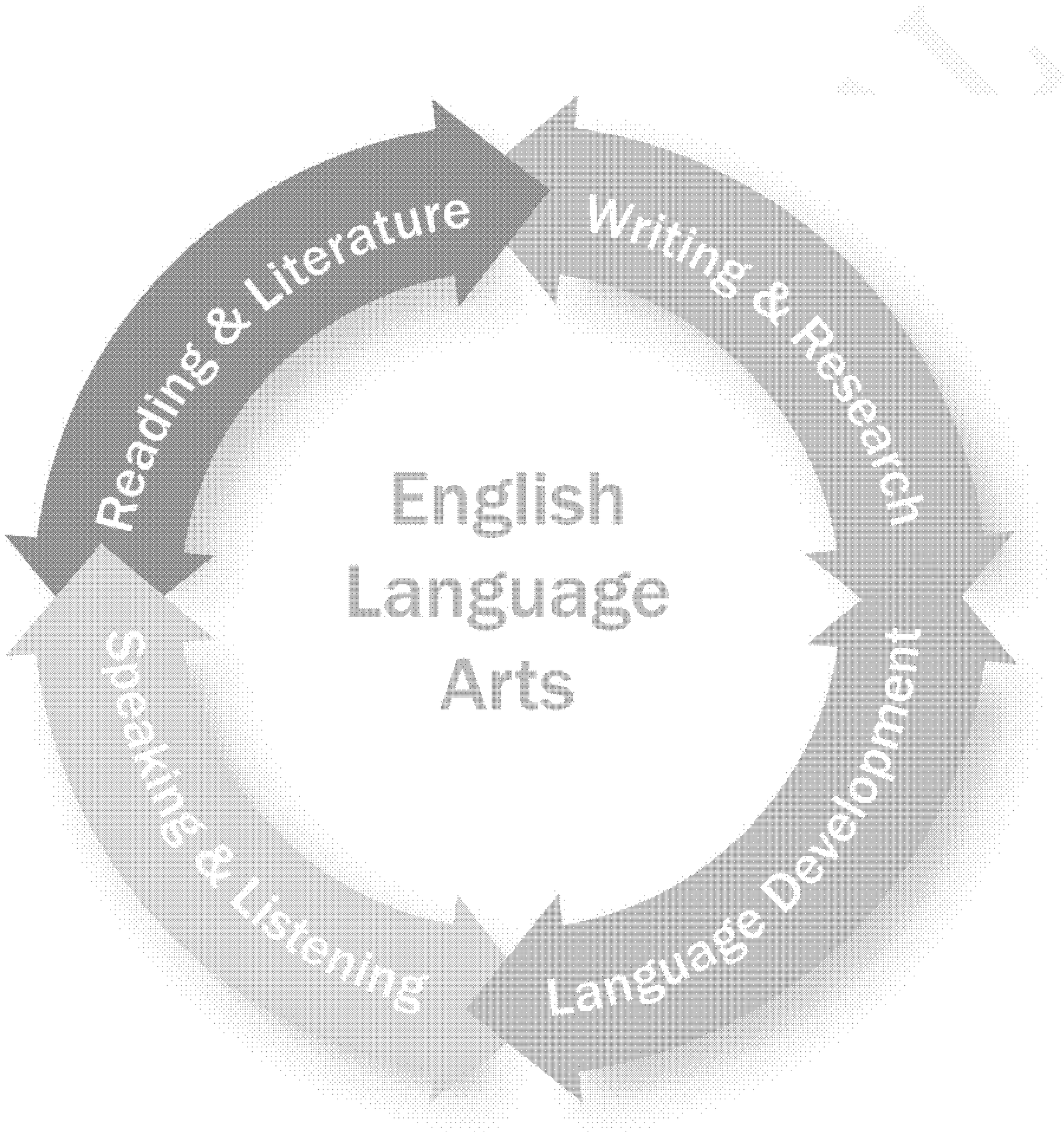
Language Development

In grade 10, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Advanced Punctuation Use
  - Coordinate adjectives … (Conventions Standard #3)
  - Comma/dash/ellipsis… (Conventions Standard #4)
  - Semicolon … (Conventions Standard #5)
  - Colon … (Conventions Standard #6)
  - Hyphen … (Conventions Standard #7)

English Language Arts

Grades 11–CCR



Required Text Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each Grad

Grades	9–10 Level Text	11–CCR Level Text	Beyond CCR
9	100%		
10	70%	30%	
11		100%	
12		70%	30%

While advancing through grades 11-12, students must engage with texts of steadily increasing complexity.

- **In grade 11**, students focus on reading texts in the 11-CCR grade band level with scaffolding likely required for texts at the high end of the range.
- **In grade 12**, students focus on reading texts in the 11-CCR grade band level (70 percent) independently and are introduced to texts in the "Beyond CCR" grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 11–CCR[30]

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts	Quantitative Measures of Texts
• *Structure:* Implicit, complex, unconventional; sophisticated graphic representations are essential to meaning; texts are sufficiently long to address complex subjects • *Purpose:* Multiple; often implicit and may be hidden or obscure • *Style and Language:* Unfamiliar, demanding, complex; many literary devices; extensive use of Tier 2 and 3 words and figurative language; language may be intentionally or unintentionally ambiguous • *Richness:* Many ideas/concepts; highly abstract; high information density • *Relationships:* Many implicit, complex, interwoven connections • *Knowledge Demands:* Ability to handle one or more complex themes, consider multiple and unusual perspectives, and understand experiences distinctly different from one's own; cultural and historical knowledge useful for understanding characters, settings, and allusions; extensive, perhaps specialized discipline-specific content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences, students' interests, motivations, and maturity level.	

[30] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

Mix of Key Text Types for 11–CCR

Narratives	Drama	Poetry	Informational Text
At this level, includes the subgenres of adventure stories, biographies, memoirs, historical fiction, mysteries, science fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels.	*At this level, includes one-act and multi-act plays both in written form and on film.*	*At this level, includes the subgenres of narrative poems, lyrical poems, free verse, odes, ballads, and epics.*	*At this level, Includes such subgenres as exposition and argument in the form of essays, speeches, opinion pieces as well as other documents and digital media sources on a range of topics.*

Illustrative Texts for Narratives, Drama, and Poetry[31]

Pride and Prejudice by Jane Austen (1813)

Black Boy by Richard Wright (1945)

Their Eyes Were Watching God by Zora Neale Hurston (1937)

The Bluest Eye by Toni Morrison (1970)

The Namesake by Jhumpa Lahiri (2003)

The Importance of Being Earnest by Oscar Wilde (1895)

Death of a Salesman by Arthur Miller (1949)

"Ode on a Grecian Urn" by John Keats (1820)

"Because I Could Not Stop for Death" by Emily Dickinson (1890)

Illustrative Informational Texts

The Declaration of Independence by Thomas Jefferson (1776)**

The Crisis by Thomas Paine (1776)

Walden by Henry David Thoreau (1854)

"Politics and the English Language" by George Orwell (1946)

"Letter from a Birmingham Jail" by Martin Luther King (1963)**

"Mother Tongue" by Amy Tan (1990)

Seminal historical texts that all students are expected to read

[31] See Appendix B for other texts illustrative of Grades 11–CCR text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Read the text closely to determine what the text says explicitly and to make logical inferences from it; cite text evidence to defend and challenge analyses in discussion and in writing.
2. Articulate the text's theses and themes and provide a summary that clarifies the relationships among ideas and the connections between key details.
3. Analyze in detail how complex and multifaceted events, ideas, and characters unfold and influence one another over the course of the text.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. analyze where the author chooses to focus and which details the author chooses to emphasize
b. analyze how multiple themes and ideas in the text interact and build on one another
c. evaluate the extent to which setting shapes the course of events and sets the mood
d. trace the origins and evolution of the traits, motivations, and relationships among characters and how they interact to influence the plot and its resolution
e. describe how the poet develops a central image, preoccupation, or idea through the accumulation of specific phrases and images

Informational Text

a. demonstrate an understanding of the precise elements of an author's explanation or argument, including the distinctions the author makes between different ideas or information
b. scrutinize the details within specific portions of texts and connect the insights gained to develop an understanding of the text as a whole
c. analyze how the text captures the interaction between complex ideas or multifaceted events

Observing craft and structure

Core Standards — Students can and do:

4. Interpret the meanings of words and phrases, including connotative and figurative meanings, and analyze how word choices have a significant effect on the meaning and tone of the text.
5. Analyze the ways the author chooses to structure the text, including how to present complex ideas and events and where to begin and end.
6. Compare and contrast the choices different authors make in treating similar topics or themes, including content, style, and tone.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. analyze how the author's use of language impacts the text, including the degree of formality of the diction and how it is evocative of a particular setting (e.g., a courtroom, a rural town)
b. evaluate how authors create meaningful ambiguity and multiple layers of meaning in poetry, drama, and other narratives
c. analyze how an author choice of where to begin a story, poem, or drama impacts the overall plot structure
d. contrast alternative treatments of the same dramatic work in different stage productions and evaluate how the directors' different interpretations relate to evidence within the script
e. analyze how the author draws upon and transforms fictional or historical source material (e.g., how Shakespeare draws on Plutarch or a story in Ovid)

Informational Text

a. describe how the choice of a particular word, phrase, or series of words can impact significantly the meaning of a document (e.g., contract, court opinion, essay)
b. evaluate how the author's choice of structure contributes to the effectiveness of the exposition or argument
c. compare and contrast presentations of the same topic in different media and describe the differences in focus, organization, and links to other sources

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Synthesize information presented graphically or visually in print, videos, or electronic texts and, when appropriate, note discrepancies of fact or interpretation (e.g., data in a table inconsistent with the author's analysis).

8. Rigorously evaluate the logic and reasoning of the text, including assessing whether the evidence provided is relevant and sufficient.

9. Analyze how the point of view or purpose develops in the text and explain how it is revealed in the key details.

Standards — Students can and do (by key text type):

Narratives, Drama, and Poetry

a. compare points of view from which different stories are told and trace how they shift within a story and influence characterization and plot
b. explain how dramatic irony created by the differences between what the audience or reader knows and what the characters know in a drama or narrative fiction creates suspense, anxiety, or humor

Informational Text

a. synthesize ideas and data presented graphically and determine their purpose and relationship to the rest of the text (print or digital), noting any inconsistencies or discrepancies between the two
b. evaluate the reasoning and rhetoric that support an argument or explanation, including assessing the sufficiency and relevance of the evidence as well as identifying any unsubstantiated statements or fallacious reasoning
c. analyze documents of historical and literary significance for their premises, perspectives, and logical structure

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding texts.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write informative and explanatory texts and arguments that match purpose to task and are tailored to audiences with specific requirements (e.g., admissions officer, human resources officer, skeptical audience).

Conducting research

Core Standards — Students can and do:

2. Demonstrate proficiency at performing short, focused research projects as well as more sustained inquiries that synthesize multiple authoritative sources on a subject.
3. Analyze evidence independently gathered from multiple authoritative and credible print and digital sources.
4. Assess the credibility, reliability, consistency, and accuracy of the information and sources gathered and determine their usefulness and relevance for the specific audience, purpose, and task.
5. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.
6. Cite print or electronic sources correctly and document quotations, paraphrases, graphics, and other information using a standard format.

Revising writing

Core Standards — Students can and do:

7. Strengthen writing through revision, editing, or beginning again to ensure to ensure logical organization, precision of word choice, and coherence.

Using tools and technology

Core Standards — Students can and do:

8. Demonstrate command of technology and other tools to produce, revise, and distribute writing, as well as to interact online with others about writing, including responding to and providing feedback.

Developing proficiency in a range of writing

9. Create writing over extended timeframes (time for reflection and revision) and shorter timeframes (a single sitting or a day or two), responding to specific sources.

   Focus by grade level:

   Grade 11: Analyzing the content of literary or informational sources at the 11-CCR grade band level of text complexity and content
   Grade 12: Synthesizing or evaluating the contents of literary or informational sources at the 11-CCR grade band level of complexity and content

Standards — Students can and do (by key text type):[32]

Narratives

By high school, students are most often using narrative writing as a technique embedded within other genres. They use narrative writing to inform and persuade. They may, for example, provide a brief anecdote to support a point made in an argument or a scenario to illustrate an explanation. In such cases, narrative writing is a technique rather than a form in itself.

Informative and Explanatory Texts

a. provide a clear and coherent introduction that establishes the subject and conveys a knowledgeable stance
b. develop complex subjects through judicious use of relevant and specific facts, details, quotations, examples, or other information
c. organize and present information so that each new piece of information builds upon what precedes it to create a unified whole
d. demonstrate command of discipline-specific and technical vocabulary when appropriate and adjust style as appropriate to the situation
e. demonstrate control of a range of strategies to present complex information or explanations and employ them effectively to manage the complexity of the topic and accomplish the writer's purpose
f. link ideas with transitions and by varying sentence structures to express the precise relationships among ideas and create cohesion
g. provide a conclusion that articulates the implications and significance of the information or explanation

Arguments

a. establish the importance of the issue, make a substantive claim, and distinguish it from alternate or opposing claims
b. support claims with logical reasons
c. provide relevant, sufficient, and convincing evidence from credible sources in support of the reasons
d. make logical connections between the evidence and the claim
e. develop the argument in part based on an awareness of the audience's values, knowledge of the issue, and possible biases
f. convey relationships between reasons, as well as between reasons and evidence, and signal alternative claims using words, phrases and clauses (e.g., *on the other hand*, *however*, *but*, *nevertheless*, *because*, *therefore*, *in addition*)
g. maintain a formal style when appropriate to the discipline or context
h. enhance the credibility of the argument by demonstrating control of strategies, including paraphrasing or quoting from authoritative sources and citing logical consequences
i. provide a concluding statement or section that enhances the argument, using strategies such as articulating the implications, summing up the key factors, or weighing the evidence to support the claim

[32] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in a range of structured interactions—both interpersonally and in groups—exchanging information constructively and with confidence, adapting to different levels of formality.
2. Sustain concentration on complex information presented orally, visually, or multi-modally and confirm understanding by challenging or defending key ideas and supporting evidence.

Standards — Students can and do (by key communication type):

Classroom discussions and collaboration

a. come to discussions having formulated considered judgments on the topics or issues under study and draw upon that preparation in discussions
b. evaluate the content and rhetoric of a speaker, noting when evidence is exaggerated or distorted
c. ask questions that probe the reasoning and evidence that support the claims and conclusions made orally or through other media, including offering counter examples or other points of view
d. propel conversations forward by providing essential information and sharing findings that clarify, accommodate, or challenge ideas
e. synthesize information presented visually or digitally with other information presented orally, noting the effect on meaning of any discrepancies between the two presentations
f. assist in the formulation and productive functioning of both formal and informal self-directed work groups by identifying and assigning tasks and maintaining conversational norms as well as evaluating the progress of the team towards its goals

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Present information clearly and persuasively to others, selecting the most appropriate way to structure comments for clarity and effect.
4. Adapt delivery, tone, and mood for emphasis and effect, demonstrating command of formal English when indicated or appropriate (e.g., presenting ideas versus class discussion).

Standards — Students can and do (by key communication type):

Presentation of ideas and information

a. organize and present complex information about topics, situations, or texts, providing reliable and credible evidence from authoritative sources in support of findings and claims such that the line of reasoning is clear and alternative perspectives are addressed
b. shape delivery and message to the occasion and the audience's values, knowledge of the issue, and possible biases
c. engage an audience and improve comprehension through visual aids in presentations, including multimedia platforms

d. portray and explain various ways to perform dramatic readings of various prose and poetry, citing text evidence for the alternative readings

Language Development Standards

Conventions

In high school, students gain a broad range of sophisticated language skills to enhance meaning, achieve stylistic effect, and create subtle links between and among ideas. They maintain parallel structure. They acquire a more conceptual understanding of usage and the limits of "rules." They use a full range of punctuation, including ellipses, semicolons, colons, and hyphens, and have a fuller understanding of how to employ commas and dashes. They make use of a wide range of phrases and clauses for effect. They maintain a consistent style and tone, using a style manual appropriate to the discipline in which they are working to help conventionalize their writing.

Key Terms: colon, ellipses, hyphen, semicolon, parallel structure, verbal

Grammar and usage

Core Standards — Students can and do:

11. Use parallel structure in writing.
12. Consult references (e.g., *Merriam-Webster's Dictionary of English Usage*) as needed to resolve particular usage issues, particularly when the usage is contested.

Mechanics

Core Standards — Students can and do:

13. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore a light*[,] *blue suit*).
14. Use a comma, ellipses, or dash to indicate a pause or break.
15. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.
16. Use a colon to introduce a list or a quotation.
17. Observe the conventions concerning using hyphens to join words.

Word choice and style

Core Standards — Students can and do:

18. 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.
19. Maintain consistency in style and tone.
20. Write and edit work so that it conforms to the guidelines in a style manual.

Focus by Grade-Level
Grade 11: Parallel structure and phrasing (Conventions Standards #1, #8)
Grade 12: Usage (Conventions Standard #2)

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In high school, students continue to make use of a range of strategies to determine and clarify the meaning of unknown and multiple-meaning words. This repertoire now includes considering multiple levels of context (sentence, paragraph, and text levels) and the word's history. They habitually verify their inferences of word meanings. They interpret a wide range of figurative language found in what they read and consider its contribution to the text. Possessing a highly developed sense of the shadings among words with similar denotations, they evaluate an author's or speaker's choice of words as well as alternatives to the words chosen. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly. This includes a continuing focus on "Tier 2" words and phrases (those that commonly appear in writing but not in spoken language), "Tier 3" words and phrases (those that are specific and important to particular disciplines).

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - using knowledge of roots, prefixes, and suffixes
   - using context, including syntactic and semantic clues, at the sentence, paragraph, and text levels
   - consulting reference materials, including general and specialized dictionaries and thesauruses, both print and digital
   - using the word's history (etymology)
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or by looking up the word in a dictionary).
4. Interpret figurative language and analyze its role within the text.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

7. Assess and explain the merits of the choice of one word over another in reading, writing, speaking, and listening.
8. Gain a clearer sense of a word's meaning and use by comparing it to other words with similar but not identical meanings (synonyms).

Acquiring vocabulary

Core Standards — Students can and do:

7. Acquire and use an extensive vocabulary of Tier 2 words taught directly and gained through reading.
8. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

Grade 11 English Language Arts: Focus for Instruction

Reading and Literature

In grade 11, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 11-CCR grade band text independently, with scaffolding likely required for texts at the high end of the range.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 100% 11-CCR Band Text

100%

Writing and Research

In grade 11, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 11-CCR grade band level of complexity and content.

Speaking and Listening

In grade 11, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 11, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

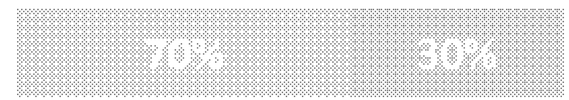
- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Parallel Structure and Phrasing
  - Use parallel structure in writing … (Conventions Standard #1)
  - Use various types of phrases… (Conventions Standard #8)

Grade 12 English Language Arts: Focus for Instruction

Reading and Literature

In grade 12, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 11-CCR grade band text independently as well as on sustained practice with Beyond CCR band "stretch" texts, which will likely require scaffolding.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 70% 11-CCR Band Text; 30% Beyond CCR text



Writing and Research

In grade 12, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter time frames, responding to specific sources by synthesizing or evaluating the contents of literary of informational sources of 11-CCR grade band level complexity and content.

Speaking and Listening

In grade 12, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 12, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Usage
  - Consult references … (Conventions Standard #2)

APPENDIX A

Text Complexity Next Steps

A key requirement of the Core Standards in Reading is that all students engage with texts of steadily increasing complexity as they advance through school. The Core Standards' model of *text complexity*—in the simplest terms, how easy or difficult a text is to read—blends qualitative and quantitative measures of inherent text difficulty with educators' knowledge of their students. All three elements should be considered together when evaluating a text's appropriateness for particular students.

Qualitative dimensions are aspects of text best measured by readers applying trained judgment to the evaluation task. These dimensions include the text's structure, format, and length; its purpose; its style and language; the quality, nature, and density of its ideas, concepts, and information; relationships among ideas, information, and characters in it; and the knowledge and experience demands it places upon readers.

Quantitative dimensions include not only those aspects of text traditionally measured by readability formulas—word length and sentence length—but also computer-assessable aspects of text cohesion. These include referential cohesion (the degree to which a text refers back to previous points) and word frequency.

The qualitative and quantitative measures of a text are balanced in the model by educators' *professional judgment* of the appropriateness of the text for particular students given their background knowledge, interests, and motivation. Harder texts may be appropriate for highly knowledgeable or motivated students, and easier texts may be suitable as a means for building struggling readers' skills up to required levels.

While the tools included in this draft and the forthcoming ones described below represent an important advance over those previously available, no measure or set of measures is perfectly accurate. The mandate is that the body of works that students study in a given year represent an appropriate level of complexity as defined by these standards.

Current and next steps

A qualitative rubric, derived from prior studies and refined through feedback from trained teacher-raters, is included in this draft to define some ways in which text complexity should increase as students move through the grades. The rubric can be used (in conjunction with forthcoming quantitative measures) to place individual texts into grade bands by complexity. The qualitative dimensions are best understood, however, as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

The Core Standards work team is presently conducting a study with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity. Graphically, these three elements will appear together in a "label" defining complexity for a given text.

Following the completion of that study in early 2010, the work team will oversee the development of a Web site designed to make the text complexity tools more user-friendly and broadly available. The site will contain a database of complexity information for a range of widely used texts, including links to texts and test passages of similar complexity. Educators will be able to input additional texts for evaluation and comment on the suitability of particular texts for particular groups of students. The overarching goal is to make text complexity a vital and easy-to-incorporate element of reading instruction.

Text Complexity Qualitative Scheme

Dimension of Text		Grade Span 2–3	4–5	6–8	9–10	11–12
Structure		Explicit, simple, conventional; simple graphic representations are supplementary to meaning; texts are relatively short	Largely explicit and direct; graphic representations are supplementary to meaning; texts are of increasing length	Largely implicit and subtle; graphic representations are essential to meaning; texts are of increasing length	Implicit, subtle; graphic representations are essential to meaning; texts are of increasing length	Implicit, complex, unconventional; sophisticated graphic representations are essential to meaning; texts are sufficiently long to address complex subjects
Purpose		Single; explicitly stated	Single or twofold; clearly indicated	Single or multiple; subtly stated	Multiple; often implicit	Multiple; often implicit and may be hidden or obscure
Style and Language	Style	Familiar, accessible, plain; few literary devices	Moderately accessible; some literary devices	Moderately demanding; several literary devices	Demanding; many literary devices	Unfamiliar, demanding, complex; many literary devices
	Language	Mostly clear, everyday language; limited use of Tier 2 and 3 words and figurative language	Some everyday language; some use of Tier 2 and 3 words and figurative language	Consistent use of Tier 2 and 3 words and figurative language	Extensive use of Tier 2 and 3 words and figurative language	Extensive use of Tier 2 and 3 words and figurative language; language may be intentionally or unintentionally ambiguous
Richness		A few ideas/concepts; concrete; low information density	Some ideas/concepts; mostly concrete; moderate information density	Several ideas/concepts; mostly abstract; moderate information density	Several ideas/concepts; abstract; high information density	Many ideas/concepts; highly abstract; high information density
Relationships		A few connections; explicit; simple	Some connections; largely explicit	Several connections; largely implicit	Several connections; implicit	Many connections; implicit; complex and interwoven
Knowledge Demands	Life experiences (literary texts)	Ability to handle simple themes and fantastical elements as well as draw upon common, everyday experiences	Ability to handle fairly simple themes, consider a perspective somewhat different from one's own, and understand unfamiliar experiences	Ability to handle fairly challenging themes, consider multiple perspectives, and understand unfamiliar experiences	Ability to handle challenging themes, consider multiple perspectives, and understand experiences distinctly different from one's own	Ability to handle one or more complex themes, consider multiple and unusual perspectives, and understand experiences distinctly different from one's own
	Cultural/literary knowledge (chiefly literary texts)	General background knowledge and familiarity with genre conventions required		Cultural and historical knowledge useful for understanding characters, settings, and allusions		
	Content/discipline knowledge (chiefly informational texts)	Some everyday and general content knowledge	Some general and discipline-specific content knowledge	Some discipline-specific content knowledge	Extensive discipline-specific content knowledge	Extensive, perhaps specialized discipline-specific content knowledge

Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004)

The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Structure

- Explicit, simple, conventional → Implicit, complex, unconventional
- Simple graphic representations → Sophisticated graphic representations
- Graphic representations supplementary to meaning → Graphic representations essential to meaning
- Relatively short texts → Texts sufficiently long to address complex subjects

Purpose

- Single purpose → Multiple purposes
- Explicitly stated → Often implicit and may be hidden or obscure

Style

- Familiar, accessible, plain → Unfamiliar, demanding, complex
- Few literary devices → Many literary devices

Language

- Mostly everyday language → Extensive use of Tier 2 and 3 words
- Limited use of figurative language → Extensive use of figurative language
- Clear language → Potentially ambiguous language

Richness

- A few ideas/concepts → Many ideas/concepts
- Concrete ideas/concepts → Abstract ideas/concepts
- Low information density → High information density

Relationships

- A few connections → Many connections
- Explicit connections → Implicit connections
- Simple connections → Complex, interwoven connections

Knowledge Demands: Life Experiences

- Simple themes → Complex themes
- Single theme → Multiple themes
- Common, everyday experiences and fantastical elements → Experiences distinctly different from one's own
- Single perspective like one's own → Multiple and unusual perspectives

Knowledge Demands: Cultural Knowledge

- General background knowledge and familiarity with genre conventions required → Cultural and historical knowledge useful

Knowledge Demands: Content/Discipline Knowledge

- Some everyday and general content knowledge → Extensive, perhaps specialized discipline-specific content knowledge

Definitions of Key Writing Types

Narrative

Narrative writing is organized by time. Time is central because narrative writing depicts events, whether real or imagined. Narrative writing is fundamental to novels, short stories, biographies, autobiographies, historical accounts, and plays. With practice, students' repertoire of narrative strategies expands and their control of them increases. Students learn to provide visual details of scenes, objects, or people; to depict specific actions (movements, gestures, postures, and expressions); to use dialogue and interior monologue in order to provide insight into the narrator's and characters' personalities and motives; and to manipulate pace in order to highlight the significance of certain events and create tension and suspense. Narrative writing serves a variety of purposes; frequently it is embedded in other kinds of writing, such as writing intended to inform, instruct, or persuade.

Informative/Explanatory Text

Informative/explanatory writing conveys information accurately. This kind of writing can serve one or more of several closely related purposes: to increase readers' knowledge of a subject, to help readers better understand a procedure or process, or to enhance readers' comprehension of a concept. Informative/explanatory writing addresses questions, such as questions about types (What are the different types of whales?), about components (What are the parts of a motor?), about aspects of a subject such as its size, function, or behavior (How big is the United States? What is an x-ray used for? How do penguins find food?), about how things work (How does a camera work?), and about why things happen (Why is Earth warming?). To produce this kind of writing, students draw on what they already know and on primary and secondary sources. With practice, students become better able to develop a controlling idea that supports coherence and focus, and they can select examples, facts, and details that are relevant. They are also able to employ a variety of techniques that writers use to convey information, such as naming, describing, or differentiating different types or parts; comparing or contrasting one subject with another; and relating an anecdote or scenario to illustrate a point.

Argument

The purpose of argument is to persuade in order to change the reader's point of view or to bring about some action on the reader's part. There are many techniques employed by writers to persuade readers—for example, appeals to emotions, appeals to common beliefs, and the creation of a believable authorial voice. However, the core of argument is logic and evidence. A logical argument convinces its audience of the merit and reasonableness of the claims and the proof offered in support of the claims. Writers of logical arguments provide credible evidence (facts and details) to support their assertions. Although young children are not able to produce fully developed logical arguments, they are developing a variety of ways to extend and elaborate their work around opinions or judgments. They provide examples, they offer reasons for their assertions, and they explain cause and effect. These kinds of expository structures are steps on the road to argument.

Conventions

Three goals undergird the Conventions standards:

(1) Students should have a carefully specified range of broadly useful terms in order to be precise in their discussions about language. Such key terms (noted below) should be defined in grade-appropriate ways for younger students and fleshed out more fully in later grades. (For guidance on this matter, see, for example, Brock Haussamen with Amy Benjamin, Martha Kolln, and Rebecca S. Wheeler, *Grammar Alive!: A Guide for Teachers* [Urbana, IL: NCTE, 2003] and Amy Benjamin with Tom Oliva, *Engaging Grammar: Practical Advice for Real Classrooms* [Urbana, IL: NCTE, 2007].) Additional terminology may be helpful in particular instructional situations; avoiding terminology altogether may be appropriate in others.
(2) Students must be able to observe the conventions of standard English in their formal writing and speaking for the sake of having their efforts widely understood and taken seriously.
(3) Students need to understand that effective language use is more than simply observing a series of rules but also about making careful choices among alternatives, considering those choices in relation to task, purpose, audience, occasion, and discipline.

Many conventions-related issues are likely to arise in students' writing and speaking prior to their formal appearance in the sequence below. For example, students in kindergarten are expected to know what a complete sentence is even though the concept of a fragment is not mentioned specifically in the standards until grade 3.

Conversely, many skills and understandings introduced at lower grades will require continued attention as students advance in the grades. Students in grade 3, for instance, can ensure subject-verb agreement in simple situations, such as when the subject and verb appear next to each other in a sentence. As students' writing and speaking become more complex, however, new agreement challenges arise, such as intervening phrases suggesting a different number for the verb than the subject calls for. "Errors" with applying previously mastered skills and understandings are thus often a sign of progress in that students are stretching their ability to communicate. "Relearning" is then a matter of students becoming able to apply old skills and understandings in new, more sophisticated ways.

While all the Conventions standards should be considered cumulative, certain ones, noted with an asterisk (*), are particularly likely to need to be revisited by older students as they convey ever more elaborate ideas in writing and speech.

ELA Conventions Progressive Skills: By Standard

The following standards, marked with an asterisk (*) in the standards document, are skills and understandings that require continued attention in higher grades (after their introduction in lower grades) as they are applied to increasingly sophisticated writing and speaking.

Grade 3 **Grades 4–5** **Grades 6–8** (Grade/band in which the standard is introduced)

3.1 Generate complete sentences, avoiding sentence fragments, comma splices, and run-ons.

3.2 Ensure subject-verb and pronoun-antecedent agreement.

3.7 Choose words for effect.

4–5.2 Recognize and correct inappropriate shifts in verb tense.

4–5.3 Form and choose between adjectives and adverbs (including comparative and superlative forms), placing them appropriately within the sentence.

4–5.4 Correctly use frequently confused words.

4–5.5 Use idiomatic language.

4–5.7 Use punctuation to separate items in a series.

4–5.11 Spell grade-appropriate words correctly, consulting references as needed.

4–5.12 Use specialized, topic-specific language to convey ideas precisely.

4–5.13 Use figurative language to create images or make comparisons and connections between people, objects, or ideas.

4–5.14 Use punctuation for effect.

4–5.15 Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.

6-8.2 Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.

6-8.4 Recognize and correct inappropriate shifts in pronoun number and person.

6.8.5 Recognize and correct vague pronouns with unclear or ambiguous antecedents.

6-8.8 Recognize and correct inappropriate shifts in verb voice and mood.

6-8.9 Set off nonrestrictive/parenthetical elements with commas, parentheses, or dashes.

6-8.12 Vary sentence patterns for meaning, reader/listener interest, and style.

6-8.13 Choose words and phrases to express ideas precisely and concisely, avoiding redundancy and wordiness.

Vocabulary Instruction

> Words are not just words. They are the nexus — the interface — between communication and thought. When we read, it is through words that we build, refine, and modify our knowledge. What makes vocabulary valuable and important is not the words themselves so much as the understandings they afford.
>
> Marilyn Adams[33]

The importance of students acquiring a rich and varied vocabulary cannot be overstated. Research suggests that if students are going to grasp and retain words and comprehend text, they need incremental, repeated exposure to words they are trying to learn in a variety of contexts. When students make multiple connections between new words and their own experiences they develop a nuanced and flexible understanding of the word. In this way, students learn not only what a word means, but how to use that word in a variety of contexts and apply appropriate senses of the word's meaning in order to understand different contexts.[34]

Initially children readily learn words from oral conversation because oral conversations are context rich in ways that aid in vocabulary acquisition: in discussion a small set of words (accompanied by gesture and intonation) is used with great frequency to talk about a narrow range of situations children are exposed to on a day to day basis. Yet as children reach school age, new words are less frequently introduced in conversation, and consequently vocabulary acquisition eventually stagnates by fourth or fifth grade unless students acquire additional words from written context.[35]

Written language, by contrast, contains hundreds of times as many different words as are typically used in conversational language. Yet writing lacks the interactive opportunities and nonverbal context provided by oral conversation so it presents a special challenge towards successful vocabulary acquisition without purposeful and ongoing concentration on vocabulary.[36] In fact, at most, between five and fifteen percent of new words encountered when reading are retained.[37] The weaker a student's vocabulary is, the slighter the gain.[38] Yet research shows that if students are going to understand what they read, they must understand upward of 95 percent of the words. [39]

As this "tipping point" for lexical dexterity is quite challenging for students to reach, every classroom needs to focus on providing students with high quality contextual encounters with vocabulary words that epitomize what they encounter in written texts. The aim should be to expose students to words that have the widest application—concepts that students are likely to meet again and again not just in classroom settings but outside the school walls as well. Some of these highly transferable academic words, often referred to as Tier 2 words, such as qualifying adjectives and adverbs (e.g., important, typically) are used broadly across domains and indeed in contexts that

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[33]Adams, M. (2009). "The Challenge of Advanced Texts: The Interdependence of Reading and Learning," in Hiebert (Ed.), Reading more, reading better: Are American students reading enough of the right stuff?, New York: Guilford Publications.
[34]Landauer, TK, McNamara, DS, Dennis, S and Kintsch, W (2007) Handbook of Latent Semantic Analysis; Landauer, T. K., & Dumais, S. T. (1997). A solution to Plato's problem: The latent semantic analysis theory of acquisition, induction, and representation of knowledge. *Psychological Review, 104(2)*, 211-240; Nagy, W. E., Herman, P., & Anderson, R. C. (1985). Learning words from context. *Reading* Research Quarterly, 20, 233-253.

[35] Hayes, D and Ahrens, M: "Vocabulary simplification for children: A special case of "motherese?" Journal of Child Language. Vol 15(2), Jun 1988, 395-410
[36] Ibid.

[37] Ibid.
[38] Daneman & Green, 1986; Herman, Anderson, Person &Nagy, 1987; Sternberg & Powell
[39] Betts, E. A. (1946). *Foundations of reading instruction.* New York, NY: American Book Company; Carver, R. P. (1994). Percentage of unknown vocabulary words in text as a function of the relative difficulty of the text: Implications for instruction. *Journal of Reading Behavior, 26,* 413-437; Hu, M., & Nation, P. (2000). Unknown vocabulary density and reading comprehension. *Reading in a Foreign Language, 13(1)*, 403-430; Laufer, B. (1988). What percentage of text-lexis is essential for comprehension. In C. Lauren & M. Nordmann (Eds.), *Special language: From humans to thinking machines,* pp. 316-323. Clevedon, UK: Multilingual Matters.

transcend the classroom.[40] However, the meanings of most words are specific to their domains—often referred to as Tier 3 words—including those that arise in multiple domains (e.g., chemical constituents, constituent voting patterns). To learn words, students have to read multiple selections from multiple authors within key domains of learning.

The problem is that, in any given instance, it is not the entire spectrum of a word's history, meanings, usages, and features that matters, but only those aspects that are relevant to the surrounding context. That means, first, that the reader's internal representation of the word must be sufficiently complete and well-articulated so that the intended meaning is available and, second, that the reader must understand the context well enough to select the intended meaning – which, in turn, depends on good understanding of the surrounding words of the passage.

Key to students' vocabulary development is building rich and flexible word knowledge. Students need plentiful opportunities to use and respond to the words they learn, through playful informal talk, discussion, and reading or being read to and responding to what is read. Along with attention to academic (Tier 2 words) and content-specific words (Tier 3 words), students benefit from instruction about the connections and patterns in language. Developing in students an analytical attitude toward the logic and sentence structure of their texts alongside an awareness of word parts, word origins, and word relationships provides students with a sense of how language works so that syntax, morphology and etymology can become useful cues to word in building meaning as students encounter new words and concepts in their reading.[41] As students are exposed to and interact with language throughout their school careers, they are able to acquire understandings of word meanings, build awareness of the workings of language, and apply word meanings to comprehend and produce language.

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[40] Indeed, the fact that these words transcend specific disciplines argues for them being taught and used across the curriculum by all teachers.

[41] Beck, I. L., McKeown, M. & Kucan, L. (2008). *Creating robust vocabulary: Frequently asked questions and extended examples.*

APPENDIX B

Exemplars of Reading Text Complexity and Quality, ELA K–12

Selecting Text Samples

The following text samples primarily serve to exemplify the level of complexity and quality that the *Standards* require all students in a given grade band to engage with while additionally suggesting the breadth of text types that students should encounter. The choices should serve as useful guideposts in helping educators select texts of similar **complexity**, **quality**, and **breadth** for their own classrooms. The process of text selection was guided by these criteria in the following fashion:

- *Complexity*. Appendix A describes in detail a three-part model of measuring text complexity based on qualitative and quantitative indices of inherent text difficulty balanced with educators' professional judgment. In selecting texts to serve as exemplars, the work group began by soliciting contributions from teachers, educational leaders, and researchers who have experience working with students in the grades for which the texts have been selected. These contributors were asked to propose texts that they or their colleagues have used successfully with students in a given grade band. The work group made final selections based in part on whether qualitative and quantitative measures identified by the *Standards* indicated that the proposed texts were of sufficient complexity for the grade band. For those types of texts—particularly poetry and multimedia sources—for which these measures are not as well suited, professional judgment necessarily played a greater role in selection.

- *Quality*. While it is possible to have high-complexity texts of low inherent quality, the work group solicited only texts of recognized value. From the pool of submissions gathered from outside contributors, the work group selected classic or historically significant texts as well as contemporary works of comparable literary merit, cultural significance, and/or content richness.

- *Breadth*. After identifying texts of appropriate complexity and quality, the work group applied a range of secondary criteria to ensure that the samples presented in each band represented as broad a range of sufficiently complex, high-quality texts as possible. Among the factors considered were initial publication date, authorship, and subject matter.

Copyright and Permissions

For those exemplar texts not in the public domain, the work group is seeking permission from the rights holders for limited use by the Common Core State Standards Initiative of the National Governors Association.

While we await permissions grants from the rights holders, we will make use of texts under a conservative interpretation of Fair Use, which allows limited, partial use of copyrighted text for a nonprofit, educational purpose as long as that purpose does not impair the rights holder's ability to seek a fair return for his or her work.

Please note that these texts are included solely as exemplars in support of the *Standards*. Any additional use of those texts that are not in the public domain, such as for classroom use or curriculum development, requires independent permission from the rights holders. The texts may not be copied or distributed in any way other than as part of the overall Common Core Standards Initiative document.

Organization and Excerpting

Texts are organized first by category, with narrative texts followed by drama and poetry and then the informational texts. Within each category, the texts are organized by date, usually of first publication, beginning with the oldest and ending with the most recent. In some cases, the date of any given work may be open to debate.

The excerpts given here are meant to stand in for the full work in most instances. Works that are not in the public domain may be represented by short excerpts or snippets while the work group awaits permission from the rights holders for full use.

Media Texts

Selected excerpts are accompanied by annotated links to related media texts available online at the time of the publication of this document.

Kindergarten to Grade 1 Exemplar Texts

Narratives

Little Bear by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)

Are You My Mother? by P. D. Eastman (1960)

The Fire Cat by Esther Averill (1960)

Green Eggs and Ham by Dr. Seuss (1960)

Put Me in the Zoo by Robert Lopshire (1960)

Frog and Toad Together by Arnold Lobel (1971)

Owl at Home by Arnold Lobel (1975)

Henry and Mudge: The First Book of Their Adventures by Cynthia Rylant, illustrated by Suçie Stevenson (1987)

Poppleton in Winter by Cynthia Rylant, illustrated by Mark Teague (2001)

Cowgirl Kate and Cocoa by Erica Silverman, illustrated by Betsy Lewin (2005)

Poetry

"Mix a Pancake" by Christina G. Rossetti (1893)

"Singing-Time" by Rose Fyleman (1919)

"Halfway Down" by A. A. Milne (1924)

"As I Was Going to St. Ives" by Unknown, collected by Peter and Iona Opie (1951)

"Drinking Fountain" by Marchette Chute (1957)

"Poem" by Langston Hughes (1958)

"Wouldn't You?" by John Ciardi (1961)

"In the Falling Snow" by Richard Wright (1973)

"Covers" by Nikki Giovanni (1980)

"It Fell in the City" by Eve Merriam (1985)

"Celebration" by Alonzo Lopez (1993)

"Two Tree Toads" by Jon Agee (2009)

Informational Texts

A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)

My Five Senses by Aliki (1962)

Starfish by Edith Thacher Hurd, illustrated by Robin Brickman (1962)

What Do You Do With a Tail Like This? by Steve Jenkins & Robin Page (2003)

From Seed to Pumpkin by Wendy Pfeffer, illustrated by James Graham Hale (2004)

Mouse in a Meadow by John Himmelman (2005)

Petting Zoo by Dorling Kindersley (2005)

Meet the Meerkat by Darrin Lunde, illustrated by Patricia J. Wynne (2007)

"The Forest in Spring" in National Geographic Young Explorer! April 2009 (2009)

"Our Good Earth" in National Geographic Young Explorer, April 2009 (2009)

Read-Aloud Narratives

The Wonderful Wizard of Oz by L. Frank Baum (1900)

Little House in the Big Woods by Laura Ingalls Wilder, illustrated by Garth Williams (1932)

Mr. Popper's Penguins by Richard Atwater (1938)

Finn Family Moomintroll by Tove Jansson, translated by Elizabeth Portch (1948)

A Story A Story by Gail E. Haley (1970)

The Paper Crane by Molly Bang (1985)

Read-Aloud Poetry

"The Owl and the Pussycat" by Edward Lear (1871)

"April Rain Song" by Langston Hughes (1932)

"The Fox's Foray" – Traditional rhyme in Opie / *The Oxford Nursery Rhyme Book* (1955)

Over in the Meadow by John Langstaff, illustrated by Feodor Rojankovsky (1957)

Zin! Zin! Zin! a Violin by Lloyd Moss, illustrated by Marjorie Priceman (1995)

Read-Aloud Informational Texts

The Year at Maple Hill Farm by Alice and Martin Provensen (1978)

Fire! Fire! by Gail Gibbons (1984)

Follow the Water from Brook to Ocean by Arthur Dorros (1991)

Amazing Whales! by Sarah L. Thomson (2005)

Living Sunlight: How Plants Bring the Earth to Life by Molly Bang & Penny Chisholm, illustrated by Molly Bang (2009)

Grades 2–3 Exemplar Texts

Narratives

My Father's Dragon by Ruth Stiles Gannett, illustrated by Ruth Chrisman Gannett (1948)

Crow Boy by Taro Yashima (1955)

Amos & Boris by William Steig (1971)

The Treasure by Uri Shulevitz (1978)

The Stories Julian Tells by Ann Cameron (1981)

Sarah, Plain and Tall by Patricia MacLachlan (1985)

Tops and Bottoms by Janet Stevens (1995)

The Raft by Jim LaMarche (2000)

The Lighthouse Family: The Storm by Cynthia Rylant, illustrated by Preston McDaniels (2002)

The One-Eyed Giant (Book One of Tales from the Odyssey) by Mary Pope Osborne (2002)

Poetry

"Autumn" by Emily Dickinson (1893)

"Who Has Seen the Wind" by Christina G. Rossetti (1893)

"Afternoon on a Hill" by Edna St. Vincent Millay (1917)

"Stopping by Woods on a Snowy Evening" by Robert Frost (1923)

"Something Told the Wild Geese" by Rachel Field (1934)

"Grandpa's Stories" by Langston Hughes (1958)

"A Bat Is Born" by Randall Jarrell (1964)

"Knoxville, Tennessee" by Nikki Giovanni (1968)

"Weather" by Eve Merriam (1969)

"Eating While Reading" by Gary Soto (1995)

Informational Texts

A Medieval Feast by Aliki (1983)

Maps & Globes by Jack Knowlton, pictures by Harriet Barton (1985)

Sunshine Makes the Seasons by Franklyn M. Branley (1985)

From Seed to Plant by Gail Gibbons (1991)

Throw Your Teeth on the Roof: Tooth Traditions Around the World by Selby B. Beeler, illustrated by G. Brian Karas (1998)

So You Want to Be President? By Judith St.George, illustrated by David Small (2000)

Boy, Were We Wrong About Dinosaurs by Kathleen V. Kudlinski, illustrated by S.D. Schindler (2005)

Bat Loves the Night by Nicola Davies, illustrated by Sarah Fox-Davies (2008)

Moonshot: The Flight of Apollo 11 by Brian Floca (2009)

Where Do Polar Bears Live? by Sarah L. Thomson, illustrated by Jason Chin (2010)

Read-Aloud Narratives

"How the Camel Got His Hump" in *Just So Stories* by Rudyard Kipling (1902)

The Thirteen Clocks by James Thurber (1950)

The Cricket in Times Square by George Selden, illustrated by Garth Williams (1960)

The Search for Delicious by Natalie Babbitt (1969)

Bud, Not Buddy by Christopher Paul Curtis (1999)

Read-Aloud Poetry

"The Jumblies" by Edward Lear (1871)

"The Pied Piper of Hamelin" by Robert Browning (1888)

"Your World" by Georgia Douglas Johnson (1918)

"The Song of the Jellicles" by T.S. Eliot (1939)

"Fireflies" by Paul Fleischman, illustrated by Eric Beddows (1988)

Read-Aloud Informational Texts

Lincoln: A Photobiography by Russell Freedman (1987)

A Drop of Water: A Book of Science and Wonder by Walter Wick (1997)

The Museum Book: A Guide to Strange and Wonderful Collections by Jan Mark, illustrated by Richard Holland (2007)

What the World Eats by Faith D'Aluisio, photographed by Peter Menzel (2008)

Wild Tracks! A Guide to Nature's Footprints by Jim Arnosky (2008)

Grades 4–5 Exemplar Texts

Narratives

Alice in Wonderland by Lewis Carroll (1865)

The Secret Garden by Frances Hodgson Burnett (1911)

The Black Stallion by Walter Farley (1941)

The Little Prince by Antoine de Saint-Exupery (1943)

Tuck Everlasting by Natalie Babbitt (1975)

"Zlateh the Goat" by Isaac Bashevis Singer (1984)

M. C. Higgins, the Great by Virginia Hamilton (1993)

The Birchbark House by Louise Erdrich (1999)

Bud, Not Buddy by Christopher Paul Curtis (1999)
[Also a read-aloud narrative at Grades 2–3]

Where the Mountain Meets the Moon by Grace Lin (2009)

Poetry

"The Echoing Green" from *Songs of Innocence* by William Blake (1789)

"The New Colossus" by Emma Lazarus (1883)

"Casey at the Bat" by Ernest Lawrence Thayer (1888)

"A Bird Came Down the Walk" by Emily Dickinson (1893)

"Fog" by Carl Sandburg (1916)

"Dust of Snow" by Robert Frost (1923)

"Little Red Riding Hood and the Wolf" by Roald Dahl (1982)

"They Were My People" by Grace Nichols (1988)

"Words Free As Confetti" by Pat Mora (1996)

Informational Texts

Discovering Mars by Melvin Berger (1992)

Let's Investigate Marvelously Meaningful Maps by Madelyn Wood Carlisle (1992)

Hurricanes: Earth's Mightiest Storms by Patricia Lauber (1996)

The Kid's Guide to Money by Steve Otfinoski (1996)

Toys: Amazing Stories behind Some Great Inventions by Don Wulffson (2000)

"Good Pet, Bad Pet" by Elizabeth Schleichert from *Ranger Rick* (2002)

"Ancient Mound Builders" by E. Barrie Kavash from *Cobblestone* (2003)

About Time: A First Look at Time and Clocks by Bruce Koscielniak (2004)

England the Land by Erinn Banting (2004)

A History of US by Joy Hakim (2005)

My Librarian Is a Camel by Margriet Ruurs (2005)

Horses by Seymour Simon (2006)

Quest for the Tree Kangaroo by Sy Montgomery (2006)

Volcanoes by Seymour Simon (2006)

We Are the Ship: The Story of Negro League Baseball by Kadir Nelson (2008)

"Kenya's Long Dry Season" by Nellie Gonzalez Cutler from *Time for Kids* (2009)

"Seeing Eye to Eye" by Leslie Hall from *National Geographic Explorer* (2009)

"Computer" from *Britannica Junior Encyclopedia* (2010)

"Telescopes" by Ronan, Colin A. from *The New Book of Knowledge* (2010)

"Underground Railroad" by Henrietta Buckmaster from *The New Book of Knowledge* (2010)

Grades 6–8 Exemplar Texts

Narratives

Little Women by Louisa May Alcott (1869)

The Adventures of Tom Sawyer by Mark Twain (1876)

A Wrinkle in Time by Madeline L'Engle (1962)

The Dark is Rising by Susan Cooper (1973)

Dragonwings by Laurence Yep (1975)

Roll of Thunder, Hear My Cry by Mildred Taylor (1976)

"The People Could Fly" from *The People Could Fly: American Black Folktales* by Virginia Hamilton (1985)

The Tale of the Mandarin Ducks by Katherine Paterson (1990)

"Eleven" from *Woman Hollering Creek: And Other Stories* by Sandra Cisneros (1992)

Black Ships Before Troy: The Story of the Iliad by Rosemary Sutcliff (1993)

Drama

A Midsummer Night's Dream by William Shakespeare (1596)

The Diary of Anne Frank by Frances Goodrich and Albert Hackett (1958)

Poetry

"Paul Revere's Ride" by Henry Wadsworth Longfellow (1861)

"O Captain, My Captain" by Walt Whitman (1865)

"Jabberwocky" by Lewis Carroll (1872)

"Twelfth Song of Thunder" from *The Mountain Chant: A Navajo Ceremony* Navajo tradition (1887)

"The Railway Train" by Emily Dickinson (1893)

"The Song of Wandering Aengus" by W. B. Yeats (1899)

"Chicago" from *Chicago Poems* (1914) by Carl Sandburg

"Stopping by a Wood on a Snowy Evening" by Robert Frost (1923)

"I, Too" by Langston Hughes (1925)

"The Book of Questions" by Pablo Neruda (1973) translated by William O'Daly

"Oranges" from *Black Hair* (1985) by Gary Soto

"A Poem for My Librarian, Mrs. Long" from *Acolytes* (2007) by Nikki Giovanni

Informational Texts (English Language Arts)

"Allegory of the Cave" from *The Republic* by Plato (380 BCE) translated by G.M.A. Grube

"Letter on Thomas Jefferson" by John Adams (1822)

Narrative of the Life of Frederick Douglass an American Slave by Frederick Douglass (1845)

"Gettysburg Address" by Abraham Lincoln (1863)

"Lee Surrenders to Grant" by Horace Porter (1865)

"Blood, Toil, Tears and Sweat" by Winston Churchill (1940)

Travels with Charley: In Search of America by John Steinbeck (1962)

"Address to the Nation on Civil Rights" by John F. Kennedy (1963)

I Know Why the Caged Bird Sings by Maya Angelou (1969)

"Address to Students at Moscow State University" by Ronald Reagan (1988)

Grades 9-10 Exemplar Texts

Narratives

The Odyssey by Homer (8th century B.C.E.) translated by Robert Fagles

"The Nose" by Nikolai Gogol (1836) translated by Ronald Wilks

"The Gift of the Magi" by O. Henry (1906)

The Grapes of Wrath by John Steinbeck (1939)

Fahrenheit 451 by Ray Bradbury (1953)

"I Stand Here Ironing" by Tillie Olsen (1956)

The Killer Angels by Michael Shaara (1975)

The Joy Luck Club by Amy Tan (1989)

In the Time of the Butterflies by Julia Alvarez (1994)

The Book Thief by Marcus Zusak (2005)

Drama

The Tragedy of Romeo and Juliet by William Shakespeare (1592)

The Glass Menagerie by Tennessee Williams (1944)

Rhinoceros by Eugene Ionesco (1959) translated by Derek Prouse

Master Harold…and the Boys by Athol Fugard (1982)

Poetry

"Song" by John Donne (1635)

"Ozymandias" by Percy Bysshe Shelley (1810)

"The Raven" by Edgar Allen Poe (1845)

"We Grow Accustomed to the Dark" by Emily Dickinson (1893)

"Loveliest of Trees" by A. E. Houseman (1896)

"Lift Ev'ry Voice and Sing" by James Weldon Johnson (1900)

"Domination of Black" by Wallace Stevens (1916)

"Yet Do I Marvel" by Countee Cullen (1925)

"Women" by Alice Walker (1970)

"I Am Offering This Poem to You" by Jimmy Santiago Baca (1977)

Informational Texts (English Language Arts)

"Preface to Lyrical Ballads" by William Wordsworth (1800)

"Speech to the Second Virginia Convention" by Patrick Henry (1775)

"Second Inaugural Address" by Abraham Lincoln (1865)

"State of the Union Address" by Franklin Delano Roosevelt (1941)

"I Am an American Day Address" by Learned Hand (1944)

"Remarks to the Senate in Support of a Declaration of Conscience" by Margaret Chase Smith (1950)

"Address at the March on Washington" by Martin Luther King, Jr. (1963)

"Nobel Prize Acceptance Speech" by Elie Wiesel (1986)

"A Quilt of a Country" by Anna Quindlen (2001)

Grades 11-12 Exemplar Texts

Narratives

Pride and Prejudice by Jane Austen (1813)

Jane Eyre by Charlotte Brontë (1848)

"At Home" by Anton Chekov (1887) translated by Constance Garnett

The Great Gatsby by F. Scott Fitzgerald (1925)

As I Lay Dying by William Faulkner (1930)

Their Eyes Were Watching God by Zora Neale Hurston (1937)

Black Boy by Richard Wright (1945)

The Adventures of Augie March by Saul Bellow (1949)

The Bluest Eye by Toni Morrison (1970)

Dreaming in Cuban by Cristina García (1992)

The Namesake by Jhumpa Lahiri (2003)

Drama

Macbeth by William Shakespeare (c1611)

The Importance of Being Earnest by Oscar Wilde (1895)

Death of a Salesman by Arthur Miller (1949)

A Raisin in the Sun by Lorraine Hansberry (1959)

Poetry

"A Valediction Forbidding Mourning" by John Donne (1633)

"Ode on a Grecian Urn" by John Keats (1820)

"Song of Myself" from *Leaves of Grass* by Walt Whitman (c1860)

"Because I Could Not Stop for Death" by Emily Dickinson (1890)

"Mending Wall" by Robert Frost (1914)

"Ode to My Suit" by Pablo Neruda (1954) translated by Margaret Sayers Peden

"Sestina" by Elizabeth Bishop (1983)

"The Latin Deli: An Ars Poetica" by Judith Ortiz Cofer (1988)

"Demeter's Prayer to Hades" by Rita Dove (1995)

"Man Listening to Disc" by Billy Collins (2001)

Informational Texts (English Language Arts)

The Declaration of Independence by Thomas Jefferson (1776)

The Crisis by Thomas Paine (1776)

Walden by Henry David Thoreau (1854)

"Society and Solitude" by Ralph Waldo Emerson (1857)

"The Fallacy of Success" by G.K. Chesterton (1909)

The American Language by H.L. Mencken (1938)

"Politics and the English Language" by George Orwell (1946)

"Abraham Lincoln and the Self-Made Myth" by Richard Hofstadter (1948)

"Letter from Birmingham City Jail" by Martin Luther King, Jr. (1963)

"Mother Tongue" by Amy Tan (1990)

"Take the Tortillas Out of Your Poetry" by Rudolfo Anaya (1995)

The Common Core K–12 Mathematics Standards

This document provides grade level standards for mathematics in grades K–8, and high school standards organized under the headings of the *College and Career Readiness Standards in Mathematics*. Students reaching the readiness level described in that document (adjusted in response to feedback) will be prepared for non-remedial college mathematics courses and for training programs for career-level jobs. Recognizing that most students and parents have higher aspirations, and that ready for college is not the same as ready for mathematics-intensive majors and careers, we have included in this document standards going beyond the readiness level. Most students will cover these additional standards. Students who want the option of entering STEM fields will reach the readiness level by grade 10 or 11 and take precalculus or calculus before graduating from high school. Other students will go beyond readiness through statistics to college. Other pathways can be designed and available as long as they include the readiness level. The final draft of the K–12 standards will indicate which concepts and skills are needed to reach the readiness level and which go beyond. We welcome feedback from states on where that line should be drawn.

English Language Learners in Mathematics Classrooms

English language learners (ELLs) must be held to the same high standards expected of students who are already proficient in English. However, because these students are acquiring English language proficiency and content area knowledge concurrently, some students will require additional time and all will require appropriate instructional support and aligned assessments.

ELLs are a heterogeneous group with differences in ethnic background, first language, socio-economic status, quality of prior schooling, and levels of English language proficiency. Effectively educating these students requires adjusting instruction and assessment in ways that consider these factors. For example ELLs who are literate in a first language that shares cognates with English can apply first-language vocabulary knowledge when reading in English; likewise ELLs with high levels of schooling can bring to bear conceptual knowledge developed in their first language when reading in a second language. On the other hand, ELLs with limited or interrupted schooling will need to acquire background knowledge prerequisite to educational tasks at hand. As they become acculturated to US schools, ELLs who are newcomers will need sufficiently scaffolded instruction and assessments to make sense of content delivered in a second language and display this content knowledge.

While some ELLs are economically and educationally advantaged, this is not the case for many of these students. Moreover, once in the U.S., the majority of ELLs attend high poverty schools with high percentages of other ELLs. These schools often lack the resources and capacity needed to help ELLs reach high academic standards. However, schools and districts can be assisted in providing a positive learning environment that capitalizes on the linguistic and cultural diversity of the student body.

Language proficiency is a complex construct that can reflect proficiency in multiple contexts, modes, and academic disciplines. Current measures of language proficiency may not give an accurate picture of an individual's language competence. In particular, we do not have measures or assessments for language proficiency related to competence in mathematics for different ages or mathematical topics. These two facts can confuse discussions of mathematics instruction for ELLs. In particular, because of the complexity of language proficiency and the limitations of the label "English Language Learner" as currently implemented, instructional decisions should not be made solely based on that label. However, research on language and mathematics education for this student population does provide a few clear results to guide practices for teaching ELLs mathematics:

- English learners can participate in mathematical discussions as they learn English (Moschkovich, 1999a, 2002, 2007a, 2007b, 2007d).

- Mathematics instruction for students who are learning English should draw on multiple resources and modes available in classrooms—such as objects, drawings, inscriptions, and gestures—as well as home languages and mathematical experiences outside of school.

- While mathematics instruction for ELLs should address mathematical discourse and academic language, this involves much more than vocabulary instruction.

Basic principles for improving the mathematics achievement of ELLs

Language is a resource for learning mathematics, it is not only a tool for communicating, but also a tool for thinking and reasoning mathematically. All languages (English, Spanish, Tagalog,etc.) and language varieties (different dialects, home or everyday ways of talking, vernacular, slang, etc.) provide resources for mathematical thinking, reasoning, and communicating.

Regular and active participation in the classroom—not only reading and listening but also discussing, explaining, writing, representing, and presenting—is crucial to ELLs' success in mathematics, and that ELLS can produce explanations, presentations, etc. and participate in classroom discussions *as they are learning English* (Moschkovich, 1999 and 2007).

- ELLs, like English-speaking students, require regular access to teaching practices that are most effective for improving student achievement. These practices include: a) Keeping mathematical tasks at high-cognitive demand (Henningsen & Stein, 1997; Silver & Stein, 1996); b) teachers and students attend explicitly to concepts (Hiebert & Grouws, 2007), and c) students wrestle with important mathematics (Hiebert & Grouws, 2007).
- See the evidence of ELLs' mathematical thinking, hear how ELLs use language to communicate about mathematics, understand the competence that ELLS bring to the classroom, build on this competence, and provide access to opportunities for advancing their mathematics learning.

Overall, research suggests that:

- Classroom instruction should allow bilingual students to choose the language they prefer for arithmetic computation. Language switching can be swift, highly automatic, and facilitate rather than inhibit solving word problems in the second language, as long as the student's language proficiency is sufficient for understanding the text of the word problem.
- Instruction should ensure that students understand the text of word problems before they attempt to solve them.
- Instruction should include a focus on "mathematical discourse" and "academic language" because these are important for English learners. Although it is crucial that students who are learning English have opportunities to communicate mathematically, this is not primarily a matter of learning vocabulary. Students learn to participate in mathematical reasoning, not by learning vocabulary, but by making conjectures, presenting explanations, and/or constructing arguments.
- While vocabulary instruction is important, it is not sufficient for supporting mathematical communication. Furthermore, vocabulary drill and practice are not the most effective instructional practices for learning vocabulary. Instead, research has demonstrated that vocabulary learning occurs most successfully through instructional environments that are language-rich, actively involve students in using language, require that students both understand spoken or written words and also express that understanding orally and in writing, and require students to use words in multiple ways over extended periods of time (Blachowicz, Camille, and Peter Fisher, 2000). To develop written and oral communication skills, students need to participate in negotiating meaning for mathematical situations and in mathematical practices that require output from students (Moschkovich, 2009).

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Access for Students with Disabilities

The Common Core Standards articulate rigorous expectations in the areas of mathematics, reading, writing, and speaking and listening in order to prepare students to be college- and career-ready. These standards identify the knowledge and skills students must acquire in order to be successful. Research shows that students with disabilities are capable of high levels of learning and should not be limited by low expectations and watered down curriculum. It is imperative that these highly capable students—regardless of their disability—are held to the same expectations articulated in the Core Standards as other students.[1]

However, *how* these high standards are taught is of the utmost importance in reaching students with special needs. When learning the knowledge and skills represented in the Core Standards, students with disabilities may need accommodations or—in exceptional cases—modified goals, incorporated in an individualized education program (IEP),[2] to help them access information or demonstrate their knowledge. Students might be precluded from reaching particular standards given the nature of the standard itself. In instances when a standard asks students to perform actions they are physically incapable of, students will need to be presented with alternative options to demonstrate similar knowledge and skills within the range of their abilities. Accommodations based on individual needs allow students of all disability levels to learn within the framework of the Core.

Meeting English Language Arts (ELA) Standards

Reading, writing, speaking, and listening standards often require accommodations for students with disabilities. In the case of students who are deaf, a standard that calls for "listening" should be interpreted to include reading sign language. In a similar vein, "speaking" as it occurs in standards for certain students with speech impairments should be read broadly to include "communication" or "self-expression." Students who are blind or have low vision should be able to read via Braille, screen reader technology, or other assistive technology to demonstrate their comprehension

[1] Research suggests that the vast majority of the population of students with intellectual impairments *can* achieve proficiency when they receive high quality instruction in the grade-level content and appropriate accommodations.
[2] According to the Individuals with Disabilities Act (IDEA), an IEP includes appropriate accommodations that are necessary to measure the individual achievement and functional performance of a child.

skills. "Writing" should not preclude the use of a scribe, computer, or speech-to-text technology for students with disabilities that interfere with putting pen to paper. In the case of students with intellectual impairments—less than 2 percent of the total population of all students and less than 20 percent of students with disabilities—accommodations should allow them to demonstrate their knowledge and skills through alternative modes like text to speech software or reading aloud. For these students, writing may involve the use of pictures to assist in illustrating plot or argument, or offering them the opportunity to "choose words and phrases" by selecting from options rather than generating direct answers. With appropriate accommodations and support, students with all levels of disabilities can participate in the general education curriculum and achieve grade-level proficiency with regard to the ELA content and skills articulated in the Core.

Meeting Mathematics Standards

In curriculum for students with disabilities, ELA skills often take precedence over mathematics understanding. However, most of these students can master mathematical concepts with accommodations in instructional delivery and the use of specialized technology, including computers and calculators. For example, students with visual disabilities might require enhanced verbal descriptions from teachers and the use of large-print to demonstrate subsequent knowledge. Students who are deaf might require visual aids such as charts, diagrams, and mental images and increased reliance on computers and calculators. Manipulatives can enable students with intellectual impairments to grasp abstract concepts and continue learning. Evidence suggests that students with disabilities, even those with full intellectual abilities, tend to lag behind their peers in mathematics achievement; strong curriculum that gives equal priority to mathematics and ELA will help these students succeed.

In short, while the standards remain and retain high expectations of students, they may need to be translated and occasionally modified to appropriately apply to students with disabilities, including all levels of intellectual impairment. Every student deserves to be treated with respect, and every student deserves an outstanding education. Promoting a culture of high expectations for all students is a fundamental goal of the Core Standards. Reaching students with disabilities requires broadening our understanding of what the standards say and being ready to make appropriate accommodations and/or modifications to meet individual students' needs.

How to read this document

The K–8 standards are organized by grade level. Within each grade level there are several headings, each one the title of a single progression having significant presence in the grade in question. Under each of these progression headings, there appear **core standards**, divided into standards describing concepts students should understand and standards describing skills students should acquire. A typical progression spans a number of grades, but does not span all of K-8. The progressions and their grade spans are listed at the end of the document.

The high school standards are not organized by grade level or by course, but rather are organized under headings of the *College and Career Ready Standards for Mathematics*: Expressions, Equations, Functions, Coordinates, Modeling, Statistics, Probability, and Geometry.[3] Subheadings under each heading refer either to mathematical practices or to principle topics, and core standards are listed under each subheading, as in the K-8 standards. The subheadings are not necessarily curricular units, but rather can describe concepts and skills that are revisited throughout a student's high school career. This design necessitates a future effort to develop course sequences (either traditional or integrated).

[3] Number and Quantity are not included, since they are principally the domain of K–8. In response to feedback, the headings have been reordered and Shape has been renamed to Geometry.

Mathematical Practice[4]

Proficient students 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 carry through. They are experimenters and inventors, and can adapt known strategies to new problems. They think strategically.

Students who engage in these practices discover ideas and gain insights that spur them to pursue mathematics beyond the classroom walls. They learn that effort counts in mathematical achievement.[a] These are practices that expert mathematical thinkers encourage in apprentices. Encouraging these practices in our students should be as much a goal of the mathematics curriculum as is teaching specific content topics and procedures.[b] Taken together with the Standards for Mathematical Content, they support productive entry into college courses or career pathways.

Core Standards · Students can and do:

1 Attend to precision.

Mathematically proficient students organize their own ideas in a way that can be communicated precisely to others, and they analyze and evaluate others' mathematical thinking and strategies noting the assumptions made. They clarify definitions. They state the meaning of the symbols they choose, are careful about specifying units of measure and labeling axes, and express their answers with an appropriate degree of precision. Rather than saying, "let v be speed and let t be time," they would say "let v be the speed in meters per second and let t be the elapsed time in seconds from a given starting time." They recognize that when someone says the population of the United States in June 2008 was 304,059,724, the last few digits indicate unwarranted precision.

2 Construct viable arguments.

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 break things down into cases and can recognize and use counterexamples. They use logic to 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.

3 Make sense of complex 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 consider analogous problems, try special cases and work on simpler forms. They evaluate their progress and change course if necessary. They try putting algebraic expressions into different forms or try changing the viewing window on their calculator to get the information they need. They look for correspondences between equations, verbal descriptions, tables, and graphs. They draw diagrams of relationships, graph data, search for regularity and trends, and construct mathematical models. They check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?"

4 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern. For example, in $x^2 + 5x + 6$ they can see the 5 as $2 + 3$ and the 6 as 2×3. They recognize the significance of an existing line in a geometric figure and can add an auxiliary line to make the solution of a problem clear. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects. For example, by seeing $5 - 3(x$

[4] Slated for review and editing, based on feedback to the College and Career Readiness Standards, and in order to apply more naturally to elementary school as well.

$-y)^2$ as 5 minus a positive number times a square, they see that it cannot be more than 5 for any real numbers x and y.[b]

5 Look for and express regularity in repeated reasoning.

Mathematically proficient students pay attention to repeated calculations as they carry them out, and look both for general algorithms and for shortcuts. For example, by paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, they might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel in the expansions of $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ leads to the general formula for the sum of a geometric series. As they work through the solution to a problem, proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.[b]

6 Reason quantitatively.

Quantitative reasoning is a way of thinking by which one reasons with quantities and about relations among quantities. It entails habits of creating a coherent image of the problem at hand; considering the units involved; continually attending to the meaning of quantities, not just how to compute them; and having multiple images of a concept and being flexible in transitioning among them. In problems dealing with quantitative relationships, students exercise two inseparable abilities: 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 referential meanings for the symbols involved in the manipulation.

7 Make strategic decisions about the use of technological tools.

Mathematically proficient students consider the available tools when solving a mathematical problem, whether pencil and paper, ruler, protractor, graphing calculator, spreadsheet, computer algebra system, statistical package, or dynamic geometry software. They are familiar enough with all of these tools to make sound decisions about when each might be helpful. They use mathematical understanding and estimation strategically, attending to levels of precision, to ensure appropriate levels of approximation and to detect possible errors. They are able to use these tools to explore and deepen their understanding of concepts.

Mathematics: Kindergarten[5]

Developing Coherent Understanding

[Temporarily removed for editing.]

Counting and Cardinality

Core Standards · Students understand that:

1. The number words have a standard order.
2. In counting, each object receives one and only one number word.
3. The last number word tells the number of objects.
4. Numbers said later in the count refer to larger quantities.
5. Counting on 1 more is the same as adding 1. That is, one more than a number is the next number in the count.

Core Standards · Students can and do:

a. Count by ones from 1 to 100; count by tens to 100.[6]
b. Count forward from a given number within the known sequence (instead of always counting forward from 1).[7]
c. See collections of up to 10 objects as being composed of subgroups.
d. Count to answer "how many?" questions with up to 10 things in various arrangements (e.g., array, circular, scattered), or up to 25 things if in a row.
e. Write numerals from 1 to at least 30.

Base Ten Computation

Core Standards · Students understand that:

1. Ten ones make a tens unit (ten things can be thought of as bundled into a single unit).
2. Decade words refer to groups of tens units. For example, thirty refers to a group of three tens units.
3. A teen number[8] is a ten and some ones. The number 10 can be thought of as a ten and no ones.
4. Any teen number is larger than any single digit number. Teen numbers are ordered according to their ones digits.
5. A two-digit number is some tens and some ones. For example, 29 is two tens and nine ones.

Core Standards · Students can and do:

a. Make 10 with each number from 1 to 9 (i.e., know the number that makes 10 with the given number).
b. Show each teen number as a ten and some ones.

Early Relations and Operations

Core Standards · Students understand that:

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[5] Some material is used verbatim from National Research Council. (2009). *Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity*. Committee on Early Childhood Mathematics, Christopher T. Cross, Taniesha A. Woods, and Heidi Schweingruber, Editors. Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

[6] To "count" here means only to say the number words, not to determine how many objects are in a collection.

[7] To "count" here means only to say the number words, not to determine how many objects are in a collection.

[8] Glossary: Teen number. A whole number that is greater than or equal to 11 and less than or equal to 19.

1. Adding is putting two groups together or putting some more with a group, and subtracting is taking some from a group.
2. Addition and subtraction can be represented with physical or mental objects (including fingers), pictures, drawings, sounds (e.g. number words), motions, or equations.
3. Adding can be recorded by an expression, as when "three more than six" is recorded as 6 + 3, or by an equation that also shows the answer (6 + 3 = 9). Likewise, subtracting can be recorded by an expression, as when "how much more than 9 is 5" is recorded as 9 – 5, or by an equation that also shows the answer (9 – 5 = 4).
4. Breaking apart a group can be recorded in an equation such as 8 = 5 + 3. Breaking apart a group in more than one way can be recorded in an equation such as 7 + 6 = 10 + 3.
5. In all equations, the equals sign indicates that the values on either side are the same.

Core Standards · Students can and do:

a. Use matching and counting strategies to decide whether one set is more than, less than, or equal to another set in number of objects (less than or equal to 10).
b. Compare and order numbers less than or equal to 10.
c. Use concrete objects to determine the answer to addition and subtraction word problems and additions and subtractions with totals less than or equal to 10.
d. Experience enough problem situations so that additions to five and the corresponding subtractions and some additions and subtractions within ten become well known.

Quantity and Measurement

Core Standards · Students understand that:

1. Things have attributes—such as length, weight, capacity, loudness, softness, and so on. A single thing might have several attributes of interest (as when we focus on a child's height and gender).

Core Standards · Students can and do:

a. Directly compare two objects to see which one has "more of" a shared attribute.
b. Rank three objects by a shared attribute (especially length), and use transitivity[9] to compare two objects indirectly.
c. ♦ Classify objects or people into predetermined categories, and count the numbers in each category. List the categories and counts in order by count. (Each category count less than or equal to 10.)[10]

Shapes

Core Standards · Students understand that:

1. Names refer to shapes regardless of orientation or overall size.[11]

Core Standards · Students can and do:

a. Study a range of 2D and 3D shapes, in different sizes and orientations, and discuss their properties, similarities, and differences using informal language.

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[9] Glossary: Transitive property of measurement order: If one object is bigger than a second, and the second object is bigger than a third object, then the first object is bigger than the third object.

[10] The symbol ♦ indicates material in data analysis and statistics that appears under another progression heading in order to make an important connection.

[11] For example, a square rotated to form a "diamond" is still a square, even though it is rotated. Students at this grade might need to physically rotate a shape until it is "level" before they can correctly name it.

b. Move shapes using translations, reflections and rotations.[12]

[12] This is not meant to be assessed by showing students a picture of a shape and asking them to draw or select a translated, reflected or rotated version of it.

Mathematics: First Grade[13]

Developing Coherent Understanding

[Temporarily removed for editing.]

Early Relations and Operations

Core Standards · Students understand that:

1. Counting on is an efficient method of counting all, in which the initial count of the first addend is omitted.
2. Addition and subtraction apply to situations of joining, separating, part-part-whole, and comparing quantities to one another.[14] These situations can be represented by addition and subtraction equations such as 7 + 5 = 12, 10 = 5 + 5, and so on.
3. Addition and subtraction are inverse operations; that is 10 – 8 can be found by thinking 8 + 2 = 10.
4. When any two of the numbers in an addition or subtraction equation are known, the unknown number can be found.
5. One-to-one dealing of objects in a collection (e.g., "One for you, one for me, one for him, …") creates fair shares.

Core Standards · Students can and do:

a. Use counting on strategies or decomposing strategies for additions and subtractions within 20.
b. Solve addition problems containing three addends.
c. Use objects, pictures and story contexts to explain what happens when the order of addends in a sum is changed, when 0 is added to a number, and when one addend in a sum is increased by 1 and another decreased by 1.
d. Experience enough problem situations so that many or all sums and differences within 20 become well known.
e. Use drawings and equations to represent and solve word problems involving addition and subtraction.[15]
f. ♦ 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
g. Create *n* fair shares from a collection of objects. Identify the size of one share, and recognize the original collection as *n* copies of a single share.

Quantity and Measurement

Core Standards · Students understand that:

1. Lengths can be added by placing long objects, rods, or unit cubes end to end in a straight line. The total length is the same in whatever order the rods are placed.

[13] Some material is used verbatim from National Research Council. (2009, op. cit.)

[14] In join and separate problems, there is change over time. In part-part-whole problems, two quantities make up a whole in a static situation. Compare problems involve two quantities and the difference between them. Compare problems add specificity to the notions of greater than and less than.

[15] Include join, separate, part-part-whole, and compare problems, with unknowns in all positions. Represent these situations with equations that use a small square or a ? for the unknown.

2. Lengths can be compared by placing rods side by side, with one end lined up. The difference in length is how far the longer extends beyond the end of the shorter.
3. Lengths are measured (assigned numerical values) by comparing them to other lengths—that is, by using another object as a length unit. The length of an object can be expressed numerically by counting the number of length units that span it with no gaps or overlaps.
4. When an object or figure is decomposed into several pieces, the length of the whole can be found by placing the pieces end to end in any order.
5. A sum of two whole numbers represents a total length; a difference of two whole numbers represents a difference in length.
6. Durations of time are measured by comparing them to other durations of time, such as the earth's rotation period, or the time a minute hand takes to complete a circle around a clock face.

Core Standards · Students can and do:

a. Using an object as a length unit, measure, compare and estimate length.[16]
b. Using an object as a length unit, determine total length by adding lengths of two parts.[17] Compare lengths using addition and subtraction.
c. Decompose circles and rectangles into 2 and 4 equal parts. Describe the parts using the words "halves" and "quarters," and using the phrases "half of" and "quarter of." Describe the wholes as twice or four times as large as the parts.
d. Tell time in hours from clocks; subtract to find whole-hour durations on a clock (within AM or within PM).

Base Ten Computation

Core Standards · Students understand that:

1. In comparing two-digit numbers, the number with more tens units is larger; if the number of tens units is the same in each, the number of ones units decides.
2. In adding or subtracting 2-digit numbers, one adds or subtract like units (tens units and tens units, or ones units and ones units).

Core Standards · Students can and do:

a. Count to 100 or beyond, switching appropriately to the new decade after a 9 has been said in the ones place.
b. Compare and order numbers to 100 based on meanings of the tens and ones places.
c. Easily write numerals to 20; write numerals to 100.
d. Use break-apart and make-a-ten strategies to add and subtract with teen totals as in $7 + 6 = 10 + 3$ and $17 - 9 = 17 - 7 - 2$.
e. Find 10 more or 10 less than a number without having to count.
f. Add one-digit numbers to two-digit numbers, and add multiples of 10 to one-digit and two-digit numbers.
g. Represent addition of two-digit numbers using 10-rods and unit cubes,[18] including rearranging rods and cubes to show regrouping when needed.
h. Add two-digit numbers to two-digit numbers using strategies based on place value, Properties of Arithmetic, or the inverse relationship between addition and subtraction.

Shapes

[16] Select and iterate units, partition into equal parts, and compare lengths indirectly by using a reference length.
[17] Restrict to whole-unit lengths.
[18] Any concrete model that can show individual units and ten connected units will do.

Core Standards · Students understand that:

1. Several shapes can be joined together to form a larger shape. A single shape can also be visualized as a collection of smaller shapes joined together.
2. Decomposing larger shapes into equal-sized parts creates fair shares.
3. When an identical figure is decomposed into more fair shares, the shares are smaller than in the first instance.

Core Standards · Students can and do:

a. Form different 2D figures with cutouts of rectangles, squares, triangles, semicircles, and quarter-circles.[19]
b. Form different 3D figures with concrete models of cubes, rectangular prisms, cones, and cylinders.[20]
c. Decompose 2D shapes into rectangles, squares, triangles, semicircles, and quarter-circles, including decomposing into fair shares.

[19] From Singapore Primary 2
[20] From Singapore Primary 2

Mathematics: Second Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Operations and the Problems They Solve

Core Standards · Students understand that:

1. Addition and subtraction apply to situations of joining, separating, part-part-whole, and comparing quantities to one another.[21] These situations can be represented by addition and subtraction equations such as 17 + 5 = 22, 36 = 56 – 26, and so on.
2. Addition and subtraction are inverse operations; that is 100 – 98 can be found by thinking 98 + 2 = 100.
3. Numbers can be added and subtracted only when they refer to the same underlying unit.

Core Standards · Students can and do:

a. Use representations (objects, pictures, story contexts) to describe and justify properties of addition and subtraction.[22]
b. Produce full sets of related equations for addition and subtraction, as in the set 5 + 3 = 8, 3 + 5 = 8, 8 = 5 + 3, 8 = 3 + 5, 8 – 5 = 3, 8 – 3 = 5, 3 = 8 – 5, 5 = 8 – 3.
c. Solve up to two-step addition/subtraction word problems with whole numbers and whole number quantities within 100.[23]

Base Ten Computation

Core Standards · Students understand that:

1. A three-digit number is made up of hundreds, tens and ones units. Digits in each place are worth ten times as much as digits in the place to the right.
2. Comparison of numbers is decided by the leftmost digit, with subsequent digits breaking ties.
3. Three-digit numbers can be expanded into sums of hundreds, tens and ones units. In adding or subtracting, one adds or subtracts the units of each size; regrouping might be needed to write a total in standard form if there are too many of a unit, or to get enough of a unit to subtract from it.
4. The scheme for regrouping is the same at each place, because each unit is composed of ten of the smaller unit.

Core Standards · Students can and do:

a. Compare and order numbers to 1,000.

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[21] In join and separate problems, there is change over time. In part-part-whole problems, two quantities make up a whole in a static situation. Compare problems involve two quantities and the difference between them. Compare problems add specificity to the notions of greater than and less than.

[22] Include properties such as that the sum is the same when multiple addends are added in a different order; if adding two numbers gives a certain sum, then subtracting one of the addends from the sum results in the other addend; that if more is subtracted from a number, the difference is decreased and if less is subtracted the difference is increased; that in an addition problem, each addend can be taken apart and the parts can be recombined in any order without changing the sum.

[23] Include join, separate, part-part-whole, and compare problems, with unknowns in all positions. Represent these situations with equations that use a small square or a ? for the unknown.

b. Given a three-digit number, quickly find 10 more or 10 less than the number, and quickly find 100 more or 100 less than the number.
c. Rapidly add and subtract within 20.[24]
d. Add and subtract three-digit numbers to three-digit numbers using strategies based on place value, Properties of Arithmetic, or the inverse relationship between addition and subtraction.
e. Add and subtract three-digit numbers using an algorithm[25] based on place value and regrouping, such as the standard algorithm.
f. Explain why addition and subtraction strategies and algorithms work, using place value and the Properties of Arithmetic (including explanations supported by drawings or objects).

Quantity and Measurement

Core Standards · Students understand that:

1. 1 inch, 1 foot, 1 centimeter and 1 meter are conventionally defined lengths that allow standardized length measurements.
2. When measuring a length, if a smaller unit is chosen, more units must be iterated to measure the length in those units. But the length of an object itself does not depend on the choice of unit.
3. Units can be decomposed into smaller units, e.g. a foot contains 12 inches and a meter contains 100 centimeters. A small number of long units might form a greater total length than a large number of small units.
4. Sharing a circle or rectangle fairly among 2-6 shares creates equal parts, each of which is a single unit. Copying one unit by the number of pieces measures the whole in terms of the units.
5. A half, a third, or a quarter of a given rectangle encloses the same amount of space regardless of its shape.

Core Standards · Students can and do:

a. Measure, compare and estimate whole-unit lengths in units of inches, feet centimeters and meters.
b. Construct a number line with an origin (0) and a unit (1), marking off whole numbers one unit distance apart. Use a number line to represent sums and differences; determine lengths of intervals on the number line.
c. Decompose circles and rectangles into 2-6 equal parts. Describe the parts using the words "halves," "thirds," "half of," "a third of," etc. Describe the wholes as 2-6 times as large as the parts.
d. Construct a number line to 100 using tens-unit lengths, showing ones-unit lengths within a decade of interest. Explain regrouping by composing and decomposing concrete lengths.
e. ♦ Draw a bar graph (with single-unit scale) to represent a data set with several categories. Solve simple part-part-whole and compare problems using information presented in a bar graph.[26]
f. ♦ Identify correspondences in different representations of a data set with several categories.
g. Solve word problems involving dollar bills, quarters, dimes, nickels and pennies.

Shapes

Core Standards · Students understand that:

[24] Acceptable strategies include: mental strategies such as making a ten, use of fingers to assist in rapid counting-on, and producing sums or differences from memory.
[25] Glossary: Algorithm. A step by step routine that always gives some answer, rather than ever giving no answer; that always gives the right answer, and never gives a wrong answer; that can always be completed in a finite number of steps, rather than in an infinite number of steps; and that applies to all problems of a given type (e.g., adding any two multidigit whole numbers, or bisecting any angle). Cf. Wikipedia's "effective procedure," from which this definition is adapted.
[26] For part-part-whole problems, only sum-unknown problems are required to meet this standard. For compare problems, only difference-unknown problems are required to meet the standard.

1. A given category of shapes (e.g., triangles) can be divided into subcategories (e.g., isosceles triangles) on the basis of special properties. Conversely, different classes of shapes (e.g., squares and rectangles) can be united into a larger category (e.g., quadrilaterals) on the basis of shared properties.

Core Standards · Students can and do:

a. Draw and identify equilateral triangles, isosceles triangles,[27] squares and rectangles.[28]
b. Recognize squares and rectangles as examples of quadrilaterals; draw examples of quadrilaterals that are neither squares nor rectangles.
c. Draw and identify radii and diameters of a circle.
d. Recognize objects that resemble spheres, cylinders and rectangular prisms.

[27] Students at this grade need not understand that equilateral triangles are isosceles.
[28] Students at this grade need not understand that squares are rectangles.

Mathematics: Third Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Operations and the Problems They Solve

Core Standards · Students understand that:

1. Multiplication and division apply to situations of equal grouping, fair sharing, measuring, and comparing ("times as much").
   - An equation of the form $a \times b = n$ applies to a situation in which a groups of b things each make n things in all, or in which a copies of a continuous quantity of size b form a continuous quantity of size n. (See table for examples.)
   - An equation of the form $n \div a = b$ tells how many things, b, are in each group when n things are divided equally into a groups, or tells how large a quantity b results when a continuous quantity of size n is shared fairly into a shares. (See table for examples.)
   - An equation of the form $n \div b = a$ tells how many groups, a, result when n things are divided into equal groups of b things each, or tells how many fair shares, a, a quantity of size n yields when each share has size b. (See table for examples.)
   - Two quantities can be compared by multiplication or division. An equation of the form $a \times b = n$ means n is a times as much as b and b times as much as a.
2. Multiplication is commutative: The total number of things in a groups of b things each is the same as the total number of things in b groups of a things each, that is, $a \times b = b \times a$. Likewise, a copies of a continuous quantity of size b are equal in size to b copies of a continuous quantity of size a.
3. The area of a rectangle with whole number side lengths can be calculated by multiplying because the rectangle can be decomposed into equal rows (or columns) of unit squares.
4. Multiplication and division are inverse operations; that is $35 \div 7$ can be found by thinking $5 \times 7 = 35$. When any two of the numbers in a multiplication or division equation are known, the unknown number can be found.

	$3 \times 6 = 18$	$18 \div 3 = 6$	$18 \div 6 = 3$
Collections	3 rows of apples with 6 apples in each row are 18 apples.	If 18 apples are arranged into 3 equal rows, each row will have 6 apples in it.	If 18 apples are arranged into equal rows of 3 apples, there will be 6 rows.
Continuous Quantities	If you have enough ribbon to make 6 bows, then 3 times as much ribbon will make 18 bows.	If you have enough ribbon to make 18 bows and share the ribbon fairly among 3 kids, then each kid has enough ribbon to make 6 bows.	If each kid wants to make 6 bows and there's enough ribbon to make 18 bows, then 3 kids can make bows.

Core Standards · Students can and do:

a. Use representations (objects, pictures, story contexts) to describe and justify properties of multiplication and division.[29]
b. Solve simple multiplication and division word problems involving equal groups, length and area.
c. Solve up to two-step word problems involving the four operations with whole numbers and whole number quantities. (Whole number quotients only)
d. Solve multiplicative comparison problems with whole numbers (problems involving the notion of "times as much").
e. ♦ Draw a scaled bar graph to represent a data set with several categories. Solve "how many more"/"how many less" problems (two-step problems) using information presented in scaled bar graphs.[30]

Base Ten Computation

Core Standards · Students understand that:

1. Patterns in the multiplication table can be explained by the Properties of Arithmetic. For example, the distributive property explains why, for any row, the entries in the 7 column are the sums of the entries in the 5 and 2 columns.
2. The Properties of Arithmetic can be used to derive new multiplications and divisions from known ones.

Core Standards · Students can and do:

a. Explain strategies for multiplying and dividing that use the Properties of Arithmetic and properties of the base ten system.
b. Rapidly multiply and divide within 100.[31]
c. Produce full sets of fact families for multiplication and division, as in the set $6 \times 7 = 42$, $7 \times 6 = 42$, $42 = 7 \times 6$, $42 = 6 \times 7$, $42 \div 7 = 6$, $42 \div 6 = 7$, $6 = 42 \div 7$, $7 = 42 \div 6$.
d. Find the factor pairs for a given number, as in the factor pairs for the number 42: {42, 1}, {21, 2}, {14, 3}, {7, 6}.

Fractions

Core Standards · Students understand that:

1. When a whole, 1, is divided into b equal parts, the size of the parts is written $1/b$. To show $1/b$ of something, divide the thing into b equal parts.
2. For a whole number a and a positive whole number b, a/b is defined as a copies of $1/b$.[32] This can be thought of as the sum $1/b + 1/b + \ldots + 1/b$ (with a summands).
3. Whole numbers can be written as fractions, as in $b/b = 1$, $n/1 = n$, and cases such as $(4 \times 7)/4 = 7$.
4. Fractions are numbers and can be seen as lengths on a number line.[33]

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[29] Include properties such as that the product is the same when the order of the factors is changed; that multiplication problems involving 1-digit numbers can be solved by breaking one factor apart additively and multiplying each part by the other factor; and that multiplying a quantity by a number, then dividing by the same number, leaves the original quantity unchanged.

[30] Include single-unit scales and multiple-unit scales. For multiple-unit scales, all counts should be evenly divisible by the scale factor. No count should represent more than ten of the scale unit, and no scale unit should represent more than ten counts.
[31] A variety of mental strategies are acceptable, including derived fact strategies and producing products or quotients from memory.
[32] This includes fractions greater than 1. For example, $17/5$ is 17 copies of $1/5$.
[33] For example, $17/5$ is 17 copies of the subinterval $1/5$ laid end to end.

5. Two fractions are equal when they represent the same portion of a whole, or when they have the same length on a number line. One fraction is greater than another when it represents a greater portion of the whole than the other, or lies to the right of the other on the number line.

6. Given two unit fractions, the fraction with the larger denominator is smaller, because dividing a whole into a larger number of parts leads to smaller parts.

7. Fractions with the same denominator can be added or subtracted by adding or subtracting the units indicated by the unit fraction. 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 $6/3$.

8. The decimal 0.1 denotes the fraction $1/10$, 0.2 denotes $2/10$, and so on through 0.9, which denotes $9/10$.

Core Standards · Students can and do:

a. Use fractions to describe quantities and parts of wholes.
b. Compare and order fractions with equal numerators or equal denominators, including in contextual situations, using the fractions themselves, bar strip drawings, number line representations, and area models.
c. Reason about fractions to establish equivalences between fractions with unlike denominators 2, 3, 4 and 6 (e.g. $1/2 = 2/4$, $4/6 = 2/3$).
d. Add and subtract fractions with like denominators.
e. Solve word problems that involve adding, subtracting, ordering and comparing fractions.
f. Represent fractions of the form $a/10$ in decimal notation; compare and order to tenths in decimal notation.

Quantity and Measurement

Core Standards · Students understand that:

1. A unit of measure can be partitioned into equal-sized parts, whose sizes can be represented as fractions of the unit.

2. The area of a closed plane figure is a measure of how much space it encloses. A square with side length 1 unit is said to enclose "one square unit" of area.

3. The area of a closed plane figure can be measured (expressed numerically) by the number of square units that fit inside it with no gaps or overlaps.

4. Area is a model for multiplication because tiling a rectangle with unit squares shows that a rectangle a units long by b units wide encloses an area of $a \times b$ square units.

Core Standards · Students can and do:

a. Measure lengths using rulers marked with halves and fourths of inches. Make a dot plot to show repeated measurements.
b. Convert compound units to a smaller or a larger unit, and solve problems involving mixed units (feet and inches, yards and feet).
c. Using customary units, demonstrate and justify correct processes for measuring, comparing, and estimating length, mass, capacity, and durations of time, including unit selection, partitioning and iterating units, and transitivity.
d. Compute perimeters of polygons by adding given side lengths, and find an unknown length in a polygon given the perimeter and all other side lengths. Represent these problems with equations involving a symbol for the unknown quantity.
e. Determine and compare areas by counting square units (improvised units, cm^2, m^2, in^2, ft^2).
f. Compute elapsed time and solve problems involving elapsed time (to the nearest minute).

Mathematics: Fourth Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Operations and the Problems They Solve

Core Standards · Students understand that:

1. 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 whatever numbers are involved.
2. The distributive property (of multiplication over addition) relates addition and multiplication. The distributive property can be shown numerically and visually, using arrays and area models.

Core Standards · Students can and do:

a. Solve multistep word problems involving the four operations with whole numbers.[34]
b. Estimate answers to computations and compute mentally to assess reasonableness of results.
c. Solve problems that involve comparing, ordering, adding and subtracting fractions with like denominators. Compare fractions to benchmark fractions.
d. Solve problems that involve comparing and ordering decimal numbers to hundredths. Compare decimals to benchmark decimals.
e. ♦Make a table from given data, ask and answer questions about data in a table, solve multi-step problems using information presented in tables, and find patterns in tables.[35]

Fractions

Core Standards · Students understand that:

1. The fraction a/b can be written as $a \times 1/b$ because a/b is a copies of $1/b$.
2. When a identical things are divided into b equal parts, each of a things contributes $1/b$. So $a \div b = a/b$.[36]
3. A fraction can be multiplied by a whole number as $n \times a/b = n \times a/b$. For example, $3 \times 2/5$ can be seen as 3 groups of 2 unit fractions $1/5$.[37]
4. A decimal of two digits stands for a sum of fractions whose denominators are 10 and 100. For example, 0.34 stands for $3/10 + 4/100$.

Core Standards · Students can and do:

a. Reason about fractions to establish equivalences between related fractions[38] (e.g. $3/10 = 30/100$, $9/12 = 3/4$).

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[34] Use the properties of multiplication (commutative, associative, identity) or the inverse relationship between multiplication and division (multiplying a number by b then dividing by b, and vice versa, leaves the number unchanged) to make sense of single digit multiplication and division situations and solve problems.
[35] Include tables with data from proportional relationships.
[36] This definition agrees with previous understandings of division in cases like 28 ÷ 7 (i.e., when a is a multiple of b), but also gives meaning to quotients such as 3 ÷ 4 or 7 ÷ 2.
[37] Using the Properties of Arithmetic, $n \times a/b = n \times (a \times 1/b) = (n \times a) \times 1/b = (n \times a)/b$.

b. Add and subtract related fractions in simple cases within one whole (e.g. $1/2 + 1/4$, $3/10 + 4/100$).
c. Solve word problems posed with whole numbers that have fractional answers.
d. Represent multiplication of whole numbers by fractions and fractions by whole numbers, using length and area models.
e. Solve word problems involving multiplying fractions by whole numbers and multiplying whole numbers by fractions.[39]
f. Use decimals to hundredths to describe quantities and parts of wholes, compare and order decimals to hundredths, and write fractions of the form $a/10$ or $a/100$ in decimal notation.
g. Round decimals (to hundredths) to the nearest whole number.
h. Solve addition and subtraction story problems involving fractions with related denominators (situations familiar from whole number work).

Base Ten Computation

Core Standards · Students understand that:

1. The product of a one-digit number times a multidigit number is the sum of the products of the one-digit number times each place value component. This is an instance of the distributive property.
2. Multi-digit multiplication algorithms can be derived and explained by decomposing numbers into their place value components and applying the distributive property.
3. Digits in each place are worth ten times as much as digits in the place to the right and a tenth as much as digits to the left; comparison of numbers is decided by the leftmost digit, with subsequent digits breaking ties.
4. Given whole numbers a and b, find whole numbers Q and R so that $a = Q \times b + R$. For example, given 325 and 7, express 325 in the form $325 = 46 \times 7 + 3$.

Core Standards · Students can and do:

a. Demonstrate place value understanding for whole numbers to 1,000,000 and compare numbers within this range.
b. Round whole numbers to the nearest 10 or 100 and use rounding to estimate computations.
c. Multiply single place numbers (to 9000) by single digit numbers.[40]
d. Multiply two-, three- and four-digit numbers by single-digit whole numbers, and multiply two-digit numbers by two-digit numbers, using strategies based on place value, Properties of Arithmetic, or the inverse relationship between multiplication and division.
e. Multiply two-digit numbers by two-digit numbers using an algorithm based on place value and regrouping, such as the standard algorithm.
f. Divide two-, three- and four-digit numbers by single-digit numbers, with or without remainder. In the case of remainders, express results in the form of an equation, as in $325 = 46 \times 7 + 3$.
g. Explain why multiplication and division strategies and algorithms work, using place value and the Properties of Arithmetic (including explanations supported by drawings or objects).

Quantity and Measurement

Core Standards · Students understand that:

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[38] Glossary: Related fractions. Two fractions are *related* if one denominator is a factor of the other. (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.)
[39] Include sharing multiple continuous wholes a fairly among b people, naming an individual share as a/b. For example 5 meters of pink ribbon shared among 3 people results in $5/3$ meters each.
[40] Glossary: Single-place number. The numbers that result when a whole number between 1 and 9 (inclusive) is multiplied by the numbers 10, 100, 1000, etc.

1. Area is additive: If a figure is decomposed into several pieces, then the area of the whole figure can be found by adding the areas of the pieces (expressed in common units).
2. An angle is two rays with a common endpoint, and is measured by the relative amount of a circle that you trace when turning from one ray to the other.
3. A one-degree angle turns through 1/360 of a circle, where the circle is centered at the origin of the rays; the measure of an angle is the number of one-degree angle turned with no gaps or overlaps.

Core Standards · Students can and do:

a. Apply the formula for area of squares and rectangles. Measure and compute whole-square-unit areas of objects and geometric figures decomposable into rectangles.[41]
b. ♦ Make a dot plot to show repeated measurements in common 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 (e.g., finding the difference in length between the longest and shortest specimens in an insect collection).
c. Draw scales (number line representations) of problem situations involving length, height and distance including fractional units or decimal numbers.
d. Find one dimension of a rectangle given the other dimension and its area or perimeter; find the length of one side of a square given its area or perimeter. Represent these problems with equations involving a symbol for the unknown quantity.
e. 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; represent these problems with equations involving a symbol for the unknown quantity.

Shapes

Core Standards · Students understand that:

1. Shapes can be analyzed and classified using concepts of parallelism, perpendicularity and angle measure.

Core Standards · Students can and do:

a. Draw points, lines, line segments, rays and angles; identify these in geometric figures.
b. Associate angles of a quarter turn (subtending ¼ of a circle) with angle measure 90°, a half turn (½ of a circle) with angle measure 180°, ¾ turn (¾ of a circle) with angle measure 270°, and a full turn (complete circle) with angle measure 360°.[42]
c. Draw perpendicular and parallel lines; identify these in geometric figures.
d. Identify right angles and angles smaller than/greater than a right angle in geometric figures; recognize right triangles.
e. Given a quadrilateral, say whether it is a square, whether it is a rectangle, and whether it is a parallelogram (with an understanding that a given shape may fit more than one category).

[41] using one-digit or two-digit numbers times two-digit numbers
[42] From Singapore Primary 4

Mathematics: Fifth Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Fractions

Core Standards · Students understand that:

1. Fractions a/b and $(n \times a)/(n \times b)$ are equal: for $1/b$ is n copies of $1/(n \times b)$, so a/b is $n \times a$ copies of $1/(n \times b)$. Example: $1/3$ is 4 copies of $1/12$, so $2/3$ is 8 copies of $1/12$; thus $2/3 = 8/12$.
2. Fractions can be added or subtracted by replacing each with an equal fraction so that the resulting fractions have the same denominator. Example: $2/3 + 5/4 = 8/12 + 15/12 = 23/12$.
3. Multiplying unit fractions gives a new unit fraction with denominator equal to the product of the initial denominators. For example, $1/3 \times 1/2 = 1/(3 \times 2)$. The product $1/3 \times 1/2$ is 1 part when a whole of size $1/2$ is divided into 3 parts, i.e. it is "$1/3$ of $1/2$."[43]
4. Multiplying unit fractions can be extended to multiplying fractions in general. For example, $2/3 \times 4/5$ can be seen as 2 groups of 4 unit fractions $1/15$, hence the product is $8/15$.[44] The product $2/3 \times 4/5$ is 2 parts when a whole of size $4/5$ is divided into 3 parts, i.e. it is "$2/3$ of $4/5$."[45]
5. Dividing a unit fraction $1/b$ by a whole number n gives a unit fraction with denominator $n \times b$, because when $1/b$ is divided into n equal parts, the size of each part is $1/(n \times b)$. For example, $1/3 \div 2 = 1/6$.
6. Dividing a whole number n by a unit fraction $1/b$ gives a whole number $n \times b$, because, as there are b units of $1/b$ in 1, there are $n \times b$ units of $1/b$ in n. For example, $2 \div 1/3 = 6$.
7. A mixed number stands for the sum of its whole number part and a fractional part less than 1. A mixed number can be written as a fraction greater than 1, such as $17/5$. This equivalence can be shown using area, length, and number line models.
8. The ratio of two whole number quantities a and b, written $a:b$ or a/b, is a multiplicative comparison telling how much of one quantity there is for a given amount of the other, or how many times as much one is than the other.[46]

Core Standards · Students can and do:

a. Use area models and length models (such as strip drawings or the number line) to represent multiplication of fractions, division of unit fractions by whole numbers, and division of whole numbers by unit fractions.
b. Multiply fractions, divide unit fractions by whole numbers, and divide whole numbers by unit fractions, and solve word problems involving these operations.
c. Divide whole numbers by single digit decimals by seeing that they are fractions with denominator 10 or 100.
d. Rename fractions and mixed numbers to equivalent forms and identify equivalent fractions.
e. Compare and order fractions and mixed numbers with like or unlike denominators, including in contextual situations, using the fractions themselves, strip drawings or number line representations, and area models. Describe the size of fractional quantities with reference to the problem situation.
f. Make tables of equal ratios relating whole number quantities, and find missing values in the tables. Plot pairs of values on the coordinate plane. Example

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[43] On the number line, $1/n \times 1/d$ is 1 part when the interval from 0 to $1/d$ is divided into n parts. This is the same as 1 part when the interval from 0 to 1 is divided into $n \times d$ parts, and thus $1/n \times 1/d = 1/n \times d$.

[44] Using the Properties of Arithmetic, $2/3 \times 4/5 = (2 \times 1/3) \times (4 \times 1/5) = (2 \times 4) \times (1/3 \times 1/5) = (2 \times 4) \times 1/3 \times 5 = 2 \times 4/3 \times 5$.

[45] On a number line, $m/n \times c/d$ means m parts when the interval from 0 to c/d is divided into n parts.

[46] For example, in a mixture of 5 cups of flour and 2 cups of sugar, the ratio is 5 cups flour to 2 cups sugar. There is $5/2$ times as much flour as sugar (equivalently, $2\ 1/2$ times as much or 2.5 times as much).

Cups of Flour	5	10	?	20
Cups of Sugar	2	?	6	8
Flour:Sugar (fraction form)	5/2	10/4	?	20/8
Flour:Sugar (decimal form)	?	?	?	?

Hours of Snowfall	5	10	?	20
Inches of Snow	2	?	6	8
Inches:Hours (fraction form)	2/5	4/10	?	8/20
Inches:Hours (decimal form)	?	?	?	?

Base Ten Computation

Core Standards · Students understand that:

1. The standard division algorithm is based on successively finding the largest single digit multiple of the divisor that is less than the dividend, regrouping to the next lower unit if necessary, and then subtracting the multiple and repeating to find the next digit in the quotient.
2. The division algorithm can be used to express a fraction in decimal form by carrying the division into the decimal places.
3. The features of the place value system for whole numbers extend to the decimal positions and the combined system is symmetric around the ones place.
4. In adding or subtracting decimal numbers, one operates separately with the units of each size, except when regrouping is needed; the scheme for regrouping is the same at each place, because each unit is composed of ten of the next smaller unit.
5. Numbers in decimal notation can be shown on the number line by dividing and sub-dividing the unit intervals as many times as needed to locate the number. This process can be visualized as zooming in on the number line.

Core Standards · Students can and do:

a. Divide two, three and four digit numbers by two digit numbers, with remainder, using an algorithm based on place value and regrouping, such as the standard algorithm. In the case of remainders, express results in the form of an equation, as in $145 = 11 \times 13 + 2$.
b. Understand very large and very small numbers (from millionths to hundreds of millions); round very large numbers.
c. Quickly 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.
d. Add and subtract decimals using an algorithm based on place value and regrouping, such as the standard algorithm, and solve problems involving these operations.
e. Write fractions in decimal notation for denominators 2, 3, 4, 5, 6, 8, 10 and 100.
f. Explain why strategies and algorithms for decimals work, using place value and the Properties of Arithmetic (including explanations supported by drawings or objects).

Quantity and Measurement

Core Standards · Students understand that:

1. The volume of a solid figure is a measure of how much space it encloses. A cube with side length 1 unit is said to contain "one cubic unit" of volume. The volume of a solid figure can be measured (expressed numerically) by the number of cubic units that fit inside it with no gaps or overlaps.
2. Packing a rectangular prism with unit cubes and decomposing the prism into layers shows that a rectangular prism ℓ units long by w units wide by h units tall contains a volume $V = \ell \times w \times h$ cubic units. The base of the

prism has area $A = \ell \times w$ square units, and the prism can be viewed as h layers, each containing $\ell \times w$ cubic units,

so the volume of the prism can also be expressed as $V = A \times h$ cubic units.

3. Volume is additive: If a solid figure is decomposed into several pieces, then the volume of the whole figure can be found by adding the volumes of the pieces (expressed in common units).
4. Quantities with like units can be added or subtracted giving a sum or difference with the same unit; quantities with unlike units can be multiplied or divided giving products or quotients with derived units.
5. The ratio of a length, area or amount to another length, area or amount is the same regardless of the size of the unit used for measurement.
6. The number line is a scale that can be used to show units such as pounds, liters, etc.

Core Standards · Students can and do:

a. Measure and compute whole-cubic-unit volumes for rectangular prisms and for objects well described as rectangular prisms.
b. Convert among different-sized standard measurement units within a given measurement system (e.g. feet to yards, centimeters to meters) and use conversion to solve story problems.
c. Form ratios of lengths, areas, and other quantities, including when quantities being compared are measured in different units.
d. Solve word problems involving addition, subtraction, multiplication and/or division using quantities expressed as whole numbers, fractions, or decimals with measurement units.
e. Solve multi-step problems involving units of weight, capacity, money, volume and area.

Coordinate Geometry

Core Standards · Students understand that:

1. A pair of perpendicular number lines ("axes") defines a coordinate system. A given point in the plane has a separate position along each of the two axes; the two positions of the point are called its coordinates.
2. Graphs on coordinate axes can be used to make sense of relationships among quantities in complex problems.

Core Standards · Students can and do:

a. Graph points in the first quadrant the coordinate plane, and read off the coordinates of graphed points.[47]
b. Determine the lengths of horizontal and vertical segments in the plane, given the coordinates of their endpoints.
c. ♦ Collect data on continuous covarying quantities and display the data in a line graph with broken lines; distinguish bar graphs from line graphs; ask and answer questions from line graphs, including comparisons of ratios.

Statistics

Core Standards · Students understand that:

[47] The axes should sometimes represent dimensioned quantities, and the units of measure should not always be the same for both axes. Coordinates may be whole numbers, fractions or decimals.

1. Data are collected purposefully to answer a predefined question (e.g., "How tall are the fifth graders in our school?")
2. A set of data typically shows variability—not all of the values are the same—and yet the values also typically show some tendency to cluster. Identifying a "center" for a data set is a way to describe its many values using a single number.
3. The median is a measure of center in the sense that approximately half the data values are less than median, while approximately half are greater.
4. Variation in a data set can be measured by the range and by typical deviations from the center.

Core Standards · Students can and do:

a. Collect data to answer a predefined question about a measurement quantity. Make a dot plot to display the data, and describe the data using the median and typical deviations from the it.

Mathematics: Sixth Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Ratios and Proportional Relationships

Core Standards · Students understand that:

1. Multiplicative comparisons can be extended from whole numbers to fractions and decimals. When the ratio q/m is formed, or when q is r times as much as m, the numbers q, r and m can be fractions or decimals.
2. p% of a quantity means $p/100$ times as much as the quantity. The number p can be a fraction or decimal, as in 3.75%.
3. A unit rate is the multiplicative factor relating the two quantities in a ratio. Two quantities q and m can be compared by $q = r \times m$, where the unit rate r tells how much q per m.
4. Given two quantities in a ratio (e.g. distance and time), finding the unit rate produces a new type of quantity (e.g. speed).

Core Standards · Students can and do:

a. Solve for an unknown quantity in a problem involving two equal ratios.
b. Find a percentage of a quantity; solve problems involving finding the whole given a part and the percentage.
c. Solve unit rate problems including unit pricing and constant speed. (See table.)

$D = s \times T$	$D \div T = s$	$D \div s = T$
A car driving at a speed of 30 miles per hour for 6 hours travels a distance of 180 miles.	If a car drives 180 miles for 6 hours at a constant speed, that speed is 30 miles per hour.	When a car drives 180 miles at a speed of 30 miles per hour, the trip takes 6 hours.

d. Represent unit rate problems on a coordinate plane where each axis represents one of the two quantities involved, 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.

The Number System

Core Standards · Students understand that:

1. The Properties of Arithmetic govern operations on all numbers.
2. Division of fractions follows the "invert and multiply" rule because multiplication and division are inverse operations. For example, $(2/3) \div (5/7) = 14/15$ because $(14/15) \times (5/7) = 2/3$.
3. Every nonzero fraction has a unique multiplicative inverse,[48] namely its reciprocal. Division can be defined as "multiplying by the multiplicative inverse." Then $(2/3) \div (5/7) = 14/15$ because the division symbol indicates multiplication by the multiplicative inverse.
4. A two-sided number line can be created by reflecting the fractions across zero. Numbers located to the left of zero on the number line are called negative numbers and are labeled with a negative sign.

[48] Glossary: 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 $3/4 \times 4/3 = 4/3 \times 3/4 = 1$.

5. Two different numbers, such as 7 and –7, that are equidistant from zero are said to be opposites of one another. The opposite of 7 is –7 and the opposite of –7 is 7. The opposite of the opposite of a number is the number itself. The opposite of 0 is 0. The operation of attaching a negative sign to a number can be interpreted as reflecting the number across zero on the number line.

6. The absolute value of a number is its distance from zero on the number line. For any positive number q, there are two numbers whose absolute value is q, namely q and $-q$.

7. The absolute value of a signed quantity (e.g. account balance, elevation) tells the size of the quantity irrespective of its sense (debit or credit; above or below sea level).

8. Comparison of numbers can be extended to the full number system. The statement $p > q$ means that p is located to the right of q on the number line, while $p < q$ means that p is located to the left of q on the number line. The statement $p > q$ does not mean $|p| > |q|$.

Core Standards · Students can and do:

a. Divide fractions, and divide finite decimals by expressing them as fractions.
b. Solve problems requiring arithmetic with fractions presented in various forms, converting between forms as appropriate and estimating to check reasonableness of answers.
c. Find and position rational numbers[49] on the number line.
d. Use rational numbers to describe quantities such as elevation, temperature,[50] account balance and so on. Compare these quantities using > and < symbols and also in terms of absolute value.
e. Graph points and identify coordinates of points on the Cartesian coordinate plane in all four quadrants.

Statistics

Core Standards · Students understand that:

1. The mean is a measure of center in the sense that it is the balance point; the mean is the value each data point would take on if the total value of all the data points were redistributed fairly.

2. When the mean and median of a data set differ substantially, both measures should be provided, and the difference explained in terms of the data values.

Core Standards · Students can and do:

a. Collect data to answer a predefined question about a measurement quantity. Make a dot plot to display the data, and describe the data using measures of center and measures of variation.[51]

Geometry

Core Standards · Students understand that:

1. Triangles and parallelograms can be dissected and reassembled into rectangles with the same area; this leads to a formula for area in terms of base and height.

2. Polygons can be dissected into triangles in order to find their area.

Core Standards · Students can and do:

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[49] Glossary: Rational number. A number expressible in the form a/b for integers a and $b \neq 0$. The rational numbers include positive and negative integers, positive and negative fractions, and 0.
[50] A caution for temperature problems: The rational numbers are not a good model for a temperature scale. There is no temperature that solves the equation $T + 1000^{\circ}\text{C} = 0$.
[51] Data sets should include fractional values at this grade but not negative values.

a. Find the area of right triangles, other triangles, special quadrilaterals, and polygons (by dissection into triangles and other shapes).
b. Find surface area of cubes, prisms and pyramids (include the use of nets to represent these figures).
c. Solve problems involving area, volume and surface area of objects.
d. Examine the relationship between volume and surface area. Exhibit rectangular prisms with the same surface area and different volume, and with the same volume and different surface area.
e. 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 the side length, and to express the side length in terms of the area or volume.

Expressions and Equations

Core Standards · Students understand that:

1. A number that is the result of a sequence of operations with other numbers can be expressed in different ways using conventions about order of operations and parentheses, rules for working with fractions, and the Properties of Arithmetic. All such expressions are equivalent.
2. A letter is used to stand for a number in an expression in cases where one doesn't know what the number is, or where, for the purpose at hand, it can be any number in the domain of interest. Such a letter is called a variable.
3. An equation is a statement that two expressions are equal, and a solution to an equation is a value of the variable (or a set of values for each variable if there is more than one variable) that makes the equation true.

Core Standards · Students can and do:

a. Represent an unknown number using a letter in simple expressions such as $y + 2$, $y - 3$, $6 + y$, $5 - y$, $3y$, $y/2$, and $(3 \pm y)/5$.
b. Interpret $3y$ as $y + y + y$ or $3 \times y$, $y/2$ as $y \div 2$ or $1/2 \times y$, $(3 \pm y)/5$ as $(3 \pm y) \div 5$ or $1/5 \times (3 \pm y)$.[52]
c. Evaluate simple expressions when values for the variables in them are specified (exclude expressions with a variable in denominator).
d. Choose variables to represent quantities in a word problem and construct simple equations to solve the problem by reasoning about the quantities.
e. Solve equations of the form $x + p = q$ (for $p < q$) and $px = q$ where p and q are fractions.

[52] From Singapore Secondary 1

Mathematics: Seventh Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Ratios and Proportional Relationships

Core Standards · Students understand that:

1. Two variable quantities x and y are said to be proportional to one another if the ratio x/y is always equal to the same quantity k, so that $y = kx$. The constant k is the unit rate, and tells how much of y per unit of x.

Core Standards · Students can and do:

a. Compare proportional relationships represented in different ways (e.g. compare a graph to an equation to determine which of two objects has greater speed).
b. Decide whether two quantities that vary together have a proportional relationship, analyze proportional relationships using the unit rates that characterize them, and solve word problems involving proportional relationships.
c. Plot pairs (x, y) from a proportional relationship $y = kx$, and pass a straight line through them and the origin. Observe that increases in y are proportional to increases in x, and calculate [increase in y]/[increase in x] = k.

The Number System

Core Standards · Students understand that:

1. On the number line, the sum $p + q$ is defined to be the number lying 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 (add to zero).[53]
2. Sums of signed numbers can be computed using the Properties of Arithmetic.[54]
3. The additive inverse of a sum is the sum of the additive inverses.[55]
4. Subtraction is defined as adding the additive inverse. This definition of subtraction allows subtraction of rational numbers and agrees with previous understandings of subtraction with positive numbers.[56] On the number line, the difference $p - q$ lies distance $|q|$ from p, to the left of p if q is positive and to the right of p if q is negative.
5. The absolute value of $p - q$ equals the distance between p and q on the number line.
6. Products of signed numbers can be computed using the Properties of Arithmetic.[57] In particular, multiplying a number by –1 produces its additive inverse.[58]

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[53] Glossary: 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 $^3/4 + (-^3/4) = (-^3/4) + ^3/4 = 0$.

[54] For example, 7 + (–3) = 4 because 7 + (-3) = (4 + 3) + (–3) = 4 + [3 + (–3)] = 4 + [0] = 4. And (–2) + (–3) = –5 because 5 + [(-2) + (-3)] = (2 + 3) + [(-2) + (-3)] = [2 + (-2)] + [3 + (-3)] = [0] + [0] = 0 so (-2) + (-3) is the additive inverse of 5, that is –5.

[55] For example, –(6 + –2) = (–6) + 2 because [6 + (–2)] + [(–6) + 2] = [6 + (–6)] + [(–2) + 2] = [0] + [0] = 0.

[56] For example, the subtraction 7 – 3 means 7 plus the additive inverse of 3, i.e. 7 + (–3), which equals 4. The subtraction 9 – (–4) means 9 plus the additive inverse of –4, i.e. 9 + 4, which equals 13.

[57] For example, (–1) × (–1) = 1 because (–1) + (–1) × (–1) = 1 × (–1) + (–1) × (–1) = [1 + (–1)] × (–1) = 0 × (–1) = 0.

[58] Because (–1) × a + a = (–1) × a + (1) × a = [(–1) + (1)] × a = 0 × a = 0.

7. Every nonzero rational number has a multiplicative inverse. Division of rational numbers is defined as multiplying by the multiplicative inverse.
8. The operation of adding the rational number q to points on the number line is a translation; it shifts points to the right if $q > 0$, to the left if $q < 0$, and not at all if $q = 0$. The operation of adding $-q$ undoes the operation of adding q.
9. The operation of multiplying points on the number line by a positive rational number k is a dilation; it scales points further away from zero if $k > 1$, closer to zero if $k < 1$, and not at all if $k = 1$. The operation of multiplying by $1/k$ undoes the operation of multiplying by k.

Core Standards · Students can and do:

a. Explore and explain with number lines the rules for adding rational numbers, e.g., $r + s = s + r$; $r + (-s) = r - s$; $p - (q + r) = p - q - r$.
b. Use the rules of arithmetic to explore and explain with specific numbers the rules for multiplying rational numbers, e.g., 4×-5 is -5 added to itself 4 times, so equal to -20; $-3 \times (-2 + 2) = -3 \times 0 = 0$, so $-3 \times -2 = -(-3)\times 2 = -(-6) = 6$.
c. Add and subtract rational numbers, and use these operations to solve word problems (including signed quantities such as elevation, temperature, account balance, and so on).
d. Multiply and divide rational numbers, and use these operations to solve word problems (including signed quantities).

Expressions and Equations

Core Standards · Students understand that:

1. Expressing a quantity in different forms serves a purpose in analyzing quantitative situations.
2. The distributive property can be used in two directions, both to expand linear expressions, and to factor a sum of terms with a common factor.

Core Standards · Students can and do:

a. Construct algebraic expressions for simple real-world situations and generate equivalent expressions to interpret their meaning (e.g., $P + 0.05P = 1.05P$ means that "increase by 5%" is the same as "multiply by 1.05").
b. Generate equivalent expressions from a given expression, including putting linear expressions in standard form and taking out a common factor. Include expressions involving negative numbers and exponents 2 and 3.
c. Solve multi-step word problems that lead to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are rational numbers, by undoing the operations involved in producing the expression on the left, using additive and multiplicative inverses.
d. Solve simple absolute value equations of the form $|x + h| = j$ and $|x - h| = j$, where h and j are integers.
e. Read the structure in a numerical expression at a level necessary to enter it into a calculator or spreadsheet, making use of parentheses and the conventions on order of operations.

Statistics

Core Standards · Students understand that:

1. In addition to measurement variability, another source of variation in data is randomness.

Core Standards · Students can and do:

a. Collect experimental or simulation data from repeated random trials. Make a histogram showing absolute frequencies and a bar graph of relative frequencies. Discuss the patterns and make predictions for further experiments or simulations.

Probability

Core Standards · Students understand that:

1. Chance events fall along a spectrum: nearly impossible | unlikely | neither likely nor unlikely | likely | nearly certain.
2. Probability is a quantitative measure of likelihood. Probabilities are numbers lying between 0 and 1, with 0 representing impossible and 1 representing certain (in the case of a finite sample space).
3. The experimental probability of a specified outcome is the observed fraction of the outcome in a data set collected from a process involving randomness or chance.
4. In a random process, the individual outcomes are unpredictable, but patterns may emerge after repeated trials. Experimental probabilities in random experiments tend to approach stable values as more and more data is generated.
5. In a theoretical probability model, the set of distinct possible outcomes for a random experiment is called the sample space. An event is a set of sample points; a sample point may belong to several events. A specified event occurs in some fraction of the sample space. This fraction is called the theoretical probability of the event.
6. When computing theoretical probabilities, all members of the sample space are assumed equally probable. Theoretical probabilities will not match long-run experimental probabilities if this assumption is inappropriate (e.g., as in the case of a loaded die).

Core Standards · Students can and do:

a. Compute experimental probabilities from data sets, including data sets generated by simulations or sampling experiments.
b. Compute experimental probabilities to estimate theoretical probabilities when no theoretical probability model is apparent.
c. Represent sample spaces for one-stage random experiments; identify members of the sample space in which specified events occur.
d. Use a theoretical probability model to compute theoretical probabilities for one-stage random experiments, expressing theoretical probabilities as fractions, decimals and percents.
e. Compare experimental probabilities to theoretical probabilities for one-stage random experiments, examining and if feasible revising the assumptions of the theoretical model when the two conflict.

Geometry

Core Standards · Students understand that:

1. Two polygons are congruent[59] if and only if there is a correspondence between vertices so that the corresponding sides are equal and the corresponding angles are equal.
2. A plane or solid figure is similar to another if the second can be obtained from the first by a similarity transformation.[60] All ratios of lengths in the second figure to corresponding lengths in the first figure are equal to the scale factor of the dilation.

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[59] Glossary: 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).
[60] Glossary: Similarity transformation. A rigid motion followed by a dilation. Glossary: 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.

3. Congruent figures have the same area or volume. 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.

4. Given a line in the coordinate plane not parallel to either axis, any two right triangles with legs parallel to the axes and hypotenuse on the given line are similar, and so the slope of the line (rise over run) is the same regardless of which two distinct points are used to compute it.

Core Standards· Students can & do:

a. Solve problems involving similar triangles and scale drawings (including computing actual lengths, areas and volumes from a scale drawing and reproducing a scale drawing at a different scale).
b. Explore using hands-on activities the area of non-rectangular figures and the perimeter of curvilinear figures, and the fact that a dilation of the plane changes areas by the square of the scale factor.[61]
c. Use scale factors to find lengths and areas of similar figures, including an informal derivation of the formulas relating the area, radius and circumference of a circle.
d. Give an explanation of why the volume of a cylinder is the area of the base times the height, using informal arguments involving slices.
e. Use coordinate grids to transform figures and to predict the effect of dilations, translations, rotations and reflections.
f. Use two-dimensional representations of three-dimensional objects (schematics, assembly instructions, perspective drawings and multiple views) to solve problems.
g. Explore three-dimensional figures formed by translations and rotations of plane figures through space.
h. Sketch and describe cross-sections of cones, cylinders, pyramids and prisms.

[61] Include using grids of squares with fractional side lengths to estimate area, and measuring the length of strings wrapped around the perimter.

Mathematics: Eighth Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Functions and the Situations They Model

Core Standards · Students understand that:

1. A function is a rule, often defined by an expression, that states a relationship between the values of two variable quantities.
2. A linear function models a situation where the change in one quantity is proportional to the corresponding change in the other quantity. The constant of proportionality, m, is the rate of change of the function. If x is the input and y is the output then the function is defined by $y = mx + b$ for some constant b, which is called the initial value of the function (the value of the function when x is 0).
3. The graph of a linear function $y = mx + b$ is a straight line, and the slope of the line is the function's rate of change.
4. The problem of finding where two linear functions have the same output value for a common input value leads to an equation in one variable; the solution or solutions (if any) can be visualized as the input value(s) where the graphs of the functions intersect.
5. A linear equation in one variable can be solved by successively transforming it into simpler equations with the same solutions using the Properties of Arithmetic and the Properties of Equality, until an equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).

Core Standards · Students can and do:

a. Compare features of two or more functions that may be presented in different representations (as formulas, graphs, tables of values, or verbally).
b. 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.
c. 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.
d. Solve linear equations with rational number coefficients, including equations that require expanding expressions using the distributive law and collecting like terms.

The Number System

Core Standards · Students understand that:

1. The number line has numbers that are not rational, such as 2π or $2 + \sqrt{3}$, called irrational numbers.
2. An irrational number can be approximated to arbitrary precision by rational numbers.
3. If $n > 0$ is an integer and $\sqrt{n}$ is not an integer, then $\sqrt{n}$ is irrational. If q is rational and r is irrational, then $q + r$ is irrational, and so is qr provided $q \neq 0$.

Core Standards · Students can and do:

a. Use rational approximations to compare the size of irrational numbers, locate them approximately on a number line and estimate the value of expressions (e.g. π^2).

Geometry

Core Standards · Students understand that:

1. Angle measures formed by a configuration of lines in a plane can often be deduced from other angle measures (e.g., vertically opposite angles, angles produced when a transversal line cuts two parallel lines).
2. The side lengths of a right triangle are related by the Pythagorean theorem.

Core Standards · Students can and do:

a. Explore and explain by hands-on activities facts about the angle sum of triangles, exterior angles, and alternate interior angles of parallel lines. Use these facts to determine the angle sum of interior angles of convex polygons, and the angle sum of exterior angles of convex polygons.[62]
b. Explore and explain using hands-on activities: parallel lines in space, line perpendicular to a line through a given point, lines perpendicular to a plane, lines parallel to a plane, the plane passing through three given points, and the plane perpendicular to a given line at a given point.
c. Use facts about angles to write and solve simple equations for an unknown angle in a figure.
d. Explain a proof of the Pythagorean theorem.[63]
e. Use the Pythagorean theorem to determine missing side lengths in right triangles and to solve problems in two and three dimensions.
f. Use the Pythagorean theorem to find the distance between two points in a coordinate system.
g. 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, ambiguous, or impossible.)
h. 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.
i. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Statistics

Core Standards · Students understand that:

1. Scatterplots for bivariate continuous data may reveal patterns of association between two quantities. This kind of relationship between quantities is not a functional relationship—and yet, a function might be a valuable way to describe a statistical relationship.

Core Standards · Students can and do:

a. Construct and interpret scatterplots for bivariate measurement data.
b. Describe patterns that appear in scatterplots, such as clustering, outliers, positive/negative association, linear association, nonlinear association.
c. For scatterplots that suggest a linear association, model the relationship with a linear function using an informal fitting procedure. Use the model function to solve problems in the context of the data,

[62] Use 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 form a line, and give an argument in terms of transversals why this is so.
[63] For example, by the method of right triangles in a square.

interpreting the slope/rate of change and intercept/initial value. Informally assess the goodness of the model by judging the closeness of the data points to the graph of the function.

Probability

Core Standards · Students understand that:

1. The framework for theoretical probability models is the same for compound events as for simple events: the theoretical probability is the fraction of the sample space in which the compound event occurs.

Core Standards · Students can and do:

a. Compute experimental probabilities from data sets, including data sets generated by simulations or repeated sampling experiments.
b. Compute experimental probabilities to estimate theoretical probabilities of compound events when no theoretical probability model is apparent.
c. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams; identify members of the sample space in which specified events occur.
d. Compute theoretical probabilities for compound events by counting members of the sample space.
e. Compare experimental probabilities to theoretical probabilities for multi-stage random experiments, examining the assumptions of the theoretical model when the two conflict.

Mathematics: High School—Expressions

A Coherent Understanding of Expressions

[Final draft of CCR narrative goes here.]

Seeing structure in expressions

Core Standards · Students understand that:

1. Different forms of expression for functions reveal different properties of the function; a purpose in transforming expressions is to find those properties.

   For example, factoring a quadratic expression reveals the zeros of the function it defines, and putting the expression in vertex form reveals the maximum or minimum of the function; the expression 1.15^t can be rewritten in the form $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate monthly interest rate if the annual rate is 15%.

2. The laws of exponents for whole number exponents follow from an understanding of exponents as indicating repeated multiplication, and from the associative property of multiplication.

3. The interpretation of zero, fractional and negative exponents follows from extending the laws of exponents to those values.

   For example, since $(x^{1/3})^3 = x^{(1/3)\cdot 3} = x^1 = x$, $x^{1/3}$ is the cube root of x.

4. Complex expressions can be interpreted by "chunking": temporarily viewing a part of the expression as a single entity.

Core Standards · Students can and do:

a. Factor, expand, and complete the square in quadratic expressions.
b. Use chunking to see expressions in different ways that suggest ways of rewriting 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 $(x^2 - y^2)(x^2 + y^2)$.

c. Rewrite expressions using the laws of exponents.

   For example $(x^{1/2})^3 = x^{3/2}$ and $1/x = x^{-1}$.

d. Use the laws of exponents to interpret expressions for exponential functions, recognizing fractional exponents as indicating roots of the base and negative exponents as indicating the reciprocal of a power.

   For example, identify the relative rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.2)^{10t}$, $y = (1.01)^{t/12}$, and recognize that any non-zero number raised to the 0 power is 1 (for example, $12(1.05)^0 = 12$). Avoid common errors such as confusing as $6(1.05)^t$ with $(6\cdot 1.05)^t$ and $5(0.03)^t$ with $5(1.03)^t$.

e. Given an expression for an exponential function, identify whether it represents exponential growth or decay.
f. Using a method such as the factorization $(x^n-1) = (x-1)(x^{n-1} + \ldots + 1)$ where n is a whole number, prove the formula for the sum of a geometric series, and use the formula to solve problems.

   Include problems involving compound interest and mortgage payments.

The arithmetic of polynomials and rational functions

Core Standards · Students understand that:

1. Polynomials form a system analogous to the integers, closed under the operations of addition, subtraction, and multiplication.

2. A polynomial of degree n has n complex roots, where roots are counted according to multiplicity.
3. For a polynomial $p(x)$, $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
4. The Binomial Theorem gives the expansion of $(x + a)^n$ in powers of x for a whole number n and a real number a, with coefficients determined for example by Pascal's triangle. The Binomial Theorem can be proved by mathematical induction.
5. Rational functions are fractions whose numerator and denominator are polynomials, and the rational functions are closed under the operation of division by a nonzero rational function.

Core Standards · Students can and do:

a. Add, subtract and multiply polynomials.
b. Identify zeros of polynomials when suitable factorizations are available, and graph polynomials.
c. Transform simple rational functions using the Properties of Arithmetic and the rules for operations on fractions.
d. Identify zeros and asymptotes of rational functions, when suitable factorizations are available, and graph rational functions.
e. Divide polynomials by monomials

Mathematics: High School—Equations

A Coherent Understanding of Equations

[Final draft of CCR narrative goes here.]

Building equations to model relations between quantities

Core Standards · Students understand that:

1. Choosing a unit for a general quantity (e.g. length) establishes a correspondence between specific instances of the quantity (e.g. lengths of specific objects) and numbers called coordinates.
2. A relation between two quantities can be represented by an equation in variables representing coordinates for the quantities; by a graph on a pair of axes marked with units for the quantities; and by a table of coordinate pairs from the relation. The graph and the table show pairs that are solutions to the equation.

Core Standards · Students can and do:

a. Build equations to express relations between quantities and solve problems.

Include equations arising from situations involving linear, quadratic, simple rational, and exponential functions.

b. Rearrange formulas to isolate a quantity of interest.
c. Build systems of equations and solve problems involving systems of equations.

Reasoning with equations and inequalities

Core Standards · Students understand that:

1. To solve an equation algebraically, one assumes it is true and deduces the solutions, often in steps that replace it with a simpler equation whose solutions include the solutions of the original one.
2. Adding a number to both sides of an equation, or multiplying both sides by a nonzero number, leads to an equation that has exactly the same solutions as the original.
3. If the product of two numbers is zero, then at least one equals zero, and conversely. This principle is the basis for solving equations by factoring.
4. Multiplying both sides of an equation by an expression that can be zero for certain values of the variables in it, or squaring both sides of an equation, can lead to an equation that has more solutions than the original. Evaluating these in the original equation eliminates extraneous solutions.
5. 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.
6. Equations not solvable in one number system may have solutions in a larger number system.
7. Equations of the form $f(x) = g(x)$ can be solved graphically by finding the intersections (if any) of the graphs of $f(x)$ and $g(x)$.
8. The relationship between a function f and its inverse (if it has one) can be used to solve equations of the form $f(x) = c$. For example, a logarithmic function can help solve exponential equations, and an inverse trigonometric function can help solve trigonometric equations.
9. Given a system of linear equations, 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.

10. The solutions to an equation in two variables form a graph—a set of points, often a curve or a line, in the coordinate plane.
11. The solutions to two equations in two variables (if any) can be visualized as the points of intersection of their graphs, because those points satisfy both equations simultaneously.
12. The solution to a system of inequalities in two variables can be visualized as the intersection of the regions in the plane defined by the inequalities.

Core Standards · Students can and do:

a. Solve simple rational and radical equations, noting and explaining extraneous solutions.
b. Solve quadratic equations over the real numbers by completing the square, using the quadratic formula and factoring.
c. Solve linear inequalities in one variable and graph the solution set on a number line.

   Emphasize solving the associated equality and determining on which side of the solution of the associated equation the solutions to the inequality lie.

d. Solve linear systems of equations algebraically, focusing on pairs of linear equations in two variables.
e. Graph a system of two linear or quadratic equations in two unknowns and estimate the solution from a graph.
f. Graph the solution set of a linear inequality in two variables.
g. Use the properties of logarithms to solve equations involving exponential functions.
h. Use inverse trigonometric functions to solve equations of the form $A\sin(Bx + C) = D$.
i. Find complex roots of quadratic equations.
j. Solve a system of two quadratic equations in two unknowns.

Mathematics: High School—Functions

A Coherent Understanding of Functions

[Final draft of CCR narrative goes here.]

Interpreting functions

Core Standards · Students understand that:

1. The domain of a function is the set of its inputs, and the range is the set of its outputs.
2. Function notation uses a letter to stand for a function. If f is a function and x is a number in its domain, then $f(x)$ indicates the output of f corresponding to the input x.
3. Functions can be described by key characteristics, including: zeros; vertical intercept; extreme points; average rates of change (over intervals); intervals of increasing, decreasing and/or constant behavior; and end behavior.
4. Linear, quadratic and exponential functions are defined by expressions that have forms specific to each type, in which the parameters can often be interpreted in terms of characteristics of the graph.
5. An equation in two variables implicitly expresses one variable as a function of the other if there are no points on the graph having the same value of the first variable but different values of the second.
6. When x is a power of ten, the common logarithm $\log(x)$ tells the exponent. When x lies between 10^n and 10^{n+1}, $\log(x)$ lies between n and $n+1$.

Core Standards · Students can and do:

a. 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.
b. Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
c. Compare values and properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions).
d. Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes.
e. Describe the qualitative behavior of common types of functions using graphs and tables.

   Identify: intercepts; intervals where the function is increasing, decreasing, positive or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. Use technology to explore the effects of parameter changes on the graphs of linear, power, quadratic, square root and cube root, polynomial, simple rational, exponential, logarithmic, sine and cosine, absolute value and step functions.

f. Interpret the parameters in the general expressions for linear, quadratic, and exponential functions, and draw conclusions about the parameters by inspection of the graph.
g. Given a function f, and given a constant c, evaluate $f(c)$ if possible and find solutions to $f(x) = c$ (if they exist). Where appropriate, relate the possibility of evaluation to the domain and the existence or nonexistence of solutions to the range.

Building functions

Core Standards · Students understand that:

1. Varying a parameter in the general expression for a linear, quadratic or exponential function can (often) be interpreted as performing a geometric transformation on the graph. This can be used to adjust a function to model a particular situation.

2. 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 $f(g(x))$.
3. The inverse of a function "undoes" what the function does; that is, composing the function with its inverse in either order returns the original input.
4. Sequences are functions whose domain is the whole numbers, and they can be defined recursively as well as explicitly. Arithmetic sequences are linear functions and geometric sequences are exponential functions.

Core Standards · Students can and do:

a. Make graphs of linear, quadratic, cubic, absolute value and exponential functions, and, given the graph of one of these types, identify the type.
b. Sketch graphs of quadratic functions presented in the form $y = ax^2+bx+c$, $y = a(x-h)^2+k$ and $y = a(x-p)(x-q)$ (without plotting points).
c. Solve problems involving quadratic functions, such as analyzing projectile motion and maximizing profit.
d. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$. Include both positive and negative k; find the value of k given the graphs.
e. Write an expression of the form $a(1+r)^t$ or ab^t for an exponential function to express a constant percent growth rate or a constant growth factor.
f. Evaluate composite functions and compose functions symbolically in simple cases (e.g. one or both functions linear).
g. Read values of an inverse function from a graph or a table, given that the function has an inverse.
h. For linear or simple exponential functions, find a formula for an inverse function by solving an equation.
i. For linear functions or simple exponential functions, verify symbolically by composition that one function is the inverse of another.
j. Write arithmetic and geometric sequences both recursively and in closed form, and translate between the two forms.

Linear vs. exponential behavior

Core Standards · Students understand that:

1. Linear functions grow by equal differences in equal time periods; exponential functions grow by equal factors in equal time periods.
2. The rate of change of a linear function is constant; the rate of change of an exponential function is proportional to the value of the function.
3. Exponential growth eventually outstrips polynomial growth (including, in particular, linear growth).

Students can and do:

a. 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.
b. Interpret absolute and relative rates of change and use them to make predictions.
c. Identify the initial value and growth or decay rate from a table or graph of an exponential function.
d. Calculate and interpret the growth factor for an exponential function (presented symbolically or as a table) given a fixed time interval. Estimate the growth factor from a graph.
e. Recognize a quantitative relationship as linear or exponential from description of a situation.

Trigonometric functions

Core Standards · Students understand that:

1. The unit circle in the coordinate plane enables one to extend the domains of the sine, cosine and tangent functions of right-triangle trigonometry to the real numbers.
2. Trigonometric functions are periodic by definition, and sums and products of these functions are periodic.
3. Restricting trigonometric functions to a domain on which they are always increasing or always decreasing allows for the construction of an inverse function.

Core Standards · Students can and do:

a. Use radian measure and revisit graphs of trigonometric functions in terms of radians.
b. Use the unit circle to determine geometrically the values of sine, cosine, tangent for multiples of $\pi/4$ and $\pi/3$; commit sines and cosines of principal angles to memory.
c. Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
d. Solve simple trigonometric equations formally using inverse trigonometric functions;[64] evaluate solutions using technology.
e. Explain relationships between the identity $\sin^2 x + \cos^2 x = 1$, the equation of a circle, and the Pythagorean theorem.
f. Explain proofs of the sine and cosine addition and subtraction formulas.
g. Use trigonometric identities to simplify expressions.
h. Use trigonometric functions to solve problems in science, economics or other fields where periodic phenomena occur.

[64] Solving trigonometric equations by means of the quadratic formula is optional.

Mathematics: High School—Coordinates

A Coherent Understanding of Coordinates.

[Final draft of CCR narrative goes here.]

Expressing geometric properties with equations

Core Standards · Students understand that:

1. The graph of a linear equation is the straight line through any two of its solutions. Conversely, any line is the set of solutions to some linear equation.
2. Two lines with well-defined slopes are parallel if their slopes are equal and perpendicular if their slopes multiply to –1.
3. The equation of a circle can be found using its definition and the Pythagorean theorem.
4. Transforming the graph of an equation by reflecting in the axes, translating parallel to the axes, or applying a dilation to one of the axes correspond to substitutions in the equation.

   For example, reflection in the y axis corresponds to $(x,y) \rightarrow (-x,y)$, translation vertically down by three units corresponds to $(x,y) \rightarrow (x,y+3)$, and dilating by a factor of 2 parallel to the x-axis corresponds to $(x, y) \rightarrow (x/2, y)$.
5. An ellipse is obtained by stretching a circle, leading to an equation of the form $x^2/a^2 + y^2/b^2 = 1$.
6. The formula $A = \pi ab$ for the area of an ellipse can be derived from the formula for the area of a circle.

Core Standards · Students can and do:

a. Write the equation of a line in point-slope form, slope-intercept form, or standard form.
b. Identify parallel and perpendicular lines in a coordinate plane, and use the relationship between slopes of parallel and perpendicular lines to solve problems. Know the equations of vertical and horizontal lines.
c. Find the point on the segment between two given points that divides the segment in a given ratio.
d. Complete the square to find the center and radius of a circle given by an equation.
e. Find an equation for an ellipse given the lengths of its major and minor axes; calculate the area of an ellipse.
f. Use coordinates to solve geometric problems.

   Include proving simple geometric theorems algebraically, using coordinates to compute perimeters and areas for triangles and rectangles, finding midpoints of line segments, finding distances between pairs of points and determining when two lines are parallel or perpendicular.

Vectors and matrices[65]

Core Standards · Students understand that:

1. Vectors are quantities having both magnitude and direction. They are typically represented by directed line segments.
2. On a coordinate plane, vectors are determined by the coordinates of their initial and terminal points or by their x- and y-components.

[65] Limit to vectors in the plane and 2x2 matrices.

3. Vectors can be added end-to-end, component-wise, or by the parallelogram rule. The length of the sum of two vectors is typically not the sum of the lengths.
4. Translations of the plane can be represented by vectors.
5. Vectors are often used to describe "directed quantities" in physics, such as position, velocity, acceleration and force. Vector addition is used to find resultant forces or compute displacements.
6. Multiplying a 2x2 matrix into a vector produces another vector. This can be viewed as a transformation of the plane.
7. A system of two linear equations in two variables can be represented as a single matrix equation in a vector variable.
8. Matrices can be added, subtracted and multiplied.
9. The zero and identify 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 2x2 matrix determines whether it has a multiplicative inverse.

Core Standards · Students can and do:

a. Represent vectors graphically.
b. Perform basic vector operations (addition, subtraction, scalar multiplication) both graphically and algebraically.
c. Use vectors to model and solve problems.
d. Use trigonometry to decompose a vector into perpendicular components.
e. Add, subtract and multiply matrices.
f. Represent systems of equations as matrix equations.
g. Find the inverse of a matrix if it exists and use it to solve equations.

Complex Numbers

Core Standards · Students understand that:

1. To solve quadratic equations that have no solutions in the real numbers, the number system can be extended to include the square roots of –1, creating a closed number system called the complex numbers.
2. The Properties of Arithmetic and the relation $i^2 = -1$ can be used to perform operations on complex numbers.
3. All polynomials can be factored over the complex numbers, e.g. as in $x^2 + 4 = (x + 2i)(x - 2i)$.
4. Complex numbers can be visualized on the complex plane. Real numbers fall on the horizontal (real) axis, and imaginary numbers fall on the vertical axis.
5. 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.
6. The absolute value (or modulus) of a complex number is defined as its distance from the origin in the complex plane. 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.
7. Euler's formula $e^{i\theta} = \cos\theta + i \sin\theta$ links complex numbers to trigonometry.

Core Standards · Students can and do:

a. Add, subtract and multiply complex numbers.
b. Find the conjugate of complex a number and use it to find absolute values and divide complex numbers.
c. Graph complex numbers in both rectangular and polar form and interpret arithmetic of complex numbers geometrically.

d. Solve quadratic equations over the complex numbers.
e. Convert complex numbers between rectangular and polar form.
f. Re-derive trigonometric identities using complex methods.

Mathematics: High School—Modeling

A Coherent Understanding of Modeling.

Modeling uses mathematics to help us make sense of the real world—to understand quantitative relationships, make predictions, and propose solutions.

A model can be very simple, such as a geometric shape to describe a physical object like a coin. Even so simple a model involves making choices. It is up to us whether to model the solid nature of the coin with a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. For some purposes, we might even choose to adjust the right circular cylinder to model more closely the way the coin deviates from the cylinder.

In any given situation, the model we devise depends 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 we can create and analyze is constrained as well by the limitations of our mathematical and technical skills. For example, modeling a physical object, a delivery route, a production schedule, or a comparison of loan amortizations each requires different sets of tools. Networks, spreadsheets 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 structure might model seemingly different situations.

The basic modeling cycle is one of (1) identifying the key features of a situation, (2) creating geometric, algebraic or statistical objects that describe key features of the situation, (3) analyzing and performing operations on these objects to draw conclusions and (4) interpreting the results of the mathematics in terms of the original situation. Choices and assumptions are present throughout this cycle.

The modeling cycle and general tools

Core Standards · Students understand that:

1. The behavior of quantities in physical, economic, public policy, social and everyday situations can be modeled using mathematics. Mathematics is used to model relationships among quantities, constraints and objectives.
2. Models are formulated to answer questions about the world based on an analysis of the situation and a conceptual model that involves assumptions and choices.
3. Quantities in the situation are represented by variables in the model, usually through measurement. Modeling includes decisions about what to measure and how, and how well the measurements work for the purpose.
4. Mathematical knowledge and skill are required in order to get results from a mathematical model—even to devise a model in the first place. Areas of mathematics commonly used in modeling include linear, quadratic, exponential or other functions; probability and statistics; and geometry (solid, plane and coordinate). In active modeling, fluency with math content is required in order to focus on the larger problem.
5. Technology is often required in order to obtain results from a model.
6. The results of a mathematical model must be evaluated against evidence and the phenomena at hand. If the mathematics is correct, then unreasonable results point to unreasonable assumptions and the need to revise the model.
7. Real-world problems do not announce that they are amenable to mathematical analysis and solution; bringing mathematics to bear on such a problem is a highly creative act.

Core Standards · Students can and do:

a. Creatively apply the mathematics they know to situations in which it only imperfectly applies—and achieve useful results by doing so.

For example, independently choose to describe HIV transmission as a random event with a fixed probability per sexual encounter.

b. Decide what measures are relevant to a problem.

For example, given the purpose at hand, is traffic safety best measured in terms of fatalities per year or fatalities per vehicle-mile? (or fatalities per 100 million vehicle-miles?)

c. Use network diagrams or other techniques to visualize complex situations with many factors, causes or agents.

For example, what agents and factors are responsible for setting the price of gasoline? How do they interact?

d. In situations with many factors, causes or agents, organize the factors/causes/agents into a hierarchy of importance.

For example, what are the primary, secondary, and relatively rare causes of lung cancer?

e. Use order of magnitude estimates, unprompted, to identify important effects, disregard unimportant effects and predict results of a more detailed model.
f. Use 2-by-2 tables, flowcharts, and other strategies to organize information and manage scenarios.

Modeling with geometry, equations, functions, probability, and statistics

Core Standards · Students can and do:

a. Model physical objects with geometric shapes.

Include common objects that can reasonably be idealized as two- and three-dimensional geometric shapes. Identify the ways in which the actual shape varies from the idealized geometric model.

b. Model situations with equations and inequalities.

Include situations well described by a linear inequality in two variables or a system of linear inequalities defining a region in the plane.

c. Model situations with common functions.

Include situations well described by linear, quadratic or exponential functions; and situations that can be well described by inverse variation ($f(x) = k/x$). Include identifying a family of functions that models features of a problem, and identifying a particular function of that family and adjusting it to fit by changing parameters. Understand the recursive nature of situations modeled by linear and exponential functions.

d. Model situations using probability and statistics.

Include using simulations to model probabilistic situations; describing the shape of a distribution of values and summarizing a distribution with measures of center and variability; modeling a bivariate relationship using a trend line or a regression line.

Mathematics: High School—Statistics

A Coherent Understanding of Statistics.

[Final draft of CCR narrative goes here.]

Summarizing and interpreting categorical, count and measurement data

Core Standards · Students understand that:

1. Statistical methods take variability into account to support making informed decisions based on quantitative studies designed to answer specific questions.
2. Visual displays and summary statistics condense the information in data sets into usable knowledge.

Core Standards · Students can and do:

a. Summarize comparative or bivariate categorical data in two-way frequency tables; interpret joint, marginal and conditional relative frequencies in the context of the data.
b. 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 appropriate statistics 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.
c. Summarize bivariate quantitative data by giving a regression line and a measure of goodness of fit.

Making inferences and justifying conclusions drawn from data

Core Standards · Students understand that:

1. 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. The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions.

Core Standards · Students can and do:

a. Use probabilistic reasoning to decide if a specified model is consistent with a given data-generating process.
b. Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.
c. Use data from a sample survey to estimate a population parameter.
d. Use data from a randomized experiment to compare two treatments.
e. Evaluate reports based on data.

Mathematics: High School—Probability

A Coherent Understanding of Probability.

[Final draft of CCR narrative goes here.]

Modeling random events with finite sample spaces

Core Standards · Students understand that:

1. Random phenomena can be modeled mathematically using a sample space in which sample points represent distinct outcomes, and in which each sample point is assumed to have the same probability.
2. Events are subsets of a sample space that can be defined using characteristics (or categories) of the sample points, as well as unions, intersections, or complements thereof ('and', 'or', 'not'). A sample point may belong to several events (categories).
3. If A and B are two events (categories), then the conditional probability of A given B, denoted by $p(A \mid B)$, is the fraction of sample points in B that also lie in A.
4. The laws of probability can be used to generate new probabilities from known probabilities.

Core Standards · Students can and do:

a. Compute theoretical probabilities of compound events by constructing and analyzing representations, including tree diagrams, systematic lists, and Venn diagrams
b. Use the addition and multiplication laws of probability to compute probabilities of complementary, disjunctive, and compound events.
c. Apply concepts such as intersections, unions and complements of events, and conditional probability and independence, to define or analyze compound events, calculate probabilities, and solve problems.
d. 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.
e. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
f. Use permutations and combinations to compute probabilities of compound events and solve problems.

Experimenting and simulating to model probabilities

Core Standards · Students understand that:

1. 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. The probability of an event within the data set is its relative frequency.
2. The law of large numbers provides the basis for estimating certain probabilities by use of empirical relative frequencies.
3. The probability of an outcome can be interpreted as an assertion about the long-run proportion of the time the outcome will occur if the random experiment is repeated a large number of times. The observed proportion of occurrence for the outcome of interest can be used as an estimate of the relevant probability.

Core Standards · Students can and do:

a. Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.

b. Compare the results of simulations (e.g., random number tables, random functions, and area models) with predicted probabilities. When there are substantial discrepancies between predicted and observed probabilities, explain them in terms of the assumptions of the probability model.
c. Use the relationship between conditional probabilities and relative frequencies in contingency tables to analyze decision problems.
d. Use the mean and standard deviation of a data set to fit it to a normal distribution (bell-shaped curve) 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.
e. Apply the binomial theorem to solve probability problems.

Using probability to make decisions

Core Standards · Students understand that:

1. A probability distribution is a collection of probabilities $\{p_1, \ldots, p_n\}$ for a set of mutually exclusive and jointly exhaustive events $\{E_1, \ldots, E_n\}$. The probabilities in a probability distribution sum to unity.
2. A random variable attaches a value to each event in a probability distribution. The expected value of the random variable is the weighted average of its possible values, with weights given by their respective probabilities.
3. 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 a wager. If possible, this is the first thing to compute in a decision context.

Core Standards · Students can and do:

a. Calculate expected value to analyze mathematical fairness, payoff.
b. Evaluate and compare options in situations where all of the available options share the same expected value but carry different levels of risk.
c. Analyze each of two options and make a quantitatively informed decision in situations where one option has both a higher expected return and a higher level of risk. Include both low-stakes and high-stakes decisions.
d. Analyze decision problems using probability concepts.

Mathematics: High School—Geometry

A Coherent Understanding of Geometry.

[Final draft of CCR narrative goes here.]

Triangle Congruence

Core Standards · Students understand that:

1. Rigid motions move lines to lines and segments to segments; preserve the distance between points; and preserve measures of angles.
2. Two geometric figures are congruent if there is a sequence of rigid motions that carries one onto the other. This is the principle of superposition.
3. Criteria for triangle congruence can be thought of as answers to the following question: What information about the measures in a triangle ensures that all triangles drawn with those measures are congruent?
4. Criteria for triangle congruence can be established using rigid motions.

Core Standards · Students can and do:

a. Use (in reasoning and problem solving) precise definitions of angles, polygons, parallel and perpendicular lines, rigid motions (rotations, reflections, translations), parallelograms and rectangles; commit these definitions to memory.

b. Prove theorems about lines and angles; test conjectures and identify logical errors in fallacious proofs.

Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; measures of supplementary angles sum to 180°; 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.

c. Prove theorems about triangles; test conjectures and identify logical errors in fallacious proofs.

Theorems include: measures of interior angles of a triangle sum to 180°, base angles of isosceles triangles are equal, the triangle inequality, the longest side of a triangle faces the largest side 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.

d. Use and prove properties of and relationships among special quadrilaterals: parallelogram, rectangle, rhombus, square, trapezoid and kite.

e. 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.

Similarity, Right Triangles and Trigonometry

Core Standards · Students understand that:

1. The dilation of a given line is parallel to the given line. (In particular, lines passing through the center remain unchanged.)
2. 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. The assumed properties of dilations can be used to establish the AA, SAS and SSS criteria for similarity of triangles.
4. Similarity allows one to view side ratios in right triangles as properties of the angles themselves, leading to elementary definitions of sine, cosine and tangent.

Core Standards · Students can and do:

a. Use triangle similarity criteria to solve problems and to prove relationships in geometric figures.
b. Prove that two lines with well-defined slopes are parallel if and only if they have the same slope, and perpendicular if and only if the product of their slopes is equal to –1.
c. 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.
d. Use and explain the relationship between the trigonometric ratios of complementary angles.
e. Use trigonometric ratios and the Pythagorean theorem to solve right triangles[66] in applied problems.

Circles

Core Standards · Students understand that:

1. All circles are similar.
2. There is a unique circle through three non-collinear points, or tangent to three non-concurrent lines.

Core Standards · Students can and do:

a. 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.

b. Identify and define radius, diameter, chord, tangent, secant and circumference.
c. Determine the arc lengths and the areas of sectors of circles, using proportions.
d. Construct a tangent line from a point outside a given circle to the circle.
e. Prove and use basic theorems about circles, and use these theorems to solve problems. Include:

- Symmetries of a circle
- Similarity of a circle to any other
- Tangent line, perpendicularity to a radius
- Inscribed angles in a circle, relationship to central angles, and equality of inscribed angles
- Properties of chords, tangents and secants as an application of triangle similarity.

Axiomatic Systems

Core Standards · Students understand that:

1. Mathematical statements are proven or disproven by deductive reasoning. Conjectures can arise from inductive reasoning, but they cannot be proven that way.
2. Precise definitions make possible rigorous logical reasoning, and definitions shared in common make possible the objective evaluation of one's own reasoning by others.
3. Logical reasoning requires avoiding common fallacies, such as using an example to prove the rule or confusing a statement with its converse.
4. Axiomatic systems require precise definitions, but some terms must be left "undefined." The axioms specify how the undefined terms behave.
5. The first three postulates of the *Elements* are models of straightedge and compass construction.
6. Hilbert and other mathematicians improved on the *Elements* by identifying its hidden assumptions and making them explicit with additional axioms.

[66] 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. (It is worth reflecting on why this problem is well-posed.)

7. Three classical construction problems (trisecting an angle, duplicating a cube and squaring a circle) inspired the development of much important mathematics.

8. The Parallel Postulate (axiom) distinguishes Euclidean geometry from other geometries. Other geometries, such as spherical and hyperbolic geometry, use alternatives to the Parallel Postulate. Many theorems of Euclidean geometry are not theorems in other geometries.

Core Standards · Students can and do:

a. Use the terms point, line and plane to define other geometric terms as line segments, angles and rays.
b. With ruler and compass:
   - Divide a segment into any number of equal parts.
   - Given two segments of lengths r and s, construct a segment of length rs and one of length r/s.
   - Given a segment of length r, construct a segment of length $\sqrt{r}$.

Trigonometry of General Triangles

Core Standards · Students understand that:

1. The Law of Sines generalizes the side-angle inequality.

2. The Law of Cosines generalizes the Pythagorean theorem.

3. 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.

Core Standards · Students can and do:

a. Explain proofs of the Law of Sines and the Law of Cosines.
b. 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

Core Standards · Students understand that:

1. Congruence plays a fundamental role defining the concepts of length, area and volume.

2. Areas of polygons can be computed by dissecting them into triangles and using the fundamental property of area, that the area of a dissected figure is the sum of the areas of its components.

3. Lengths of curves and areas of curved regions can be defined informally using the concept of "limit."

4. Cavalieri's principle allows one to understand volume formulas informally by visualizing volumes as stacks of thin slices.

Core Standards · Students can and do:

a. Give definitions of rectangular prism, (right) pyramid, (right circular) cone, (right circular) cylinder and sphere.

b. For a pyramid or a cone, give an heuristic argument to show why its volume is (1/3) its height times the area of its base.

c. Use the behavior of length and area under dilations to prove the formulas for the circumference and area of a circle.

d. Apply formulas and solve problems involving volume and surface area of right prisms, right circular cylinders and right pyramids, cones, spheres and composite figures.

e. Identify and apply the 3:2:1 relationship among volumes of circular cylinders, hemispheres and cones with same height and circular base and 3:1 relationship between volume of a prism and pyramid with same base area and height.

f. Identify cross-sectional shapes of slices of three-dimensional objects, and identify three-dimensional objects traced out by rotations of two-dimensional objects.

Mathematics: High School—Calculus

Calculus is an important part of the high school curriculum for a large and growing number of students. To see well-established standards for this course, please see course descriptions such as those of the College Board, International Baccalaureate Organization, or any of the following states: California, Florida, Hawaii, Indiana, Mississippi, Pennsylvania, South Carolina, Tennessee, Utah, and Virginia. We invite feedback from states as to whether they would like to see Calculus in future drafts of the Common Core Standards.

Progressions in Grades K–8

Note, a progression may appear in more than one band.

Grades K-5

Number

Counting and Cardinality
Base Ten Computation
Early Relations and Operations
Quantity and Measurement
Operations and the Problems They Solve
Fractions

Geometry

Shapes
Coordinates
Geometry

Data

Statistics

Grades 6-8

Number

The Number System

Algebra

Ratios and Proportional Relationships
Expressions and Equations
Functions and the Situations They Model

Geometry

Geometry

Data

Statistics
Probability

List of Progressions and Grade Ranges

Strand	Progression	Start	End
Number	Counting and Cardinality	K	K
	Early Relations and Operations	K	1
	Base Ten Computation	K	5
	Quantity and Measurement	K	5
	Operations and the Problems They Solve	2	4
	Fractions	3	5
	Ratios and Proportional Relationships	6	7
	The Number System	6	8
Geometry	Shapes	K	4
	Coordinate Geometry	5	5
	Geometry	6	8
Algebra*	Expressions and Equations	6	7
	Functions & The Situations They Model	8	8
Data*	Statistics	5	8
	Probability	7	8

* The Algebra and Data strands have concepts and skills in earlier grades that progressions in the Number strand.

GLOSSARY

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 $^3/4 + (-^3/4) = (-^3/4) + ^3/4 = 0$.

Algorithm. A step by step routine that always gives some answer, rather than ever giving no answer; that always gives the right answer, and never gives a wrong answer; that can always be completed in a finite number of steps, rather than in an infinite number of steps; and that applies to all problems of a given type (e.g., adding any two multidigit whole numbers, or bisecting any angle). Cf. Wikipedia's "effective procedure," from which this definition is adapted.

Common logarithm. The common logarithm of x is the power to which you raise 10 in order to get x.

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).

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.

Integer. A positive whole number, a negative whole number, or 0.

Mean. The sum of the values in a list divided by the number of values in the list. (To be more precise, this defines the *arithmetic mean*.)

Median. In a list of values, 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.

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 $^3/4 \times {}^4/3 = {}^4/3 \times {}^3/4 = 1$.

Range. The difference between the greatest and smallest values in a list of numbers.

Rational number. A number expressible in the form $^a/_b$ for integers a and $b \neq 0$. The rational numbers include positive and negative integers, positive and negative fractions, and 0.

Related fractions. Two fractions are *related* if one denominator is a factor of the other. (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.)

Similarity transformation. A rigid motion followed by a dilation.

Single-place number. The numbers that result when a whole number between 1 and 9 (inclusive) is multiplied by the numbers 10, 100, 1000, etc.

Teen number. A whole number that is greater than or equal to 11 and less than or equal to 19.

Transitive property of measurement order. If one object is bigger than a second, and the second object is bigger than a third object, then the first object is bigger than the third object.

Benchmarking for Success:

Ensuring U.S. Students Receive a World-Class Education

A report by the National Governors Association, the Council of Chief State School Officers, and Achieve, Inc.

National Governors Association
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.

Council of Chief State School Officers
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.

Achieve, Inc.
Created by the nation's governors and business leaders, Achieve is a bipartisan, non-profit organization that helps states raise academic standards, improve assessments and strengthen accountability to prepare all young people for postsecondary success. At the 2005 National Education Summit, Achieve launched the American Diploma Project (ADP) Network, a coalition that has grown to 34 states, educating nearly 85% of public school students in the United States. The ADP Network is committed to aligning high school expectations with the demands of college, career and life. To learn more about Achieve, visit www.achieve.org.

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Foreword

We are living in a world without borders. To meet the realities of the 21st century global economy and maintain America's competitive edge into the future, we need students who are prepared to compete not only with their American peers, but with students from all across the globe for the jobs of tomorrow.

States have voluntarily taken the lead in developing standards-based education, but policymakers lack a critical tool for moving forward—international benchmarking. This report is intended to help states take the next steps toward ensuring that American students receive a world-class education that positions them to compete and innovate in the 21st century.

International benchmarking will help state policymakers identify the qualities and characteristics of education systems that best prepare students for success in the global marketplace. The stakes are high, and improving our educational system will require commitment and insight not just from state leaders but many other stakeholders as well. With this in mind, the National Governors Association, the Council of Chief State School Officers, and Achieve, Inc. have joined to provide to states a roadmap for benchmarking their K-12 education systems to those of top-performing nations.

The partners' recommendations were informed by an International Benchmarking Advisory Group consisting of education experts representing education institutions, the business community, researchers, former federal officials, and current state and local officials. The Advisory Group's expertise and experience helped the partners identify the need for international comparisons and provide guidance for benchmarking state education system practices in areas such as standards, accountability, educator workforce, and assessments. The partner organizations will work with states to develop and implement these recommendations.

Governors recognize that new economic realities mean it no longer matters how one U.S. state compares to another on a national test; what matters is how a state's students compare to those in countries around the globe. America must seize this moment to ensure that we have workers whose knowledge, skills, and talents are competitive with the best in the world.

Governor Janet Napolitano
Arizona

Governor Sonny Perdue
Georgia

Craig R. Barrett
Chairman of the Board
Intel Corporation

Co-Chairs, International Benchmarking Advisory Group

Acknowledgements

This report was researched and written by Craig D. Jerald, president of Break the Curve Consulting in Washington, D.C.

At the National Governors Association Center for Best Practices, Ilene Berman, program director in the education division, and Dane Linn, director of the education division, supervised the project. Leadership and staff of the National Governors Association (NGA), Council of Chief State School Officers (CCSSO), and Achieve, Inc. played instrumental roles in the project. The following individuals provided useful guidance and feedback in the development of the report: Achieve, Inc. President Mike Cohen and Vice President for Advocacy and Outreach Sandy Boyd; NGA Executive Director Ray Scheppach, NGA Center Director John Thomasian, NGA Communications Director Jodi Omear, Senior Communications Manager Christopher Cashman, and Education, Early Childhood and Workforce Committee Director Joan Wodiska; CCSSO Executive Director Gene Wilhoit, Deputy Executive Director Scott Montgomery, Legislative Director Scott Frein, and Communications Director Kara Schlosser. Within the NGA Office of Communications, Publications and Communications Manager Andrea Brachtesende provided editing and design assistance.

The partner organizations extend special thanks to the members of the International Benchmarking Advisory Group who offered valuable insights, useful data, and timely review of earlier drafts. The partners also acknowledge the contributions of governors' staff and chief state school officers to the report.

The Bill & Melinda Gates Foundation and GE Foundation generously supported the preparation of this publication.

International Benchmarking Advisory Group

To develop this report, the National Governors Association (NGA), Council of Chief State School Officers (CCSSO), and Achieve, Inc. invited national, state, and local education and policy leaders to serve on an International Benchmarking Advisory Group. The Advisory Group provided the three partner organizations with valuable insights and helped frame this bipartisan Call to Action. They collectively support the recommendations herein for internationally benchmarking state K-12 education systems.

Co-Chairs:

Governor Janet Napolitano, Arizona
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Craig R. Barrett, Chairman of the Board, Intel Corporation

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Bob Wise, President, Alliance for Excellent Education and former Governor of West Virginia

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I. Executive Summary

I. Executive Summary

Around the globe, governments are eagerly comparing their educational outcomes to the best in the world. The goal is not just to see how they rank, but rather to identify and learn from top performers and rapid improvers—from nations and states that offer ideas for boosting their own performance. This process, known as "international benchmarking," has become a critical tool for governments striving to create world-class education systems.

In American education, "benchmarking" often simply means comparing performance outcomes or setting performance targets (or "benchmarks"). But in business and among education leaders in other countries, it means much more. The American Productivity and Quality Center puts it this way: "Benchmarking is the practice of being humble enough to admit that someone else has a better process and wise enough to learn how to match or even surpass them."

Countries and states have good reason to make the effort. Technological, economic, and political trends have combined to increase demand for higher skills while heightening competition for quality jobs. Rule-bound jobs on factory floors and in offices are being automated and outsourced. The world's knowledge-and-innovation economy favors workers who have postsecondary education or training, strong fundamental skills in math and reading, and the ability to solve unfamiliar problems and communicate effectively.

At the same time, new technologies and corporate strategies have opened the global labor market to billions of people from places like Eastern Europe, India, China, and Brazil who had been left out. An increasing variety of work tasks can be digitized and performed nearly anywhere in the world. More jobs are going to the best educated no matter where they live, which means that Americans will face more competition than ever for work.

International trade agreements, such as China's membership in the World Trade Organization in 2001, have hastened this transformation. Since 1980, global trade has grown 2.5 times faster than the global gross domestic product (GDP). Recent estimates put today's world exports at $12.5 trillion, nearly 20 percent of world GDP.

The global economy is here to stay, with recent research suggesting that it is evolving and its impact intensifying at a stunning pace. "Globalization is happening faster than people think," says Vivek Wadhwa, Wertheim Fellow at Harvard Law School's Labor and Worklife program and Duke University Executive in Residence. His recent research shows that companies are no longer just outsourcing production but are farming out *innovation* as well. "Having India and China conduct such sophisticated research and participate in drug discovery was unimaginable even five years ago," he says.

Education is a tremendously important lever for ensuring competitiveness and prosperity in the age of globalization, albeit not the only one. Recent economic studies show that high skills lead to better wages, more equitable distributions of income, and substantial gains in economic productivity. Higher math performance at the end of high school translates into a 12 percent increase in future earnings. If the United States raised students' math and science skills to globally competitive levels over the next two decades, its GDP would be an additional 36 percent higher 75 years from now.

The race is on among nations to create knowledge-fueled innovation economies. In Singapore, Germany, China, Brazil, Korea, and other countries around the world, educational improvement is viewed as a critical part of that mission. Nations and states are therefore working hard to benchmark their education systems to establish a solid foundation for economic development in the 21st century. Some are finding innovative ways to measure their students' progress internationally. Others are examining high-performing and fast-improving nations to learn about best practices that they then adapt or adopt to improve their own systems.

American education has not adequately responded to these new challenges. The United States is falling behind other countries in the resource that matters most in the new global economy: human capital. American 15-year-olds ranked 25th in math and 21st in science achievement on the most recent international assessment conducted in 2006. At the same time, the U.S. ranked high in inequity, with the third largest gap in science scores between students from different socioeconomic groups.

The U.S. is rapidly losing its historic edge in educational attainment as well. As recently as 1995, America still tied for first in college and university graduation rates, but by 2006 had dropped to 14th. That same year it had the second-highest college dropout rate of 27 countries.

State leaders already are deeply engaged in efforts to raise standards, advance teaching quality, and improve low-performing schools. International benchmarking provides an additional tool for making that process more effective, offering insights and ideas that cannot be garnered solely from looking within and across state lines. To that end, the partner organizations and International Benchmarking Advisory Group call on state leaders to take the following actions:

State leaders also should tackle "the equity imperative" by creating strategies for closing the achievement gap between students from different racial and socioeconomic backgrounds in each of the action steps above. Reducing inequality in education is not only socially just, it's essential for ensuring that the United States retain a competitive edge.

Research shows that education systems in the United States tend to give disadvantaged and low-achieving students a watered down curriculum and place them in larger classes taught by less qualified teachers—exactly opposite of the educational practices of high-performing countries.

Action 1: Upgrade state standards by adopting a common core of internationally benchmarked standards in math and language arts for grades K-12 to ensure that students are equipped with the necessary knowledge and skills to be globally competitive.

Action 2: Leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned to internationally benchmarked standards and draw on lessons from high-performing nations and states.

Action 3: Revise state policies for recruiting, preparing, developing, and supporting teachers and school leaders to reflect the human capital practices of top-performing nations and states around the world.

Action 4: Hold schools and systems accountable through monitoring, interventions, and support to ensure consistently high performance, drawing upon international best practices.

Action 5: Measure state-level education performance globally by examining student achievement and attainment in an international context to ensure that, over time, students are receiving the education they need to compete in the 21st century economy.

The federal government can play an enabling role as states engage in the critical but challenging work of international benchmarking. First, federal policymakers should offer funds to help underwrite the cost for states to take the five action steps described above. At the same time, policymakers should boost federal research and development (R&D) investments to provide state leaders with more and better information about international best practices, and should help states develop streamlined assessment strategies that facilitate cost-effective international comparisons of student performance.

As states reach important milestones on the way toward building internationally competitive education systems, the federal government should offer a range of tiered incentives to make the next stage of the journey easier, including increased flexibility in the use of federal funds and in meeting federal educational requirements and providing more resources to implement world-class educational best practices. Over the long term, the federal government will need to update laws to align national education policies with lessons learned from state benchmarking efforts and from federally funded research.

Nations around the world are facing a new education imperative, and many are seizing the historical moment to provide their citizens with better opportunities and stronger economies.

America must seize this moment too, with states leading the way. Many states already are working hard to improve standards, teaching quality, and accountability, but policymakers lack a critical tool—international benchmarking.

The U.S. can take pride in many aspects of its education system, from the high performance of its teenagers on international civics tests to the strength of its higher education institutions.

But if state leaders want to ensure that their citizens and their economies remain competitive, they must look beyond America's borders and benchmark their education systems with the best in the world. The state mandate to educate all students remains, but the world that students will enter after school has changed.

For Andreas Schleicher, head of the Indicators and Analysis Division at the Organisation for Economic Co-Operation and Development's Directorate for Education, the case for adopting a global view to improving education is undeniable:

> It is only through such benchmarking that countries can understand relative strengths and weaknesses of their education system and identify best practices and ways forward. The world is indifferent to tradition and past reputations, unforgiving of frailty and ignorant of custom or practice. Success will go to those individuals and countries which are swift to adapt, slow to complain, and open to change.

Appendix B5: Massachusetts Scholars and Educators Represented on Common Core Teams

Massachusetts Representation on the Common Core Development Teams

Mathematics

- Sol Garfunkel, Executive Director, COMAP, the Consortium for Mathematics and its Applications
- Deborah Hughes Hallett, Adjunct Professor of public policy, Harvard Kennedy School
- Barbara Libby, Director of the Office of Science, Technology, Engineering and Mathematics, Massachusetts Department of Elementary and Secondary Education
- Katherine Richard, Associate Director, Mathematics Programs, Lesley University
- Sharyn Sweeney, Curriculum Specialist, Director of the Office of Science, Technology, Engineering and Mathematics, Massachusetts Department of Elementary and Secondary Education

English Language Arts

- Sorel Berman, English Teacher, Retired, Brookline (MA) High School
- David Buchanan, Curriculum Specialist, Office for Humanities, History and Social Science, Massachusetts Department of Elementary and Secondary Education
- Cheryl Liebling, Director of the Office of Literacy, Massachusetts Department of Elementary and Secondary Education
- Julia Phelps, Executive Director of the Center for Curriculum and Instruction, Massachusetts Department of Elementary and Secondary Education
- Susan Wheltle, Director of the Office for Humanities, History and Social Science, Massachusetts Department of Elementary and Secondary Education

Massachusetts Representation on the Common Core Feedback Teams

Mathematics

- Andrew Chen, President, EduTron Corporation
- Wilfried Schmid, Professor, Mathematics, Harvard University

English Language Arts

- Deborah D. Perry, Director, K-12 ELA, Arlington (MA) Public Schools
- Catherine Snow, Patricia Albjerg Graham Profession, Harvard Graduate School of Education

Massachusetts Representation on the Common Core Validation Team

English Language Arts

- Sandra Stotsky, Member, Massachusetts Board of Elementary and Secondary Education

Massachusetts Department of Elementary and Secondary Education

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Mitchell D. Chester, Ed.D.
Commissioner

Massachusetts Department of Elementary and Secondary Education

Overall Impressions of the *College and Career Ready Standards for Reading, Writing, and Communication* and the *College and Career Ready Standards for Mathematics*

July 31, 2009

These standards were reviewed by teams from the Department's Center for Curriculum and Instruction (responsible for the development of academic standards), Center for Student Assessment (responsible for the development of assessments based on the standards), and Center for Student Support, Career and Education Services (responsible for high school/college/career alignment initiatives).

Our response has the following three sections:

1. Comments on overall impressions of the two standards documents (page 2);
2. Comments on the *Reading, Writing, and Communication Standards* (page 3)
   - Overall Impressions
   - Concerns
   - What We Like about the Standards; and
3. Comments on the *Mathematics Standards* (page 6)
   - Overall Impressions
   - Concerns
   - What We Like about the Standards.

Overall Impressions of the Two Documents

The Documents Need a Unified Structure

While our team found a lot to admire in each of these documents, we were surprised at the differences in organizational structure and level of detail. The13-page *Reading, Writing, and Communication Standards* appear to be deliberately concise and broadly written to be applicable across disciplines. The 28-page *Mathematics Standards,* on the other hand, contain multiple layers and appear to be written largely for mathematics educators. There are no cross-references or connections made between the documents, although there are opportunities to do so. A common introduction and a common structure, or at least on a set of analogous elements and terminology, will make the documents far more accessible (and acceptable) to a variety of audiences: the general public, state policymakers, and district educators, publishers, and assessment developers.

The Documents Need a Common Introduction that Defines "College and Career Ready"

The term "college and career ready" is ambiguous at best, because of America's variety of admissions standards to 2- and 4-year colleges, the variety of introductory college courses, and the variety of workforce training programs. Our team suggests that it would be helpful to have a common introduction to the two documents that addresses the questions, "Readiness for which colleges, which courses, which careers?" that foreshadows the issues anticipated in developing K-12 grade-specific standards.

We suggest that this introduction narrow the definition of college and career readiness to the proficiency needed to succeed with a grade of C or better in credit-bearing introductory college writing, humanities, social science, algebra, or science courses, or workforce training requiring similar skills. (The definition is derived from the Preamble to the *Standards Criteria* document that states were sent in an earlier stage of the review process, and that we found helpful.)

We think that the introduction should state that college and career readiness standards should not necessarily be construed as grade 12 exit standards. In Massachusetts we found that some of the *College and Career Ready Standards*, particularly in communication, are present in our state standards by the end of grade 10. Hence, demonstrating mastery of these *Standards* before grade 12 might lead students to a number of pathways for advanced learning: upper-level high school courses, dual enrollment or early college programs, early college admission, or training programs and internships with opportunities for advancement.

The Documents Need to Remain as Drafts as the K-12 Standards Are Developed

As the *College and Career Readiness Standards* are released to the public, we suggest that they be labeled as drafts until the backmapping part of the project is complete. As standards writers, we know how difficult it is to define a clear and non-repetitive progression of grade-level standards, concepts, and skills. The experience of defining standards for 13 grades may reveal changes needed in the *College and Career Readiness Standards.* NGA, CCSSO, and its partners should retain the flexibility to make these modifications at the end of the feedback process.

Overall Impressions of the
College and Career Ready Standards for Reading, Writing, and Communication

1a. Informational reading, writing, speaking and listening play a primary role in the *College and Career Ready Standards*, while literary reading and writing play a secondary role. These are not traditional English language arts standards.

- Given the goal of preparing students for reading, writing, and oral communication in a college course in *any* discipline or a workforce training program, this emphasis is appropriate. A curriculum weighted toward informational reading and writing aligns with the typical freshman college composition course and such alignment may ultimately reduce the need for developmental courses in reading and writing at the first-year college level.

1b. The statement on page 1B, "…students will need to encounter complex non-fiction in their English courses as well as when reading in history, the sciences, and other disciplines" has large implications for both high school English departments and other subject area departments.

- Customarily, the high school English curriculum focuses on reading, discussing, and writing about literature, with an emphasis on fiction, poetry, and drama. If meeting the *Standards* is the responsibility of the English Department alone, many English teachers will have to adjust their curriculum considerably to include more informational texts and essays.
- On the other hand, if meeting the *Standards* is a shared responsibility, teachers in other subject areas will have to allot more time to teaching reading and writing as they are applied in specific disciplines.
- Making the instructional shift to greater emphasis on teaching critical reading of informational text and on writing across disciplines will require professional development for current teachers. This shift may also necessitate changes in many secondary educator preparation programs and licensure regulations for secondary school educators.

1c. States that adopt the *Common Core Standards* as 85% of their standards may have to prepare for changes in their frameworks and assessments for English, science, and social studies to reflect the emphasis on informational text and expository and persuasive writing.

1d. The *College Readiness Standards* reflect skills that are developed primarily between grades 3 and 10 in the *Massachusetts English Language Arts* standards. In part, this reflects the recursive nature of communication skills, and the large role that increasing text complexity plays in differentiating expectations. Sample high school and college assignments or workforce training tasks, accompanied by samples of student writing that meet the standards, would exemplify the level of performance expected for college and career readiness.

Concerns about the
College and Career Ready Standards for Reading, Writing, and Communication

2a. The decision to focus the standards on informational reading, writing, and communication raises questions about expectations for students' knowledge of some topics that are present in the Massachusetts English language arts standards and that *are not* treated in detail in the *College and Career Standards* (e.g., history of the English language, grammar, vocabulary, genres, literary elements of fiction, poetry, drama, and myth, organizational structures in expository and persuasive writing, kinds of argumentation).

2b. It is impossible to judge the extent of alignment to Massachusetts standards until we see the full set of grade-level standards, along with examples of student work that meet the standards. Many of the standards as broadly written here could equally apply as early as the elementary grades; differentiating expectations at different grade levels will be crucial to curriculum and assessment development.

- The emphasis on persuasive writing is appropriate for college and career readiness, but will require professional development in the lower elementary grades, where more narrative and expository writing is traditionally taught.
- This document does not mention developing the foundations of reading and vocabulary, both of which will have to be addressed when these are backmapped to K-8.

2c. *Speaking and Listening Standards* would be improved by incorporating the language in the notes directly into the standards. The term "register" is not well understood and could be replaced with "level of formality."

2d. The sections on applications of the *Standards* to *Research* and *Media* are weak. While it is useful to see the connections among the standards, the current approach fails to do justice to research and media.

- Research is a process; hence it would be helpful to list the applied standards in a sequence that might be followed in a research project.
- *Research,* as used here, appears to be largely confined to reviews and synthesis of print and electronic sources. Particularly because these standards apply to all disciplines, it would be helpful to include other forms of research, such as interviewing or conducting a survey or an experiment.
- *Media,* as the term appears to be used here, refers to research and reporting using electronic resources, and thus is redundant to the research applications. We suggest that new media standards be written to focus on analyzing the distinctive characteristics of media communications in film and video (the combined effect of images, spoken words, sound, motion and sometimes written text). An alternative approach would be to subsume media under a re-named set of *Reading and Viewing* standards.

What We Like about the
College and Career Ready Standards for Reading, Writing, and Communication

3a. As communication standards, they have a high degree of internal consistency, and are well-written, clear, and rigorous (depending on text complexity, the volume of reading expected, and the depth of writing assignments or workforce tasks). The standards make sense, without being pedantic. It is truly wonderful to see a standards document for communication that is a model of good writing: the combination of numbered standards and small essays on "required range and contexts" is refreshing. What appear to be double-page spread formats (e.g., 1A, 1B; 2A, 2B) will enhance the reader's understanding in a print format. We hope website design will also link the components in logical and useful ways.

3b. There are many fewer topics here than in many state English language arts documents (including the Massachusetts Framework), hence more focus.

3c. The *College and Career Ready Standards* and explanatory/supplementary material for reading, writing, speaking and listening are essential, concise, and rigorous.

- The language in the numbered *Standards* for reading, writing, writing, speaking, and listening includes varied verbs and descriptors that suggest the application of higher order skills such as analysis, synthesis, reasoning, and justification.
- The sections labeled *Required Range and Contexts* for Reading, Writing, Speaking and Listening provide explanations of the breadth and complexity of reading and writing and oral communication tasks. These are further supported by the range of passages from different areas of study in the section *Reading Illustrative Texts at the Required Level of Complexity.* To provide even greater linkage back to reading standards #10, #11, and #13, we would like to see additional examples of expository text that incorporates graphic features such as charts, graphs, illustrations, or diagrams; contemporary persuasive writing (the *Declaration of Independence* is certainly an 18th century argument, but seems to be included largely because it is a primary source commonly encountered in history classes); and examples of paired texts that could elicit substantive comparisons.
- The section on *Significance and Measure of Text Complexity* (page 5) is very helpful as a potential guide to selection of reading material. The *Note on Narrative Writing* (page 2B) is an excellent statement of how narrative writing functions within other modes.

3d. The evidence for the standards listed in the bibliography of international/national source documents on the website is a very useful resource and shows the depth that lies beneath this relatively simple and deliberately brief set of *Standards.*

Overall Impressions of the *College and Career Ready Standards for Mathematics*

1a. The *College and Career Readiness Standards in Mathematics* provide a comprehensive picture of what students should know and be able to do and help clarify the level that students should reach if they are prepared for success in college and career. Our initial impressions of the overall document were quite favorable.

- The components of The *College and Career Readiness Standards* provide a detailed description of what is expected of a mathematically proficient student. The *Coherent Understanding* narratives are particularly well-written presentations of the knowledge that students should take into college and careers.
- The *College and Career Readiness Standards* need to include additional references, examples, and tasks throughout the document to illustrate what is meant by *career* readiness.

1b. The introduction should address *what these standards prepare students for* and *what they do not prepare students for.* While the *Standards* would prepare students for success in introductory college mathematics, students who wish to pursue college majors in science, mathematics, engineering, or economics or some business areas need to meet prerequisites for college admission that go beyond the *Standards.* All students who attain the *Standards* before grade 11 or 12 should take more advanced math courses each year in high school to continue their mathematical learning.

1c. The document succeeds at providing rich explanations of the mathematics in the *Standards.* Based on the side-by-side comparison by Achieve of *the College and Career Standards for Mathematics* with the Massachusetts mathematics standards, and our informal review, the majority of the *College and Career Ready Standards* appear to be included in our framework from grades 4-12. It seems safe to say that they address our Algebra I and Geometry standards, and they appear to address a substantial portion of - but not all - the Algebra II standards. Given the level of specificity, it is hard to determine the exact alignment between our state standards and the *College and Career Readiness Standards.*

1d. The overall format and the layout of individual pages are clear and well designed. Integrating the *Exemplary Problems* and *Tasks* into the document, providing commentary and links to the appropriate core concepts and skills within the task, and showing student work, will further help illustrate what meeting the standard looks like.

Concerns about the *College and Career Ready Standards for Mathematics*

2a. To help readers understand how students would achieve the *College and Career Ready Standards,* it would be helpful to include in the introduction a description where in the high school curriculum they are currently being taught (e.g., Algebra I, Geometry, Algebra II, freshman, sophomore and junior year integrated math courses).

2b.The relationships among the *Mathematical Practices*, *Strands of Mathematical Proficiency*, *Mathematical Principles*, *Core Concepts*, and *Core Skills* are not clear. The *Introduction* can be improved by including a graphic or matrix that shows the connections and relationships among all of the components of the document.

2c. The *Principles* form the backbone of the standards. Yet the term may be misleading, since "principles" are laws or rules that should be followed. For this document, we suggest that the term *Principles* be replaced with *subdomains* or *constructs* of mathematics. It would be helpful to have a more detailed explanation of the thinking used to select these particular areas. Probability, Statistics, and even Modeling seem different from the rest.

2d. The *Five Strands of Mathematical Proficiency* (page 5) are important and should be described rather than footnoted to the 2001 and 2008 mathematics reports. The term *strands* should be reconsidered and replaced with *attributes or dimensions.*

2e. There are instances in the Core Concepts and Skills where the skill (for example, #2 under Number) is too broad or just a restatement of a mathematical practice. Within the core skills the level of performance is not always explicit. For example: "Use estimation to solve problems and detect errors." Differentiated expectations for such statements will be crucial for the K-12 standards and assessment development.

2f. When describing the rules of arithmetic on page 9, we recommend using mathematical terminology: Commutative, Associative, and Distributive Properties, and identity and inverse relationships.

2g. Absolute value should be explicitly included, rather than implied, as distance on a number line. Review text for mathematical accuracy (e.g., page 9, #2, final paragraph).

2h. Commentary should be provided with each explanatory problem. In some cases a range of problems may be necessary, because the skill is relatively broad and could be manifested in different ways.

2i. Problems from other countries should be reviewed and annotated for clarity to U. S. readers and edited to follow U.S. mathematical conventions. For example, the numbers in the figure on page 19 are not labeled with a degree symbol. Additional problems should be included, potentially from other countries, NAEP, TIMSS, PISA, and various state assessments. The currently separate *Performance Tasks* and *Problems* should be grouped after the relevant *Principle/Concepts/Skills* page. Each task/problem should be coded to the *Mathematical Practices*, the *Strands of Math Proficiency*, and specific *Concepts* and *Skills*. Student work that meets the standard should also be included.

What We Like about the *College and Career Ready Standards for Mathematics*

3a. The one-page overview of the *Mathematical Principles* is excellent and well-conceived; phrases, adjectives, and clauses such as "strategic competence in approximation," "efficient," and "because nature and society are full of dependencies" all indicate acquisition of a rich mathematical understanding.

The *Principle* of mathematical modeling is a welcome addition that lends itself to 'real world' applications. It includes the embedded practice of problem solving and can make direct connections to the 'why' of mathematics. The multiple methods of modeling described include the use of data and graphical representations, as well as algebraic representations.

3b. *The Mathematical Practice,* #1, *Precision,* is well written. It describes the importance of units and labeling, as well as the importance of communication that uses mathematical symbols and conventions. Precision is usually not addressed so directly in traditional mathematics standards, and there are potential connections to be made here with the *College and Career Ready Standards for Reading, Writing, and Communication.*

3c. *Core Concepts and Skills.* The clarifying notes under some of the core skills are very helpful, in particular specifications of what is "excluded" as well as "included" in the skill. On page 8, under Expressions, cautions such as "heuristic mnemonic devices are not a substitute for procedural fluency" put a strong and much-needed focus on instruction that builds understanding of mathematics.

3d. *How Evidence Informed Decisions.* The *Evidence Section* clearly conveys the approach the committee took in developing the standards document.

3e. *Example Performance Tasks.* Inclusion of these tasks is critical to help define and identify whether students have met the standards. They also exemplify the mathematical practices and proficiencies described in the document. The introduction to the performance tasks notes that these tasks can and should vary along a number of dimensions. These dimensions provide a way to analyze tasks more critically. There is an excellent explanation of how tasks can be designed to be used for different purposes.

We were pleased to see that the tasks required students to show their work and explain the different strategies that they could use to solve the problems. Additionally the tasks help illustrate the desired level of performance and the complexity of the tasks students should be able to perform once they master the skills. It is positive and noteworthy that the document includes problems from international sources. The *How Long is a Roll of Paper?* and *Spaghetti Measure* problems are rich and appropriate and we look forward to seeing more challenging and engaging problems like these for all grade levels when the standards are backmapped K-12.

Appendix B7: Legal Regulations for Adoption of State Standards in Massachusetts

MASS. GENERAL LAWS CHAPTER 69, SECTION 1B

GENERAL POWERS AND DUTIES OF THE BOARD OF ELEMENTARY AND SECONDARY EDUCATION

Chapter 69: Section 1B. Board of elementary and secondary education; duties

Section 1B. BOARD OF ELEMENTARY AND SECONDARY EDUCATION; DUTIES

The board shall establish policies relative to the education of students in public early childhood, elementary, secondary and vocational-technical schools. The board shall be the state agency responsible for the administration of vocational education and the supervision of the administration thereof by local educational agencies.

For the purposes of this section the term "local educational agency" shall mean any agency which has administrative control and direction of a vocational education program funded in whole or in part by federal funds.

The board shall establish standards for certifying all teachers, principals, and administrators in public early childhood, elementary, secondary and vocational-technical schools, as provided in and subject to section thirty-eight G of chapter seventy-one.

The board shall promote the implementation of participatory management systems involving school based personnel and school councils.

The board shall establish the process and standards for school and district audits and reviews conducted by the office of school and district accountability established by section 55A of chapter 15. In establishing such process and standards, the board shall promote efficiency and coordination with other audit, evaluation and reporting requirements established by the board and department and shall also consider the findings and recommendations of the advisory council on school and district accountability and assistance, pursuant to section 1G of chapter 15. The board shall review and approve the protocols for the audit of schools, charter schools and school districts, including regional school districts, pursuant to this chapter.

The board shall provide technical assistance, curriculum, materials, consultants, support services and other services to schools and school districts, to encourage programs for gifted and talented students.

The board shall publish profiles of each public elementary and secondary school and school district in the commonwealth, providing information concerning student achievement of performance goals, school spending, special programs, curriculum

offerings, qualifications of teaching staff, and other information which may be pertinent to teachers, parents, students, and elected officials regarding the performance of said schools and school districts. These profiles shall be in a form readily comprehensible by the general public and shall permit meaningful comparisons among individual schools and school districts. The board also shall identify those schools and school districts that are particularly successful in improving the performance of the students whom they serve and shall undertake to analyze and publish the strategies employed by such schools and districts for the purpose of recognizing the efforts of the educators involved and of encouraging the replication, where appropriate, of their successful strategies. In producing said profiles and review of successful strategies, the board shall have access to all information gathered by the joint committee on education of the general court, which may be relevant to the production of said profiles and review. The board shall release its report annually on or before the thirtieth day of June, and shall make said report available to the public.

The board may withhold state and federal funds from school committees which fail to comply with the provisions of law relative to the operation of the public schools or any regulation of said board authorized in this section.

The board shall see to it that all school committees comply with all laws relating to the operation of the public schools and in the event of noncompliance the commissioner of education shall refer all such cases to the attorney general for appropriate action to obtain compliance.

The board shall establish the standards for the recognition of high achievement by students and school districts.

The board shall establish the process and standards for declaring a school or school district to be "under-performing" or "chronically under-performing" in accordance with the provisions of this chapter.

The board shall review and approve federal grant applications for public elementary, secondary and vocational-technical schools and may develop guidelines as needed for the disbursement of such funds in accordance with law. The board shall be the approving authority for all federal educational grants and programs to be undertaken by public elementary, secondary and vocational-technical schools in the commonwealth. The board shall be the state education agency for purposes of federal law.

The board shall establish guidelines for establishing systems of personnel evaluation, including teacher performance standards. Public school districts in the commonwealth shall be encouraged to develop programs and standards which provide for a more rigorous and comprehensive evaluation process. Said guidelines shall be reviewed at least every other school year.

The board shall seek, accept, establish and administer grants, gifts, awards, and trusts for public elementary, secondary and vocational-technical education from foundations,

corporations, individuals and federal agencies, and develop guidelines as needed for the disbursement of such funds in accordance with applicable law and pursuant to the terms of the grant, gift, award or trust and such guidelines shall, where appropriate, give preference to school districts and educational collaboratives, provided said school districts and educational collaboratives are developing programs to educate children with disabilities together with children without disabilities in programs located in regular education school buildings which are chronologically age-appropriate, as an incentive for the formation of inclusive educational programs.

The board shall establish the criteria to define areas with a high number of low-income children for purposes of the school breakfast program, the early childhood program and any other program focused on low-income children.

The board shall establish minimum standards for all public early childhood, elementary, secondary and vocational-technical school buildings, subject to the provisions of the state building code. The board shall establish standards to ensure that every student shall attend classes in a safe environment.

The board shall, in coordination with local school districts, improve the management and efficiency of public early childhood, elementary, secondary and vocational-technical schools and school districts.

The board shall encourage the collaboration between local school districts, vocational-technical school districts, and regional employment boards to prepare students for the employment needs of the region.

The board shall establish a policy to ensure that, so far as practical, school districts distribute financial resources equitably among all schools in the district.

The board shall establish maximum pupil-teacher ratios for classes in public elementary and secondary schools.

The board shall establish the permissible and mandatory ages for school attendance and shall consider the advisability of raising the minimum age for attendance in the first grade to the national average age for such attendance.

The board shall carry out its responsibilities with a view toward increasing the accountability and effectiveness of public early childhood, elementary, secondary and vocational-technical schools and school districts for the performance of the students they serve.

The board shall provide information to schools concerning the titles and sources of Braille text books and technical assistance to schools to develop Braille translation of titles not presently available. The board shall ensure, through referral by the Massachusetts commission for the blind's children's services specialists or other appropriate persons for investigation of any alleged violations, that schools within its

jurisdiction purchase or otherwise provide written material to meet the individual education needs of blind persons, either directly or through adaptation.

The board shall adopt a model policy concerning student travel sponsored by a school that is planned to occur between the hours of midnight and 6:00 a.m., or that will include an overnight stay away from a student's home. The model policy shall address, but not be limited to, such issues as safety of transportation and accommodations, cost, including expectations for fundraising by students, time away from school, appropriateness of the trip for the grade level, and the trip approval process. The model policy shall take into account the recommendations of the Federal Motor Carrier Safety Administration, including its student motorcoach travel safety guide, as well as relevant safety recommendations made by the National Transportation Safety Board and other agencies and organizations. The board shall review the model policy and modify it as appropriate at least every 10 years. The board shall communicate the model policy, and any subsequent revisions of it, to each school committee for use by the school committee in adoption of the policy required by section 37N of chapter 71.

The board shall establish such other policies as it deems necessary to fulfill the purposes of this chapter and chapters fifteen, seventy, seventy-one A, seventy-one B, and seventy-four. In accordance with the provisions of chapter thirty A, the board may promulgate regulations as necessary to fulfill said purposes. Said regulations shall be promulgated so as to encourage innovation, flexibility and accountability in schools and school districts. Notwithstanding the provisions of any special or general law or executive order to the contrary, the board of education shall notify the joint committee on education of any amendments or revisions to regulations in effect on April first, nineteen hundred and ninety-six at least ninety days before the effective date of such amendments or revisions; provided, however, that if federal law should require that amendments to regulations be made in less than ninety days to ensure continued federal funding, notification to the committee shall be made as soon as possible, but failure to provide ninety days' notice shall in no manner affect the legality or validity of said regulations.

The board shall establish an executive committee and such other committees as it may from time to time deem necessary.

MASS. GENERAL LAWS CHAPTER 69, SECTION 1D

STATEWIDE EDUCATIONAL GOALS AND ACADEMIC STANDARDS

Chapter 69: Section 1D. Statewide educational goals; academic standards; vocational training; grant program

Section 1D. The board shall establish a set of statewide educational goals for all public elementary and secondary schools in the commonwealth.

The board shall direct the commissioner to institute a process to develop academic standards for the core subjects of mathematics, science and technology, history and social science, English, foreign languages and the arts. The standards shall cover grades kindergarten through twelve and shall clearly set forth the skills, competencies and knowledge expected to be possessed by all students at the conclusion of individual grades or clusters of grades. The standards shall be formulated so as to set high expectations of student performance and to provide clear and specific examples that embody and reflect these high expectations, and shall be constructed with due regard to the work and recommendations of national organizations, to the best of similar efforts in other states, and to the level of skills, competencies and knowledge possessed by typical students in the most educationally advanced nations. The skills, competencies and knowledge set forth in the standards shall be expressed in terms which lend themselves to objective measurement, define the performance outcomes expected of both students directly entering the workforce and of students pursuing higher education, and facilitate comparisons with students of other states and other nations.

The standards shall provide for instruction in at least the major principles of the Declaration of Independence, the United States Constitution, and the Federalist Papers. They shall be designed to inculcate respect for the cultural, ethnic and racial diversity of the commonwealth and for the contributions made by diverse cultural, ethnic and racial groups to the life of the commonwealth. The standards may provide for instruction in the fundamentals of the history of the commonwealth as well as the history of working people and the labor movement in the United States. The standards may provide for instruction in the issues of nutrition, physical education, AIDS education, violence prevention, and drug, alcohol and tobacco abuse prevention. The board may also include the teaching of family life skills, financial management and consumer skills, and basic career exploration and employability skills. The board may also include in the standards a fundamental knowledge of technology education and computer science and keyboarding skills; the major principles of environmental science and environmental protection; and an awareness of global education and geography. The board may set standards for student community service-learning activities and programs. The board may also institute a process for drawing up additional standards in other areas of education.

Academic standards shall be designed to avoid perpetuating gender, cultural, ethnic or racial stereotypes. The academic standards shall reflect sensitivity to different learning

styles and impediments to learning. The board shall develop procedures for updating, improving or refining standards, but shall ensure that the high quality of the standards is maintained. A copy of said standards shall be submitted to the joint committee on education at least sixty days prior to taking effect. The standards shall also include criteria for three determinations or certificates as follows:

(i) The "competency determination" shall be based on the academic standards and curriculum frameworks for tenth graders in the areas of mathematics, science and technology, history and social science, foreign languages, and English, and shall represent a determination that a particular student has demonstrated mastery of a common core of skills, competencies and knowledge in these areas, as measured by the assessment instruments described in section one *I*. Satisfaction of the requirements of the competency determination shall be a condition for high school graduation. If the particular student's assessment results for the tenth grade do not demonstrate the required level of competency, the student shall have the right to participate in the assessment program the following year or years. Students who fail to satisfy the requirements of the competency determination may be eligible to receive an educational assistance plan designed within the confines of the foundation budget to impart the skills, competencies and knowledge required to attain the required level of mastery. The parent, guardian or person acting as parent of the student shall have the opportunity to review the remedial plan with the student's teachers. Nothing in this section shall be construed to provide a parent, guardian, person acting as a parent or student with an entitlement to contest the proposed plan or with a cause of action for educational malpractice if the student fails to obtain a competency determination.

(ii) The "certificate of mastery" shall be based upon a determination that the recipient has demonstrated mastery of a comprehensive body of skills, competencies and knowledge comparable to that possessed by accomplished graduates of high school or equivalent programs in the most advanced education systems in the world. The criteria for a certificate of mastery may incorporate a number of factors which may include, but not be limited to, any of the following: high school graduation standards, superior performance on advanced placement tests administered by the educational testing service, and demonstrated excellence in areas not reflected by the state's assessment instruments, such as artistic or literary achievement. Eligibility for potential receipt of a certificate of mastery shall extend to all secondary students residing in the commonwealth.

(iii) The "certificate of occupational proficiency" shall be awarded to students who successfully complete a comprehensive education and training program in a particular trade or professional skill area and shall reflect a determination that the recipient has demonstrated mastery of a core of skills, competencies and knowledge comparable to that possessed by students of equivalent age entering the particular trade or profession from the most educationally advanced education systems in the world. No student may receive said certificate of occupational proficiency without also having acquired a competency determination.

Nothing in this chapter shall prohibit a student from beginning a program of vocational education before achieving a determination of competency. Such vocational education may begin at grade nine, ten or eleven. No provision of law shall prohibit concurrent pursuit of a competency determination and vocational learning. There shall be no cause of action for a parent, guardian or student who fails to obtain a competency determination, a certificate of mastery or a certificate of occupational proficiency.

Subject to appropriation, the board shall establish a grant program which shall award grants to school districts for the costs associated with establishing advanced placement courses. The board shall promulgate regulations defining the standards of eligibility and other implementation guidelines.

Subject to appropriation, the board shall establish an advanced placement test fee grant program which shall award grants to school districts for the reimbursement of application fees for students based on financial need in order to assist students with paying the fee for advanced placement tests. The board shall promulgate regulations defining the standards of eligibility and other implementation guidelines for this program.

MASS. GENERAL LAWS CHAPTER 69, SECTION 1E

CURRICULUM FRAMEWORKS

Chapter 69: Section 1E. Curriculum frameworks

The board shall direct the commissioner to institute a process for drawing up curriculum frameworks for the core subjects covered by the academic standards provided in section one D. The curriculum frameworks shall present broad pedagogical approaches and strategies for assisting students in the development of the skills, competencies and knowledge called for by these standards. The process for drawing up and revising the frameworks shall be open and consultative, and may include but need not be limited to classroom teachers, parents, faculty of schools of education, and leading college and university figures in both subject matter disciplines and pedagogy. In drawing up curriculum frameworks, those involved shall look to curriculum frameworks, model curricula, content standards, attainment targets, courses of study and instruction materials in existence or in the process of being developed in the United States and throughout the world, and shall actively explore collaborative development efforts with other projects, including but not limited to the national New Standards Project. The curriculum frameworks shall provide sufficient detail to guide and inform processes for the education, professional development, certification and evaluation of both active and aspiring teachers. They shall provide sufficient detail to guide the promulgation of student assessment instruments. They shall be constructed to guide and assist teachers, administrators, publishers, software developers and other interested parties in the development and selection of curricula, textbooks, technology and other instructional materials, and in the design of pedagogical approaches and techniques for elementary, secondary and vocational-technical schools. The board may review and recommend instructional materials which it judges to be compatible with the curriculum frameworks.

Frameworks shall be designed to avoid perpetuating gender, cultural, ethnic or racial stereotypes. The frameworks shall reflect sensitivity to different learning styles and impediments to learning. The board shall develop procedures for updating, improving or refining said curriculum frameworks. A copy of said frameworks shall be submitted to the joint committee on education, arts and humanities at least sixty days prior to taking effect.

Massachusetts Department of Elementary and Secondary Education

75 Pleasant Street, Malden, Massachusetts 02148-4906

Telephone: (781) 338-3000
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Mitchell D. Chester, Ed.D.
Commissioner

MEMORANDUM

To: Members of the Board of Elementary and Secondary Education
From: Mitchell D. Chester, Ed. D., Commissioner
Date: January 15, 2010
Subject: Progress Report on the Common Core State Standards Initiative

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I write to update you on the progress of the Common Core State Standards Initiative and inform you about our proposed timeline for your review of the standards and solicitation of public comment on them. In spring 2009, the Governor and I signed a Memorandum of Agreement with the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) that committed the Commonwealth's support to the development of K-12 internationally benchmarked, rigorous Common Core Standards in English language arts and mathematics aligned to college and career expectations. Information on this state-led effort, which includes 48 states, two territories, and the District of Columbia, is posted at http://www.corestandards.org. You will recall that the Department was in the process of refining our standards when the Common Core initiative was announced. In light of this announcement, we deliberately coordinated our state effort with the Common Core effort.

In February 2010, CCSSO and NGA will release public drafts of the *K-12 Common Core State Standards for English Language Arts* and *K-12 Common Core State Standards for Mathematics* and will be accepting public comment. We will send copies of the draft *Standards* to you when they are available so that you may make comment on them if you choose to do so. Our understanding is that CCSSO and NGA will release a final version of the *Standards* documents in March 2010.

Massachusetts has played a key role in the development of these standards. A member of this Board, Sandra Stotsky, serves on the Validation Committee for the English Language Arts standards; six of our staff members were invited by CCSSO and NGA to serve on the Common Core State Standards Development Teams; and we have asked 14 Massachusetts scholars and educators to contribute their expertise to reviewing successive drafts in order to shape our written comments to CCSSO and NGA. I have enclosed a list of the educators and staff members who have been involved in Core Standards reviews during the past year. The deep involvement of Massachusetts in this effort is important for two reasons. First, our existing standards are considered the best in the nation and we want the Common Core Standards to be every bit as challenging. Second, adoption and statewide dissemination of the *Common Core Standards* is a key component of our Race to the Top application.

We are planning a public process for statewide dissemination of the standards and discussion about them. We will collect and summarize public comment in anticipation of your vote on adoption in fall 2010.

Plan for Reviewing the *K-12 Common Core State Standards*

February-March 2010: CCSSO and NGA will first release drafts, then final versions of the *K-12 Common Core State Standards*. At each stage in the process, the Department will notify principals, superintendents, statewide professional associations, and other interested parties that the standards are available on the Common Core State Standards Initiative website. Department staff and the existing Curriculum Framework Review Panels for Mathematics and English Language Arts will compare the *K-12 Common Core Standards in English Language Arts* and *Mathematics* with our current standards and new drafts in those subjects, identify where differences or gaps exist, and determine whether the *Common Core Standards* need to be supplemented with any unique Massachusetts standards to maintain our historic commitment to challenging standards. The Memorandum of Agreement that the Governor and I signed with CCSSO and NGA specified that unique state standards could comprise up to 15% of the full complement of standards the Board ultimately adopts.

April 2010: *The K-12 Common Core Standards* (including any supplementary unique state standards) will be presented to the Board of Elementary and Secondary Education for an initial discussion.

May 2010: I will ask the Board to vote to release the standards for public comment. Following the vote the Department will post the *K-12 Common Core Standards* and any supplementary Massachusetts standards on our website.

June-September 2010: The Department will solicit public comment on the strengths and limitations of these standards through the use of a web-based survey tool. In addition, we will conduct six regional forums for local K-12 educators/higher education faculty and four other forums for legislators, business, and community groups to build awareness and solicit comment on the *Common Core Standards*. The Department will compile and analyze input from the survey and forums. If necessary, our staff will make revisions to the 15% unique Massachusetts standards at this time.

October-December 2010: The final versions of the PreK-12 Massachusetts Standards for Mathematics and English Language Arts will be presented to the Board of Elementary and Secondary Education for your further consideration and a vote to adopt them in the fall of 2010.

Assuming there is substantial (85 percent) overlap between the Massachusetts and Common Core standards, then adoption of the Massachusetts standards will represent adoption of the Common Core standards.

2011-2012: We will post the newly adopted standards on our website, publicize them statewide, and conduct regional statewide professional development sessions about them at the District and School Assistance Centers and other venues. Our staff and assessment contractor, Measured Progress, will review item banks to evaluate the alignment of existing items to the Common Core Standards, and will align any newly developed items for MCAS English language arts and mathematics to these standards. By the 2011-2012 school year, we will expect all districts to have aligned their curricula to these new standards.

Enclosure:
2009-2010 Massachusetts Common Core Standards Review Committees and Department Staff Serving on Common Core Development Teams

Appendix B9: List of Members of Massachusetts Common Core Adoption Working Groups

2009-2010 Members of the Massachusetts Department of Elementary and Secondary Education Review Team for the K-12 Common Core Standards in Mathematics

- Andrew Chen, President Edutron, member of BESE Mathematics and Science Advisory Council
- Anne Marie Condike, Grade K–5 Mathematics Coordinator, Westford Public Schools, Mathematics Curriculum Framework Review Panel Member
- Solomon Friedberg, Mathematics Department Chair, Boston College, member of BESE Mathematics and Science Advisory Council
- Naseem Jaffer, Mathematics Coach Consultant, member of BESE Mathematics and Science Advisory Council and Mathematics Curriculum Framework Review Panel
- Dianne Kelly, Revere Public Schools Director of Mathematics, K-12, member of ESE Mathematics Liaisons
- Pendred Noyce, Trustee, Noyce Foundation, member of Mathematics Curriculum Framework Review Panel
- Wilfried Schmid, Dwight Parker Robinson Professor of Mathematics, Harvard University

2009-2010 Members of the Massachusetts Department of Elementary and Secondary Education Review Team for the K-12 Common Core Standards in English Language Arts

- Lori DiGisi, Middle School reading teacher, Framingham Public Schools, President of Massachusetts Reading Association, and member, English Language Arts Curriculum Framework Review Panel
- Janet Furey, English Language Arts standards consultant, retired elementary and middle school English language arts teacher, Weston Public Schools
- Gregory Hurray, Principal, Horace Mann School, Newton Public Schools and former K-8 Director of K-8 English Language Arts, Newton Public Schools, and member, English Language Arts Curriculum Framework Review Panel
- Barbara McLaughlin, Senior Program Advisor for K-5 English Language Arts, Boston Public Schools and member, English Language Arts Curriculum Framework Review Panel
- Thomas O'Toole, Director of Grades 6-12 English Language Arts, Waltham Public Schools and former Director of English Language Arts Assessment Development for MCAS
- Bruce Penniman, English Department, UMass Amherst, and Western Massachusetts Writing Project
- John Wands, retired Grades 6-12 English Language Arts Director, Cohasset Public Schools, assistant chief reader for Advanced Placement English Language Arts exams, member of English Language Arts Curriculum Framework Review Panel

Massachusetts Department of Elementary and Secondary Education Staff Members Serving on Development Teams for the K-12 Common Core Standards

Mathematics

- Barbara Libby, Director of the Office of Science, Technology, Engineering and Mathematics
- Sharyn Sweeney, Curriculum Specialist, Director of the Office of Science, Technology, Engineering and Mathematics

English Language Arts

- David Buchanan, Curriculum Specialist, Office for Humanities, History and Social Science
- Cheryl Liebling, Director of the Office of Literacy
- Julia Phelps, Executive Director of the Center for Curriculum and Instruction
- Susan Wheltle, Director of the Office for Humanities, History and Social Science

Appendix B10: MOU for Balanced Assessment Consortium

MOU for a State Consortium Developing Balanced Assessments of the Common Core Standards

This Non-Binding Memorandum of Understanding ("MOU") is entered into by and between the Balanced Assessment Consortium and MASSACHUSETTS ("Your State"). The purpose of this agreement is to establish a framework of collaboration for states in supporting assessment of the common core standards. The agreement also articulates tasks in support of a Multi-State Consortium in its implementation of an approved Standards and Assessment Section of a Race to the Top grant. The MOU outlines a set of working principles, the roles of states and local districts within the consortium, and a set of tasks that the Consortium would undertake.

Working Principles

A consortium of states developing a balanced assessment system for evaluating the common core standards would start with working principles derived from an examination of successful state systems in the U.S. and high-achieving systems internationally. For example:

1) **Assessments are grounded in a thoughtful, standards-based curriculum and are managed as part of a tightly integrated system of standards, curriculum, assessment, instruction, and teacher development.**

- Curriculum guidance is lean, clear, and focused on what students should know and be able to *do* as a result of their learning experiences. Assessment expectations are described in the curriculum frameworks or course syllabi and are exemplified by samples of student work.
- Curriculum and assessments are organized around a well-defined set of learning progressions within subject areas. These guide teaching decisions, classroom-based assessment, and external assessment.
- Teachers and other curriculum experts are involved in developing curriculum and assessments which guide professional learning and teaching. Thus, everything that comes to schools is well-aligned and pulling in the same direction.

2) **Assessments elicit evidence of actual student performance on challenging tasks that prepare students for the demands of college and career in the 21st century.** Curriculum and assessments seek to teach and evaluate a broad array of skills and competencies that generalize to higher education and work settings. They emphasize deep knowledge of core concepts within and across the disciplines, including problem solving, analysis, synthesis, and critical thinking, and include essays and open-ended tasks and problems, as well as selected response items.

3) **Teachers are involved in the development of curriculum and the development and scoring of assessments.** Scoring processes are moderated to ensure consistency and to enable teachers to deeply understand the standards and to develop stronger curriculum and instruction leading to greater student proficiency. The moderated scoring process is a strong professional learning experience that helps drive the instructional improvements that enable student learning, as teachers become more skilled at their own assessment practices and their development of curriculum to teach the standards. The assessment systems are designed to increase the capacity of teachers to prepare students for the contemporary demands of college and career.

4) **Assessments are structured to <u>continuously improve teaching and learning</u>.** Assessment *as*, *of*, and *for* learning is enabled by several features of assessment systems:

- The use of school-based, curriculum-embedded assessments provides teachers with models of good curriculum and assessment practice, enhances curriculum equity within and across schools, and allows teachers to see and evaluate student learning in ways that can feed back into instructional and curriculum decisions.

- Close examination of student work and moderated teacher scoring of both school-based components and externally developed open-ended examinations are sources of ongoing professional development that improve teaching.

- Developing both school-based and external assessments around learning progressions allows teachers to see where students are on multiple dimensions of learning and to strategically support their progress.

5) Assessment and accountability systems are designed to <u>improve the quality of learning</u> and schooling. Assessments aim to encourage and support the learning of ambitious intellectual skills in the way they are designed and used for informing teaching, learning, and schooling. Accountability systems publicly report outcomes and take these into account, along with other indicators of school performance, in a well-designed system focused on continual improvement for schools.

6) Assessment and accountability systems <u>use multiple measures</u> to evaluate students and schools.

Multiple measures of learning and performance are used to evaluate skills and knowledge. Students engage in a variety of tasks and tests that are both curriculum-embedded and on-demand, providing many ways to demonstrate and evaluate their learning. These are combined in reporting systems at the school and beyond the school level. School reporting and accountability are also based on multiple measures. Assessment data are combined with other information about schools' resources, capacities, practices, and outcomes to design intensive professional development supports and interventions that improve school performance.

7) <u>New technologies enable greater assessment quality</u> and information systems that support accountability.

New technologies enhance and transform the way the assessment process is developed, delivered, and used, providing adaptive tools and access to information resources for students to demonstrate their learning, and providing appropriate feedback by supporting both teacher scoring and computer-based scoring (now possible for both selected response and some forms of constructed-response items). By using technology to reduce costs for delivery of more open-ended assessment formats, scoring, and reporting, resources can be redirected to improvements in assessment quality.

Technology also organizes data about student learning, enhancing system accountability for instruction and reporting by providing more efficient, accurate, and timely information to teachers, parents, administrators, and policymakers. Technology helps to integrate information at as part of longitudinal data systems, contributing to a rich profile of accomplishment for every student.

<u>State and Local Roles within a Consortium</u>

States working within the Consortium would:

- Adopt and augment the Common Core standards as appropriate to their context.

- Create and deploy curriculum frameworks that address the standards—drawing on exemplars and tested curriculum models.
- Build and manage an assessment system that includes both on-demand and curriculum-embedded assessments that evaluate the full range of standards and allow evaluation of student progress. The Consortium may develop both joint assessments (commonly implemented by states) as well as other assessment tasks and items linked to the standards (and grounded in curriculum units) that can be incorporated into states' individual assessment plans for formative or summative purposes.
- Develop rubrics that embody the standards, and clear examples of good work, benchmarked to performance standards.
- Create oversight / moderation / audit systems for ensuring the comparability of locally managed and scored assessment components.
- Ensure that teacher and leader education and development infuse knowledge of learning, curriculum, and assessment.
- Implement high-quality professional learning focused on examination of student work, curriculum and assessment development, and moderated scoring.

Districts and schools would:

- Examine the standards and evaluate current curriculum, assessment, and instructional practice in light of the standards.
- Evaluate state curriculum guidance, and further develop and adapt curriculum to support local student learning, select and augment curriculum materials, and continually evaluate and revise curriculum in light of student learning outcomes.
- Incorporate formative assessments into the curriculum, organized around the standards, curriculum, and learning sequences to inform teaching and student learning.
- Participate in administering and scoring relevant portions of the on-demand and curriculum-embedded components of the assessment system, and examining student work and outcomes.
- Help design and engage in professional development around learning, teaching, curriculum, & assessment.
- Engage in review and moderation processes to examine assessments and student work, within and beyond the school.

Tasks the Consortium Would Undertake

The consortium of states would build on successful efforts already launched in a number of states, seeking to integrate the best knowledge and exemplars from existing efforts, so as to use resources efficiently, take advantage of well-tested approaches, and avoid reinventing the wheel. It would bring together leading curriculum and assessment experts to advise and support efforts to create a system for evaluating the Common Core, building on the most credible and well-vetted knowledge available in the field. With these supports, the Consortium could:

1. Support the Development of Curriculum Frameworks: When the Common Core standards have been released, vetted, and adopted, consortia of states would work with curriculum and assessment experts to develop (or adapt from previously successful work) curriculum frameworks, syllabi, and other materials mapped to the standards. There has been enormous investment in the United States in high-quality curriculum, for example through NSF and other

organizations at the national level, and in many states and districts. Other English-speaking nations have also developed high quality curriculum materials linked to standards and learning progressions that could be evaluated in this process. This effort would inventory and cull from efforts with a strong evidence base of success to support states in building out curriculum frameworks around which they can organize deeper curriculum development at the local level, state and local assessment development, instructional supports, and professional development.

2. Create a Digital Curriculum and Assessment Library: The results of this effort should ultimately be made available on-line in a digital platform that offers materials for curriculum building and, eventually, model syllabi for specific courses linked to the standards, formative and summative assessment tasks and instruments linked to the curriculum materials, and materials for training teachers and school leaders in both strategies for teaching specific curriculum concepts / units and assessment development and scoring. In addition, as described below, an electronic scoring platform supporting training, calibrating, benchmarking, and reporting would be developed and made available across the states.

3. Develop State and Local Assessments: The state consortium would work to create a **common reference examination, which includes selected-response, constructed response and performance components** aimed at higher-order skills, linked to the Common Core standards for grades 3-8, like the NECAP assessment recently developed by a set of New England states. This assessment would be designed to incorporate more rigorous and analytic multiple-choice and open-ended items than many tests currently include and would include strategically selected curriculum-embedded performance assessments at the classroom level that can be part of the summative evaluation, while also providing formative information.

These curriculum-embedded components would be developed around core concepts or major skills that are particularly salient in evaluating students' progress in English language arts and mathematics. (Eventually, work on science could be included.) Exemplars to evaluate and build upon are already available in many states and in nations like England that have developed a set of "tests and tasks" for use in classrooms that help teachers evaluate students' learning in relation to well-described learning progressions in reading, writing, mathematics, and other subjects.

Curriculum-embedded components would link to the skills evaluated in the "on-demand" test, allowing for more ambitious tasks that take more time and require more student effort than can be allocated in a 2 or 3-hour test on a single day; these components would evaluate skills in ways that expect more student-initiated planning, management of information and ideas, interaction with other materials and people, and production of more extended responses that reveal additional abilities of students (oral presentations, exhibitions, and product development, as well as written responses) that are associated with college and career success.

In the context of summative assessments, curriculum-embedded tasks would be standardized, scored in moderated fashion, and scores would be aggregated up to count as part of the external assessment. Curriculum-embedded assessments would also include marker tasks that are designed to be used formatively to check for essential understandings and to give teachers useful information and feedback as part of ongoing instruction. Thoughtful curriculum guidance would outline the scaffolding and formative assessment needed to prepare students to succeed on the summative assessments.

All components of the system would incorporate **principles of universal design** that seek to remove construct-irrelevant aspects of tasks that could increase barriers for non-native English speakers and students with other specific learning needs. In addition, designers who are skilled at developing linguistically supportive assessments and tests for students with learning disabilities would be engaged from the beginning in considering how to develop the assessments for maximum access, as well as how to design appropriate accommodations and modifications to enable as many students as possible to be validly assessed within the system.

The emphasis on evaluating **student growth over time** and on tying standards to a conception of learning progressions should encourage a growth oriented frame for both the "on-demand" examination and the more extended classroom assessments. The Consortium may consider the viability of incorporating computer-based adaptive testing that creates vertically scaled assessments based on the full range of learning progressions in ELA and math. This would allow students to be evaluated in ways that give greater information about their abilities and their growth over time. This approach would not preclude the evaluation of grade-level standards, which could be part of any students' assessment, nor would it preclude a significant number of constructed response, open-ended items, as the technology for machine-scoring structured open-ended items is now fairly well-developed. Strategic use of partial teacher scoring for these items would also be a desirable element of the system to support teachers' understanding of the standards and assessments, and their planning for instruction.

The emphasis on evaluating student growth should also inform the development of the curriculum-embedded elements of the system, which should be selected or developed to strategically evaluate students' progress along the learning continuum. Centrally developed tasks administered and scored by teachers with moderation (see below), using common rubrics, would be part of the set of reported scores. In states with experience and capacity, it may be possible to begin to incorporate information about student learning that teachers develop from their own classroom evidence, linked to the standards and learning progressions and guided by the curriculum frameworks. This could be an optional aspect of the Consortium's work for states and communities with interest and capacity.

At the **high school level**, the Consortium might explore one or both of two options for assessment:

- **Course- or syllabus-based systems** like those in England, Australia, Singapore, Hong Kong, Alberta (Canada), as well as the International Baccalaureate. Generally conceptualized as end-of-course-exams in this country, this approach should become a more comprehensive course assessment approach like that pursued in these other countries. Such an approach would include within-course performance assessments that count toward the examination score, as well as high-quality assessment end-of-course components that feature constructed response as well as selected response items. Within-course performance assessments would tap central modes of inquiry in the disciplines, ensuring that students have the opportunity to engage in scientific investigations, literary analyses and other genres of writing, speaking and listening; mathematical modeling and applications; social scientific research. Such an approach might require an ELA and math assessment at a key juncture that evaluates an appropriate benchmark level for high school standards, and then, as in high-achieving nations, allow for pursuit of other courses/ assessments that are selected by students

according to their interests and expertise. These could serve as additional information on the diploma for colleges and employers.

- **Standards-driven systems** that might include a more comprehensive benchmark assessment in ELA and mathematics complemented by collections of evidence that demonstrate students' abilities to meet certain standards within and across the disciplines. This set of assessments would allow more curriculum flexibility in how to meet the standards. Systems like these are used in some provinces in Canada and Australia, in states like Rhode Island, Wyoming, Nebraska, and New Hampshire, and in systems of schools like the New York Performance Standards Consortium, the Asia Society, and Envision Schools. Sometimes these sets of evidence are organized into structured portfolios, such as the Technology portfolio in New Hampshire and the broader Graduation portfolios in these sets of schools that require specific tasks in each content area, scored with common rubrics and moderation.

- **A mixed model** could combine elements of both course- and standards-driven models, allowing some demonstrations of proficiency to occur in any one of a range of courses (rather than a single, predetermined course) or even outside the bounds of a course, like the efforts by some states to allow students to pass courses via demonstrations of competence rather than seat time (e.g. NH, OH). Such a system could also include specific components intended to develop and display research and inquiry skills that might also be interdisciplinary, such as the Project Work requirements in England, Singapore, and the International Baccalaurate, and the Senior Project requirements in Pennsylvania and Ohio.

4. Develop Moderation and Auditing Systems for Teacher-Scored Work: The consortium would develop protocols for managing moderation and auditing systems and training scorers so as to enable comparable, consistent scoring of performance assessments. In other nations' and states' systems that include these features routinely, procedures have been developed to ensure both widespread teacher involvement – often as part of professional development time – and to create common standards and high levels of reliability in evaluating student work. A range of models are possible, and the consortium would serve as a resource to individual states in developing and implementing strong, efficient approaches.

5. Develop Technology to Support the Assessment System: Technology should be used to enhance these assessments in a number of ways: by delivering the assessments; in on-line tasks of higher-order abilities, allowing students to search for information or manipulate variables and tracking information about the students' problem-solving processes; in some cases, scoring the results or delivering the responses to trained scorers / teachers to assess from an electronic platform. Such a platform may also support training and calibration of scorers and moderation of scores, as well as efficient aggregation of results in ways that support reporting and research about the responses. This use of technology is already being used in the International Baccalaureate assessment system, which includes both on-demand and classroom-based components.

In order to gain the efficiency and cost benefits of machine scoring and the teaching and learning benefits of teachers' moderated scoring, a mixed system could be developed where computer-based scoring is incorporated on constructed response tasks where useful – though teachers would score some of these tasks for anchoring and learning purposes while other tasks that require human scoring engage most teachers in scoring to support improvements in instruction.

RESPONSIBILITIES OF ALL SEAs PARTICIPATING IN THE CONSORTIUM

1) Each participating SEA in the Consortium will appoint a key contact person.

2) These key contacts from each State will maintain frequent communication with the parties administering the Balanced Assessment Consortium to facilitate cooperation under this MOU.

3) Participating SEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.

This Non-binding Memorandum of Understanding shall be effective beginning with the date of the last signature hereon:

SEA Superintendent/- Participating State Chief/Commissioner (or equivalent authorized signatory)

Signature

1-6-10
Date

Mitchell D. Chester
Print Name

Commissioner of Elem & Sec Ed
Title MASSACHUSETTS

Please email this signed page to

Tammy Morrill
Tammy.Morrill@maine.gov

****PLEASE email this signed page only by January 7, 2010****

Appendix B11: List of States Participating in the Balanced Assessment Consortium

1. Alabama
2. Arizona
3. Arkansas
4. California
5. Connecticut
6. Delaware
7. Illinois
8. Indiana
9. Kansas
10. Kentucky
11. Maine
12. Maryland
13. Massachusetts
14. Michigan
15. Mississippi
16. Missouri
17. Montana
18. New Hampshire
19. New Jersey
20. North Dakota
21. Ohio
22. Pennsylvania
23. Rhode Island
24. South Carolina
25. South Dakota
26. Utah
27. Washington DC
28. West Virginia
29. Wisconsin
30. Wyoming

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Michael Cohen

TREASURER

Peter Sayre
Controller
Prudential Financial, Inc.

January 14, 2010

Dr. Mitchell Chester
Commissioner
Massachusetts Department of Elementary and Secondary Education
350 Main Street
Malden, MA 02148

Dear Commissioner Chester:

Achieve is pleased to confirm Massachusetts' participation in an assessment partnership committed to pursuing the development and implementation of summative assessments that are aligned to the common core standards, that can be used within states as part of statewide assessment systems, and that will enable comparability of results across a maximum number of states.

We have received your formal request to join the other states in this partnership and acknowledge your acceptance of the attached Statement of Principles which will guide our collective work.

Massachusetts' participation in this partnership is critical to its success. We look forward to continuing our important work together in the coming months.

Sincerely,

(b)(6)

Michael Cohen
President

States Committed to Assessment Partnership

1. Alabama
2. Arizona
3. Arkansas
4. California
5. Delaware
6. District of Columbia
7. Florida
8. Georgia
9. Hawaii
10. Illinois
11. Indiana
12. Kentucky
13. Louisiana
14. Maryland
15. Massachusetts
16. Michigan
17. Minnesota
18. New Mexico
19. North Carolina
20. Ohio
21. Oklahoma
22. Pennsylvania
23. Rhode Island
24. Tennessee
25. Utah
26. Wisconsin

1775 Eye Street NW, Suite 410, Washington, D.C. 20006 Phone (202) 419-1540 Fax (202) 828-0911
www.achieve.org

Appendix B13: Guiding Principals of the Achieve Common Assessment Consortium

Comparing Student Performance on Common College- and Career-Ready Standards
Statement of Principles

Our state is committed to an education system that prepares all of our students for success in college, careers, and life in the 21st century. We believe in setting *high* expectations for our students and schools that are firmly grounded in what it takes to be successful. We believe in setting *common* expectations across states, and are committed to working with like-minded states to adopt common standards and assessment systems anchored in college and career readiness.

Our state supports common assessments that meet the following principles:

- Aligned to the common core standards
- Anchored in college and career readiness
- Allow for comparison of student results across a maximum number of states
- Enable to the maximum extent possible benchmarking performance against NAEP and international standards
- Cover grades 3 through 8 and high school, including college/career ready measures at the end of high school
- Address three overarching goals: measuring student proficiency, ensuring accountability, and improving teaching and learning
- Enable measurement of student achievement and growth
- Are summative in nature but designed in a manner consistent with more comprehensive assessment systems that also include interim and formative assessments
- Provide valid and reliable measures of student knowledge, understanding of, and ability to apply crucial concepts through the use of a variety of item types and formats
- Leverage technology and economies of scale in order to minimize costs and create assessments that accurately measure student performance
- Provide for timely release of results to better inform practice and support decision-making
- Include the assessment of students identified with disabilities and English language learners and to the extent feasible, use universal design principles

We understand that Achieve will work with other national partners to build on the work of the common core standards and convene states to pursue a common assessment strategy that meets these principles. We are prepared to work with Achieve and its partners in as large a consortium of states as possible to explore the development and implementation of summative assessments that are aligned to the common core standards, that can be used within states as part of statewide assessment systems, and that will enable comparability of results across states. We understand that in pursuing this effort, Achieve and its partners will work closely with other consortia that have been formed to explore areas of common ground and determine whether and how efforts could be combined to achieve comparability of results.

Appendix B14: List of Accolades for Massachusetts State Standards

Editorial Projects in Education. 2006. "Quality Counts at 10, Massachusetts: A Decade of Standards-Based Education."

> On their State Policy Report Card, EPE gives MA an A for Standards and Accountability. They also comment, "The state ranks near the top of the nation in standards and accountability. Its academic standards for all four core subject areas at every grade span have been rated as clear, specific, and grounded in content by the American Federation of Teachers."

Finn, Chester E., Liam Julian and Michael J. Petrilli. 2006. "The State of State Standards." Thomas B. Fordham Foundation.

> The Massachusetts Report Card (2006) gives the state an A for its standards in all subjects: English, U.S. History, Geography (World History for 2006), Math and Science, for an overall score of A. The 2006 grade reflects a substantial improvement from 2005, when the overall grade was a B-.

Klein, David. 2005. "The State of State Math Standards." Thomas B. Fordham Foundation.

> Massachusetts was one of only three top scoring states; the other two were California and Indiana. Massachusetts is given an A for Clarity, an A for Content, a C for Reason and an A for Negative Qualities, for a final grade of A.

Stotsky, Sandra. 2005. "The State of State English Standards." Thomas B. Fordham Foundation.

> The review of the 2001 English Language Arts Curriculum Frameworks gives Massachusetts an A overall. The paper comments: "The standards address all areas in the English language arts and reading coherently, contain clear expectations for explicit and systematic phonics instruction in the primary grades, and provide for a strong vocabulary strand through the grades. Regulations for teacher training programs and licensure are aligned to the state's K-12 standards, as are the subject matter knowledge tests for teachers."

Achieve, Inc. 2001. "Measuring Up: A Report on Educational Standards and Assessments for Massachusetts."

> Achieve's evaluation of the state's mathematics standards and grade 10 MCAS tests in English language arts and mathematics resulted in the following major findings (quoted from document):
>
> 1. Overall, Massachusetts' standards and high school tests are of high quality and are aligned, providing a solid foundation on which to build state education policy.
> 2. The grade 10 tests are rigorous yet reasonable – and are, in fact, the most challenging of the exit-level tests Achieve has reviewed.
> 3. The mathematics standards generally are well organized, jargon-free, clear and precise.

Appendix B15: Projections for Massachusetts High School to College Pipeline

The 2008 four-year graduation rate for students in the 24 urban* school districts in Massachusetts was 63.6% (ESE 2009). Using data from the National Student Clearinghouse, a 2008 study of high school students in Boston found that only 64% of high school graduates attended a post-secondary institution (Sum 2008). Using the same data set, the Boston Indicators Project estimates that only about 15% of students who enter high school in Boston in the 2003 will be on track to complete a college degree by 2014 (Kahn, Davis and Martin 2008).

Extrapolating from these data, for every ten urban students who enter 9th grade, only 63.6%, or six students, will graduate high school. If only 64% of high school graduates attend a two- or four-year college, then approximately four students from the initial ten will attend a two- or four-year college. Using the Boston Indicators Project estimates, only about one out of ten will complete a two- or four-year degree in six years.

Notes:

*The urban cohort includes students in the 24 districts that participate in the Department's Urban Superintendent Network (Boston, Brockton, Cambridge, Chelsea, Chicopee, Everett, Fall River, Fitchburg, Framingham, Haverhill, Holyoke, Lawrence, Leominster, Lowell, Lynn, Malden, New Bedford, Pittsfield, Quincy, Revere, Somerville, Springfield, Taunton and Worcester).

Works Cited:

Massachusetts Department of Elementary and Secondary Education. February 5th, 2009. "Cohort 2008 Four-Year Graduation Rates - State Results."

Kahn, Charlotte B., Davis, Tim H. and Martin, Jessica K. 2008. "Boston's Education Pipeline: A Report Card." Boston Indicators Project.

Sum, Andrew. 2008. Getting to the Finish Line: College Enrollment and Graduation." Center for Labor Market Studies.

Table of Contents for Appendices for Section (C)

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C2: Detailed Project Summaries	(C)(2) and (C)(3)	C-17
C3: Current Data Systems and Planned Initiatives	(C)(2)	C-25
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C6: Sample Item Analysis Report	(C)(2)	C-28
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C10: Memorandum of Understanding for Data Sharing with Researchers Template	(C)(3)(iii)	C-33

Appendix C1: Evidence of Current Status of State's Longitudinal Data System by Essential Elements of the America COMPETES Act

Brief overview of data collections:

ESE currently conducts several data collections each school year. Two collections constitute the foundation for our meeting several of the essential elements of the America COMPETES Act:

- SIMS – Massachusetts has implemented a statewide unique student identifier (SASID) since 1998 that does not permit a student to be individually identified. The SIMS collection is submitted by school districts for every public school student three times per year:
  - October 1st
  - March 1st
  - Last Day of School in June
- EPIMS – In 2007Massachusetts has implemented a statewide unique educator identifier (MEPID) as part of an annual (October 1st) new collection, the Education Personnel Information Management System (EPIMS). Data are transmitted in two separate records: the staff roster, containing demographic and related (e.g., HQT) information, and the work assignment (class sections taught).

Evidence for the 12 Essential Data Elements:

Element 1: A unique statewide student identifier that does not permit a student to be individually identified.

Element 2: Student-level enrollment, demographic and program participation information

EVIDENCE: All criteria for Element 1 and Element 2 met through SIMS; complete list of data collected follows.

Variable name	Data collected	Description
DOE001	Locally Assigned Student Identifier (LASID)	A code assigned and maintained by the local school district that is unique for each student in the district over time.
DOE002	State Assigned Student Identifier (SASID)	A unique number assigned to an individual by the ESE.
DOE003	First Name	A name given to an individual at birth, during a naming ceremony (e.g., baptism), or through legal change.
DOE004	Middle Name	A secondary name given to an individual at birth, during a naming ceremony (e.g., baptism), or through legal change.
DOE005	Last Name	The name borne in common by members of a family.
DOE006	Date of Birth	The month, day, and year on which an individual was born.
DOE007	Date of Birth Format	A code that indicates the format of the value of Data Element DOE006 — Date of Birth.

DOE008	City/Town of Birth	The name of the city (or comparable unit) in which an individual was born.
DOE009	Gender	The classification of a student as male or female.
DOE010	Race/Ethnicity	The general racial category that most clearly reflects the individual's recognition of his or her community or with which the individual most identifies.
DOE011	Reason for Reporting	An indication of the basis on which a district is reporting a student — financial responsibility, enrollment, or both. If the student is not enrolled at the time of reporting, or if the Reason for Enrollment has changed over time, the indication should represent the most recent reason for reporting.
DOE012	Enrollment Status at Time of Data Collection	An indication, as of the specified time of data collection (e.g., October 1), of the enrollment status of each student who has been enrolled or for whom the district paid for education services at any time during the current school year.
DOE013	Reason for Enrollment	An indication of the reason for a student's enrollment in the receiving school district. The indication should represent the reason for the most recent enrollment if the student is not enrolled at the time of reporting, or the current Reason for Enrollment if the reason has changed over time.
DOE014	City/Town of Residence — Student	The three-digit code for the city or town where the student lives at the time of reporting or the student's last known city or town of residence if the reporting district is no longer sending or receiving the student.
DOE015	School Identification Number	Each school in Massachusetts has a four-digit code assigned by ESE.
DOE016	Grade Level	Grade in which student is enrolled as of most recent enrollment.
DOE017	Days in Attendance	Cumulative number of days a member student has been present in the district from the beginning of the current school year to the time of reporting (e.g., October 1).
DOE018	Days in Membership	Cumulative number of days a student has been enrolled in the district from the beginning of the current school year to the time of reporting (e.g., October 1).
DOE019	Low-Income Status	An indication of whether the student meets any one of the following definitions of low income: 1. The student is eligible for free or reduced price lunch; or 2. The student receives Transitional Aid to Needy Families benefits; or 3. The student is eligible for food stamps.
DOE020	Title I Participation	An indication of the type of Title I Services being received at the specified time of reporting (e.g., October 1).

DOE021	LEP Students in their First Year in U.S. Schools	A student with limited English proficiency in grades K through 12 who has attended schools in the United States for less than twelve months
DOE022	Immigration Status	To meet the federal definition a student must 1. Not have been born in any State; AND 2. Not have completed three full academic years of school in any state.
DOE023	Country of Origin	Country of Origin is the country from which immigrant children have emigrated.
DOE024	First (Native) Language	Native language is the specific language or dialect first learned by an individual or first used by the parent/guardian with a child.
DOE025	Limited English Proficiency	Limited English Proficient Students are defined as children who were 1. Not born in the U.S., whose native tongue is a language other than English and who are incapable of performing ordinary classwork in English; or 2. Born in the United States of non-English speaking parents and who are incapable of performing ordinary classwork in English.
DOE026	English Language Learners Program Status	An indication of the type of English Language Learners Program in which a student is enrolled as of the time of reporting (e.g., October 1).
DOE027	Alternative Education	The 8-digit code of the alternative education program in which the student is enrolled at the time of reporting. If the student is not enrolled in an alternative program the value "00000000" should be entered.
DOE028	Title I School Choice Participation	An indication of a student's enrollment in a school after transferring from a Title I school in the district that is identified for improvement, corrective action, or restructuring under Section 1116 of the No Child Left Behind Act of 2001.
DOE029	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE030	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE031	Career/Vocational Technical Education — Competency Attainment	A credential issued to a student enrolled in a specific career/vocational technical education program. A recognized private organization and/or a state or federal government department, agency, or board may issue the credential. It may also be a "Chapter 74 Certificate" that is issued by a vocational technical or comprehensive high school to a student enrolled in a specific career/vocational technical education program, known as a Chapter 74–approved vocational technical education program.

DOE032	Special Education Placement, ages 3–5	An indication of the educational environment of a student with disabilities, ages 3–5, at the specific time of reporting (e.g., October 1).
DOE033	High School Completer Plans	An indication of what a student plans to do after completing high school.
DOE034	Special Education Placement, ages 6–21	An indication of the educational environment of a student with disabilities, ages 6–21, at the specific time of reporting (e.g., October 1).
DOE035	Career/Vocational Technical Education — Type of Program	An indication of the career/vocational technical education program type in which a student is enrolled at the specified time of reporting (e.g., October 1). Note that 01, 03, 05 and 13 have been discontinued.
DOE036	Special Education — Nature of Primary Disability	The major or overriding disability condition that has been identified by a team of people pursuant to federal and state special education law. The identified disability is known to be causal to an inability to make effective progress in education and requires special education services in order to access the general curriculum or specially designed curriculum.
DOE037	Graduate, Completed Massachusetts Core Curriculum	An indication of whether a student has met the graduation requirements of the Massachusetts Core Curriculum, designed to prepare students for college, work, and citizenship.
DOE038	Special Education — Level of Need	The degree of service that the student receives as determined by the school district upon review of the student's IEP.
DOE039	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE040	Special Education Evaluation Results	An indication of the result of a special education evaluation (initial or re-evaluation) that has been done since the end of the last school year (July 1st).
DOE041	DISCONTINUED	USE 500 FOR ALL STUDENTS
DOE042	Career/Vocational Technical Education — Special Population	An indication of the status (single parent) of a student enrolled in a career/vocational technical education program (Chapter 74–approved vocational technical or non-Chapter 74 career and technical) that meets the definition for single parent. Note that students with disabilities and those with limited English proficiency or those who are economically disadvantaged or in programs that prepare them for careers that would be nontraditional for their gender are captured in other data elements.

DOE043	Career/Vocational Technical Education — Chapter 74–Approved Vocational Technical Education Program Participation	A Chapter 74–approved vocational technical education program is a career/vocational technical education program that meets the approval criteria in Massachusetts General Law Chapter 74 and the Vocational Technical Education Regulations and has been approved by the Department of Education. Participation in these programs is reported by a Department of Education assigned, six-digit Classification of Instructional Program (CIP) code and state title.
DOE044	Career/Vocational Technical Education — Non-Chapter 74 Career and Technical Education Program Participation	A non-Chapter 74 career and technical education program is a career/vocational technical education program that is not a Chapter 74–approved vocational technical education program, but that does meet the new Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) definition of career and technical education.
DOE045	Number of In-School Suspensions	The number of disciplinary actions imposed by school officials that removed the student from academic classes and placed him/her in a separate environment. The student remained in school during the suspension period.
DOE046	Number of Out-of-School Suspensions period	The number of disciplinary actions imposed by school officials that removed the student from participation in school activities. The student remained out of school during the suspension
DOE047	Advanced Placement Course 1	The program includes a demanding academic course of study in college-level subjects such as physics, biology, calculus, and foreign languages, among others. A student who performs above a specified level on the assessment may be awarded college credit for certain courses upon entry to the institution, as defined by the National Center of Education Statistics (NCES).
DOE048	Advanced Placement Course 2	See definition for DOE047.
DOE049	Advanced Placement Course 3	See definition for DOE047.
DOE050	Advanced Placement Course 4	See definition for DOE047.
DOE051	Advanced Placement Course 5	See definition for DOE047.
DOE052	Student Truancy	The number of school days a student was recorded as truant.

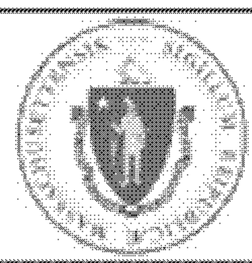
Element 3: Student-level information, re, when students exit, transfer in, transfer out, drop out, or complete P-16 education programs

EVIDENCE: For each student reported in SIMS the school district reports if the student exits, transfers in or out, drops out, or completes the program. The following is a listing of the related status codes reported to DESE through SIMS.

Acceptable Values/Code Description:
Enrolled
Graduate with a Competency Determination
Permanent Exclusion (Expulsion)***
Deceased
Reached maximum age, did not graduate or receive a Certificate of Attainment*
Certificate of Attainment**
Completed grade 12 and district-approved program. (District does not offer a Cer-
Transferred — In state public
Transferred — In state private
Transferred — Out-of-State (public or private)
Transferred — Home-school
Transferred — Adult diploma program, leading to MA diploma
Dropout — Enrolled in a non-diploma granting adult education program
Dropout — Entered Job Corps
Dropout — Entered the military
Dropout — Incarcerated, district no longer providing educational services
Dropout — Left due to employment
Dropout — Confirmed Dropout, plans unknown
Dropout — Student status/location unknown
Not enrolled but receiving special education services only.
Transferred — no longer receiving special education services only.

Element 4: The capacity to communicate with higher education data systems

EVIDENCE: The Massachusetts Department of Higher Education conducts data matching with our database of high school graduates and provides reports (consistent with the provisions of FERPA) regarding their subsequent performance in post-secondary education. [Except of report provided below; refer also to response to #11.]



Massachusetts Board of Higher Education

School-to-College Database and Reports

Background

In 2005, Massachusetts was one of ten states selected to receive a National Governors Association (NGA) Honor States Grant to increase high school graduation rates and improve college readiness.

As part of this initiative and with additional funding from the Nellie Mae Foundation, the MA Board of Higher Education (BHE) and MA Dept of Education (DOE) worked together to build a data management system to allow the Commonwealth to track the performance of public high school graduates who enroll in Massachusetts public postsecondary institutions.

This streamlined and novel approach to education data systems will enable the Commonwealth to measure the progress of Massachusetts students and the effectiveness of education policies, that will ultimately promote the college and career readiness and success for every public high school graduate.

Details

The *School-to-College Database* is the result of merging two public education data systems – the DOE public K12 system (SIMS) and the BHE public higher education system (HEIRS).

The *School-to-College Report* will be drawn from the database. An overall state report will be produced, as well as individual reports for each public high school in the Commonwealth that enrolls ten or more students in a Massachusetts college or university, detailing their graduates' performance within the system of public higher education. The main purpose of both the state and individual high school reports is to assess the variables that influence student progress toward earning a postsecondary degree and to promote discussion and action—statewide, within regions, and at high schools—about the academic preparation and performance of the Commonwealth's public school students.

The *School-to-College Report* will include data on the following:

- Enrollment
- Enrollment in developmental coursework[1]
- First-to-second year persistence rates [2]
- Post-secondary institutions where graduates attend
- College GPA and credits earned

Data will be broken down by race/ethnicity, gender, students' performance on the 10th grade Massachusetts Comprehensive Assessment Exam tests and other variables, such as low income status.

Next Steps

The BHE/DOE team will generate the state report and the individual reports for public high schools during the winter of 2008. The state report will be posted on both the DOE and the BHE websites in February 2008. The individual reports will be delivered via a secure portal from the DOE in February 2008, and will later be posted on the DOE website for the public.

The BHE and DOE have organized a series of regional workshops for the spring of 2008 that will bring together high schools and postsecondary institutions to discuss the Report's findings and develop partnerships committed to improving college readiness. Dr. David Conley, nationally renowned for his work on college readiness, and his staff at the Educational Policy Improvement Center (EPIC) at the University of Oregon have been selected to conduct the workshops and will provide specific strategies to increase college readiness and alignment between high schools and colleges. High schools enrolling high percentages of low-income students will be given priority for participation.

In the coming years, the team plans to enhance the *School-to-College Database* by including a more extensive set of variables. In the near future, the *School-to-College Report* will include information on student majors, college graduation rates, MassCore completion rates and trends over time.

The work of the BHE/DOE team will have a significant influence on the quality of preparation for Massachusetts' students as they enter college and the workforce. This team has been regarded nationally as a role model for the coordination of interagency data sharing, reporting and assessment efforts.

[1] Development coursework prepares students for college-level work and does not count towards degree completion.

[2] Persistence is the rate of students who enroll in a post-secondary institution in the fall and returns the following fall for a second year.

Contact: Shelley Tinkham, Policy Analyst, Massachusetts Board of Higher Education, shelleytinkham@bhe.mass.edu, 617-994-6922

Element 5: A state data audit system assessing data quality, validity, and reliability

EVIDENCE: Massachusetts currently implements data verification systems that assess data quality, validity and reliability. These systems include complex business/validation rules that confirm each data element meets specification and is not duplicated across the state prior to acceptance. The SIMS files are received through a web-based application that processes each student record through a total of 210 business rules (see sampling of rules below). Each record must

successfully meet each rule before it is accepted in the Departments database. A series of fourteen summary reports are then generated and provided via a secure website to the local school districts for their review. DESE staff also review the reports to identify any significant anomalies. These are identified and brought to the attention of the school district staff via email. Once any issues have been resolved the collection is certified by each local superintendent.

Element 6: Individual student test records under section 1111(b) of ESEA 1965.

Element 7: Information on students not tested, by grade and subject

EVIDENCE: Massachusetts has implemented data systems that provide individual student test records and related reports organized by learning standard (including every student's response to every MCAS/§1111(b) question) to districts and schools since 1999 that also include students not tested by grade and subject. Following is a sampling of the 529 fields captured and reported.

MCAS 2009-2010 File Layout				
Operational Tests and Retests (File type: comma delimited)				
FIELD FIRST	FIELD LENGTH	FIELD NAME	FIELD TYPE	DESCRIPTION
1	8	sprp_dis	C	Official district code (includes out-of-district placed students)
9	8	sprp_sch	C	Official school code (includes students from test sites)
…				
89	10	bookletnumber	C	Student's unique identifier (sasid, or bookletnumber if sasid is blank)
99	10	sasid	C	cleaned and verified SASID
…				
205	3	eteststat	C	Testing status in ELA (Composition and Lang & Lit) [Blank for February Biology and April STE tests]
				T = tested
				TR = tested Retake
				NTA = not tested absence
				NTM = not tested medically documented absence
				NTO = not tested other
				NTL = not tested first-year LEP
				ELA Composition (Applicable for grades 4, 7, and 10, blank if not applicable grades 3, 5, 6, 8) [Blank for February Biology and April STE tests]
208	2	wptopdev	C	Writing prompt topic development score
				02-12

				IE=Insufficient Evidence, LO= Language Other than English, OT= Off Topic, PS= Plot Summary, VI= Visible but Incomprehensible
				blank = no composition booklet
210	2	wpcompconv	C	Writing prompt composition convention score
				02-08
				IE=Insufficient Evidence, LO= Language Other than English, OT= Off Topic, PS= Plot Summary, VI= Visible but Incomprehensible
…				
212	1	eitem1	C	Respose to ELA item 1
213	1	eitem2	C	Response to ELA item 2
214	1	eitem3	C	Response to ELA item 3
…				
282	1	mitem1	C	Response to math item 1
283	1	mitem2	C	Response to math item 2
284	1	mitem3	C	Response to math item 3
…				
353	1	sitem1	C	Response to Science / Technology Engineering item 1
354	1	sitem2	C	Response to S&T item 2
355	1	sitem3	C	Response to S&T item 3
…				
528	1	LEPFirst	C	LEP Student enrolled first time in a US school (1=yes, blank)
529	8	Alt_Ed	C	Eight digit alternative education school code

Element 8: A teacher identifier system with the ability to match teachers to students
Element 9: Student-level transcript information including courses completed and grades earned

EVIDENCE: Massachusetts established a teacher / educator identifier system (EPIMS, including a unique MEPID identifier) in 2007 that also links teachers to their assigned classes (via a unique class code); see complete list of EPIMS data elements immediately below. We are currently piloting the linking of teachers to students and the classes they are assigned to in 70 school districts and will conduct the statewide collection in October, 2010 that will provide every district, school and educator with data/reports that link teachers, students and the classes they are assigned to; see list of Student Course Schedule (SCS) data elements following the EPIMS elements, below. EPIMS, SIMS and MCAS item responses are loaded into the Education Data Warehouse in order to generate reports and related analyses that combine data from these and

other sources.
Following is the list of all EPIMS data elements:

MEPID Assign Record:		
Variable name	Data collected	Description
DOE001	First Name	A name given to an individual at birth, during a naming ceremony, or through legal change.
DOE002	Middle Name / Middle Initial	A secondary name given to an individual at birth, during a naming ceremony, or through legal change. If none exists, the code "NMN" (No Middle Name) should be entered in the field.
DOE003	Last Name	The name borne in common by members of a family.
DOE004	Date of Birth	The month, day, and year on which an individual was born. Format is mm/dd/yyyy.
DOE005	Gender	The classification of an individual as male or female. Format is not case sensitive: M=Male and F=Female.
DOE006	License / Certification Number	The number assigned by the Massachusetts Department of Elementary and Secondary Education at the time an individual receives their license.
DOE007	Local Employee Number	A number used at the local district to identify an employee.
Staff Roster Record		
SR01	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the work assignment record and to an individual's identifying characteristics entered in ID Maintenance.
SR02	Local Employee Number	See above DOE 007
SR03	License / Certification Number	See above DOE 006
SR04	First Name	See above DOE 001
SR05	Middle Name / Middle Initial	See above DOE 002.
SR06	Last Name	See above DOE003.
SR07	Date of Birth	See above DOE004.
SR08	Race-Ethnicity	The general racial category or categories that most clearly reflect the individual's recognition of his or her community or with which the individual most identifies.

SR09	Employment Status at Time of Data Collection	The two-digit code that describes an individual's employment status at the time of the collection.
SR10	Reason for Exit	The two-digit code that describes an individual's reason for no longer being employed by the district.
SR11	Date of Hire	Federal Salary Source 1 One of potentially multiple federal salary sources (maximum of 3) for an individual. If a source of the funding associated with the individual's salary is a federal grant, enter the specific code for that grant.
SR12	Federal Salary Source 1	One of potentially multiple federal salary sources (maximum of 3) for an individual. If a source of the funding associated with the individual's salary is a federal grant, enter the specific code for that grant.
SR13	Percent of Federal Salary Source 1	Percent of an individual's salary paid from the federal grant identified in Federal Salary Source 1. Enter as a decimal to the thousandths (if necessary); e.g., .04, .25, .333, .5… 1.00.
SR14	Federal Salary Source 2	See Federal Salary Source 1.
SR15	Percent of Federal Salary Source 2	See Percent of Federal Salary Source 1.
SR16	Federal Salary Source 3	See Federal Salary Source 1.
SR17	Percent of Federal Salary Source 3	See Percent of Federal Salary Source 1.
SR18	Degree Type 1	One of potentially multiple educational degrees (maximum of 3) achieved by paraprofessionals, special education, and instructional support staff that are not certified in ELAR and must be reported in EPIMS.
SR19	Degree Institution 1	The educational institution from which the individual received the corresponding degree (Degree Type 1), or the code for out-of-country institutions.
SR20	Degree Subject 1	The major subject area in which the corresponding degree (Degree Type 1) was achieved
SR21	Degree Type 2	See Degree Type 1.
SR22	Degree Institution 2	See Degree Institution 1.
SR23	Degree Subject 2	See Degree Subject 1.
SR24	Degree Type 3	See Degree Type 1.

SR25	Degree Institution 3	See Degree Institution 1.
SR26	Degree Subject 3	See Degree Subject 1.

Work Assignment Record		
Variable name	Data collected	Description
WA01	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the staff roster record and to an individual's identifying characteristics entered in ID Maintenance.
WA02	Massachusetts Education Personnel Identifier (MEPID)	A unique number assigned to an individual by the Massachusetts Department of Elementary and Secondary Education. Primary key linked to the staff roster record and to an individual's identifying characteristics entered in ID Maintenance.
WA03	First Name	See above DOE001.
WA04	Middle Name / Middle Initial	See above DOE002.
WA05	Last Name	See above DOE003.
WA06	District / School Identification Number	The eight-digit code for the district and school where the individual is currently employed. Each district/school in Massachusetts has an eight-digit code assigned by ESE. The first four digits represent the district code. The second four digits represent the school code. The last four digits for a district position will equal "0000." A listing of ESE school codes can be found at: http://www.doe.mass.edu/infoservices/data/sims/schoolcodes.html
WA07	Job Classification	A description of the specific group of duties and responsibilities of a position.
WA08	Teacher / Paraprofessional Assignment	The specific educational or educational support activity in which teachers, paraprofessionals, and other instructional staff are involved and employed on a daily basis. This data element is not applicable for all staff.
WA09	Grade	The predominant grade(s) for which the specific assignment provides educational services. Where appropriate, ranges may be provided. This data element is not applicable for all staff.
WA10	Subject Area-Course Code	The description of a subject area and course that an individual teaches or provides support for. NCES coded values will be provided for academic subject areas and course descriptions and CIP codes will be provided for Chapter 74 programs to report vocational technical program areas. This data element is not applicable for all staff.

WA11	Class Section	The class section code will be a value provided by the school district. The class section code will identify the class assigned for that subject area-course and will be unique for the data collection within a school. This data element is not applicable for all staff.
WA12	Full Time Equivalent (FTE) (as per District School and Staffing Reports)	The ratio between the hours expected of a full-time position and the number of actual hours being provided by an individual (i.e., the percent of workday staff are involved in an assignment: 1.00 is a full-time employee; a half-time employee is a .50 FTE, etc.)
WA13	NCLB Instructional Paraprofessional Requirements	Two-digit code that denotes the level of paraprofessional training achieved by the individual who is working in a Title I school. This data element is not applicable for all staff.
WA14	Highly Qualified Teacher Status	Whether or not this individual meets the US ED definition and criteria of highly qualified to teach a particular subject area-course. This data element is not applicable for all staff.
WA15	Subject Matter Competency	How this individual has demonstrated or has not demonstrated subject matter competency for this position. This data element is not applicable for all staff.

List of Student Course Schedule System Data Elements:		
Variable name	Data collected	Description
DOE001	Local Agency Student Identifier (LASID)	Unique Local Education Agency Assigned Student Identifier.
DOE002	State Assigned Student Identifier (SASID)	Unique 10-digit State Assigned Student Identifier collected in SIMS.
DOE003	School Identification Number	Indicates the location where a student takes a particular course. This code may differ from the school/district in which the student is enrolled.
DOE004	Local Course Code	The locally defined code that identifies the organization of subject matter and related learning experiences provided for the instruction of students.
DOE005	Subject-Area Course	The State defined code that identifies the organization of subject matter and related learning experiences provided for the instruction of students.
DOE006	Class Section	Indicates the class assigned for a unique occurrence of a subject area-course.
DOE007	Course Term	The length of an individual course. For the purposes of reporting, the term sequence must be provided in the value.
DOE008	Course Enrollment Status	Indicates a student's status in each course in which they are enrolled.

DOE009	Course Level	An indication of the general nature and difficulty of instruction provided throughout a course.
DOE010	Course Credit Available	The number of credits that a student can earn for enrolling in and completing a given course.
DOE011	Course Credit Earned	The number of credits awarded to a student who successfully meets the objectives of the course.
DOE012	Course Letter Mark	A meaningful alphabetical or categorical expression of the performance of an individual.
DOE013	Course Numeric Mark	A meaningful raw score or statistical expression of the performance of an individual expressed as a number or percentage.

Element 10: Student-level college readiness test scores

EVIDENCE: The ESE is purchasing student level SAT, PSAT and AP data from the College Board. These data will be incorporated into the ESE data system in this spring 2010 enabling more comprehensive studies of college readiness.

Element 11: Data regarding students transition from secondary school to postsecondary education, including remedial course enrollments.

EVIDENCE: The Massachusetts Department of Higher Education conducts data matching with our database of high school graduates and provides reports (consistent with the provisions of FERPA) regarding their subsequent performance in post-secondary education, including enrollments in remedial courses. [Except of report provided below; refer also to response to #4]

Massachusetts School-to-College Report: Class of 2005 Summary Data

For data definitions and detailed individual school reports see: http://www.doe.mass.edu/research/reports/s2c.html

District Name	School Name	Number of high school graduates in the class of 2005	Number of graduates who enrolled as new students in MA public higher education in fall 2005	% of graduates who enrolled as new students in MA public higher education in fall 2005	% enrolled in one or more developmental (remedial) courses in fall 2005	% reenrolled for a second year of higher education in fall 2006
Abington	Abington High	151	63	42%	40%	75%
Acton-Boxborough	Acton-Boxborough Reg High	371	67	18%	16%	94%
Adams-Cheshire	Hoosac Valley High	111	44	40%	48%	79%
Agawam	Agawam High	243	108	44%	53%	88%
Amesbury	Amesbury High	170	49	29%	35%	97%
Amherst-Pelham	Amherst Regional High	318	106	33%	20%	85%
Andover	Andover High	367	83	23%	17%	87%
Arlington	Arlington High	248	71	29%	32%	89%
Ashburnham-Westminster	Oakmont Regional H S	160	65	41%	42%	77%
Ashland	Ashland High	142	40	28%	23%	97%
Assabet Valley	Assabet Valley Voc HS	190	46	24%	70%	60%
Athol-Royalston	Athol High	107	51	48%	53%	68%
Attleboro	Attleboro High	374	92	25%	33%	82%
Auburn	Auburn Senior High	151	63	42%	32%	84%
Avon	Avon Middle High School	39	19	49%	68%	83%
Ayer	Ayer High	94	41	44%	37%	70%
Barnstable	Barnstable High	389	116	30%	33%	85%
Bedford	Bedford High	161	43	27%	28%	85%
Belchertown	Belchertown High	154	56	36%	25%	83%
Bellingham	Bellingham High School	169	53	31%	17%	90%
Belmont	Belmont High	276	51	18%	16%	94%
Berkshire Hills	Monument Mt Reg High	121	40	33%	38%	87%
Berlin-Boylston	Tahanto Reg High	54	19	35%	47%	82%
Beverly	Beverly High	275	96	36%	29%	83%
Billerica	Billerica Memorial High School	337	153	45%	39%	85%
Blackstone Valley Reg	Blackstone Valley	182	31	17%	39%	68%
Blackstone-Millville	Blackstone Millville RHS	158	25	16%	20%	88%
Blue Hills Voc	Blue Hills Reg Voc Tech	160	55	34%	64%	66%
Boston	Boston Arts Academy	76	16	23%	56%	79%
Boston	Boston Community Leadership Academy	104	16	15%	56%	64%
Boston	Boston Latin	390	87	22%	1%	95%
Boston	Boston Latin Academy	185	83	45%	8%	88%
Boston	Brighton High	232	45	19%	49%	83%
Boston	Charlestown High	194	37	19%	46%	75%
Boston	East Boston High	236	54	23%	46%	77%
Boston	Excel High School	61	14	23%	29%	80%

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Element 12: Other data/information necessary to address alignment and adequate preparation for postsecondary education

EVIDENCE: Each spring Massachusetts collects information on whether graduating seniors have completed MassCore, our recommended curriculum for college readiness. The chart below outlines that core curriculum.

MassCore	
Massachusetts High School Program of Studies	
English/Language Arts	4 Units*
Mathematics	4 Units
	Including the completion of Algebra II or completion of the Integrated Math equivalent. All students are recommended to take a math course during their senior year.
Science	3 Units of lab-based science
	Coursework taken in technology/engineering may count for MassCore science credit. Note: The Board of Higher Education admissions standards for public colleges and universities require three (two lab-based) physical and natural science units and do not currently recognize technology/engineering as a science course.
History/Social Science	3 Units
	Including US History and World History.
Foreign Language**	2 Units
	Of the same language.
Physical Education	As required by law
	State law (M.G.L. c. 71,s. 3) states: "Physical education shall be taught as a required subject in all grades for all students." Health can be integrated into Physical Education, science, or taught as a stand-alone course.
The Arts**	1 Unit
Additional Core Courses	5 Units
	Business Education, Career and Technical Education (CTE), Health, Technology (e.g., computer science, desktop publishing, multi-media and web design), or any of the subjects above. Note: Most students majoring in CTE will take more than 5 units in a CTE program of study.
	22 Units - Is a minimum that students should take in high school

Additional Learning Opportunities	Complete as many of the following as possible:
	Advanced Placement (AP); Capstone or Senior Project; Dual Enrollment courses taken for both high school and college credit; Online courses; Service Learning; and Work-based Learning.

*A unit represents a full academic year of study or its equivalent in a subject that covers all the standards contained in a specific Curriculum Framework.

** Students enrolled in a state-approved Career and Technical Education program of studies have the option of opting out of Foreign Language and Art and still fulfill MassCore.

MassCore is the recommended program of study that Massachusetts high school students need in order to be better prepared for college and a career. Developed by a statewide advisory group from the K-12, higher education and business sectors, MassCore maintains flexibility for students and high schools while allowing districts to set additional graduation requirements. Courses included in MassCore should be rigorous, engaging, and based on appropriate Massachusetts Curriculum Frameworks high school level standards.

In addition, as noted in Element 11, data matching with DHE provides postsecondary course enrollment and completion data. A new statewide data collection beginning in October 2010 will collect additional elements at the high school level, including course enrollments and grades/marks.

Appendix C2: Detailed Project Summaries

Section (C)(2)

Goal: Transform state data systems to efficiently deliver comprehensive, accessible, actionable, and timely data to all Massachusetts K–12 educators and key stakeholders.

Strategy 1: Improve the Education Data Warehouse to better support the needs of its 80,000 users.

Activities:
Transition the Educator Data Warehouse to a data mart architecture.

Additional Detail to Supplement Narrative Activities:

(1) Develop and implement a data mart architecture that links data necessary to address specific education questions and that efficiently delivers this information to specific user groups according to their roles and needs. Specific variation includes the type of user, their corresponding range and rights to confidential vs. aggregate data, the depth of analytical options and power, and the balance of pre-made vs. user-generated reports.

(2) Separate the routing and processing of data requests to servers matched to the reports and resource demands of each user-group and associated data mart. Greatly expand the processing power available to users who require the most robust functionality. Establish and enforce protocols for routing and scheduling of ad hoc queries.

Activities:
Enhance the Education Data Warehouse's utility to the field through expanded user access, data sources, and reports.

Additional Detail to Supplement Narrative Activities:

(1) Expand the K–12 EDW into a P–16 data system by linking data from the Department of Early Education and Care (EEC) and the Department of Higher Education (DHE).

(2) Expand secure differentiated user access to all K–12 educators and to key stakeholders in early and higher education.

(3) Architect data solution to link/integrate EEC, ESE, and DHE and provide reporting needs for the agencies target users.

(4) Expand access to private special education schools with public school student placements and the Massachusetts Division of Youth Services.

(5) Integrate expanded data collections into the EDW required to support strategic initiatives related to expansion of student data (e.g. data from the teaching and learning system, refer to section (B)), and prospective and incumbent educator data (EPIMS and ELAR, refer to section (D)).

(6) Further develop the Early Warning Indicator System which helps teachers and educational leaders identify PreK-12 students who are at risk of dropping out (see

section (E)). The availability of these indicators via data dashboards and accompanying EDW reports will allow educators to initiate and track early interventions designed to improve student outcomes.

(7) Develop specifications for and determine the feasibility of building secure access for parents and students to their individual student data.

(8) The EDW contains dozens of reports with multiple filters and views of each report and the breadth and volume of these is growing rapidly. Users need and expect to be able to successfully navigate this vast array of options in order to find the data and related reports they need to answer their questions and manage specific situations. We will build differentiated user portals with data dashboards tailored to each in order to facilitate access to the data, reports and tools they need.

(9) Develop specifications for and determine the feasibility of building secure access for parents and students to their individual student data.

(10) Continuously enhance the ease of use and utility of the EDW for all stakeholders through regularly convened user-groups, focus groups and other sources of feedback collected systematically. Recommendations that emerge will be vetted by ESE's Data and I.T. Governance Committee.

Activities:
Expand the Schools Interoperability Framework (SIF).

Additional Context:

(1) Periodic data collections yield static views of the enterprise that are rapidly outdated. This introduces serious limitations in our development of policy and use of data to inform decisions and is even more problematic at the school and classroom levels where out-of-date data constitute an often fatal barrier to its utility in continuously improving instruction. The EDW must continuously provide educators with up–to-date information.

(2) Two years ago, Massachusetts identified the Schools Interoperability Framework (SIF) as the mechanism we would use to automate data collections at both the LEA and state levels. SIF's standards based protocols enable us to automate data uploads directly from each LEA's data systems (e.g., student/SIS and staff/HR systems) and into our state repository using vertical agents; LEAs are also able to automate data sharing among their generally separate data systems (e.g., SIS, transportation, library, food service, etc.). Through SIF, automated data collections can be more comprehensive; near continuous and LEAs will experience a reduction in state data collection burden. Data will be returned to LEAs rapidly via the EDW. ESE will pilot SIF in its first cohort of nineteen LEAs in spring 2010 and will evaluate the pilot project prior to statewide implementation.

Additional Detail to Supplement Narrative Activities:

(1) Building upon ESE's SIF Zone Integration Server (ZIS) developed under ESE's current initiative to implement SIF in 40-60 school LEAs, support implementation of SIF in up to 150 additional LEAs.

(2) Pilot in 40 LEAs a more comprehensive SIF solution which integrates data from SIS, HR, and other LEA data systems. As part of the strategy of helping LEAs minimize cost for new data collections needs, ESE will work with LEAs on gathering requirements for procurement process of strategic systems like SIS, special education, differentiated instruction, transportation systems. This state procurement mechanism will allow LEAs to purchase from the state vendor. This will provide savings to LEA on gathering requirements and doing procurement on their own, ensure the systems can be integrated through SIF both vertical and horizontally and pull data elements through the vertical state solution and lower the price of system due to more volume of kids.

(3) Assess developing SIF agent to collect Early Education and Care data.

(4) Procure SIF vendor for rollout of vertical integration and enable LEAs to select this (or another) vendor to support horizontal integration.

(5) Ensure that data will be returned to LEAs rapidly via the EDW.

Key Outcome: Policy and educational leaders and educators at all levels of the enterprise will be able to access the information they need to continuously improve instruction and related supports, and to evaluate the efficacy/ consequential validity of treatments, interventions and investments. Over 50% of Massachusetts LEAs will implement SIF by the end of the RTTT performance period.

Strategy 2: Improve the usability of ESE's public website.

Activities:
Improve the usability of ESE's public website.

Additional Context:
Context to Supplement Narrative under C2, Strategy 2

(1) Successfully educating all students requires informed and productive partnerships with parents, community members and other stakeholders. Every resident and business has contributed to major and growing investments in public education and they deserve to know the results. Quality research is essential to inform programmatic and instructional decisions. We must ensure maximum transparency and provide the information these constituencies need and expect.

(2) FERPA compliant access to data at the individual student level is provided through the EDW.

(3) Access by the broader community of stakeholders and other interested parties (e.g., researchers) is provided through ESE's public website. ESE's public website has an extraordinary wealth of information and resources for educators, parents, students, policy leaders, researchers and the public at large; an example of one school and LEA profile. The website, however, is not as intuitively user friendly as it must be to ensure quick and easy access to these resources. We propose to re-architect the ESE public website to automate ESE data updates, provide for more intuitive navigation, and respond more accurately and flexibly to visitor generated searches.

Additional Detail to Supplement Narrative Activities:

(1) Re-architect the ESE public website to automate ESE data updates, provide for more intuitive navigation, and respond more accurately and flexibly to visitor generated searches.

   a. Analyze website architecture and performance metrics; determine critical tasks and assess usability.
   b. Analyze ESE internal of data collection and posting process to program process improvement in order to publish data quicker and accurately.
   c. Restructure navigation to fit the needs of all stakeholders, while allowing flexibility to add new data reports, new relationships, new classifications and new organization types.
   d. Create administrative toolset to manage related links, new reports, new page templates.
   e. Create custom page view analytics tool.

(2) Execute a general re-factoring of the ESE School Profiles website including directory information, NCLB Report Cards, and publicly accessible reporting tools. Stakeholders such as parents, schools, researcher, developers, news agencies, ESE staff need better views of key metrics to help provide the story of what ESE and LEAs are

accomplishing. By improving the website will encourage the usage of data for decision making.

f. Build a compare module; generates comparison of up to five like organizations for a selected set of measures.
g. Add historical trend reports for every data element both in graphical and text displays.
h. Harden code against top vulnerabilities.
i. Improve performance metrics including page load, task completion rate and search success rate.
j. Allow export of all data reports in multiple export files including XLS, XML, PDF, JSON to conform with MA open data initiative and data.gov.
k. Analyze business process of data uploads to website with the goal of automating more of the data loading.

Key Outcome: The ESE public website will provide more up–to-date data and reports, more intuitive navigation, and respond more accurately and flexibly to visitor generated searches.

Strategy 3: Add enhanced data audits to our existing data validation protocols

Activities:
Add enhanced data audits to our existing data validation protocols

Additional Context:

(1) ESE's current data verification system includes a series of complex business/ validation rules that verify the accuracy of each data element prior to acceptance by ESE and certification by each local superintendent. Similarly, DHE and EEC have similar data validation systems that help provide reliable data. As we implement a more integrated EDW, it will increasingly be used to target and evaluate investments to improve instruction and related systems and to inform high stakes decisions. Hence, the data must be of the highest quality.

(2) In order for data to be of the highest quality, the information must be accurately entered at the source. ESE, DHE, and EEC have committed to implementing data audits that periodically assess the accuracy of data. In addition, ESE and DHE will implement data protocols for staff that enter data into their systems.

Additional Detail to Supplement Narrative Activities:

(2) Create Data Quality Curriculums and implement trainings.
   a. Develop data quality curriculums for EEC and ESE.
   b. Develop online data quality curriculums for EEC and ESE.
   c. Develop training plan.
   d. Implement data quality certification process.
   e. Pilot data quality curriculum trainings.
   f. Implement data quality curriculum statewide.

(3) Data Quality Audits.
   a. Establish data quality audit protocols.
   b. Develop process for conducting audits.
   c. Conduct audits at 29 school LEAs, 5 EEC and DHE providers.

Key Outcome: Policy leaders and educators will be assured that the data used to support continuous improvement and inform decisions for early learning centers, school LEAs, and public higher education institutions is accurate and of the highest quality.

Section (C)(3)

Goal: Empower educators to meet the learning needs of every Massachusetts student by creating technology platforms that support the PreK-12 teaching and learning system, training educators to translate the data from these tools to improve daily instruction, and providing researchers with data needed to evaluate the impact of these tools.

Section (C)(3)(i)

Strategy: Invest in the data systems and technology necessary to support the PreK–12 teaching and learning system.

Additional Context:

(1) Massachusetts has researched several options available for the automation of its teaching and learning system. Our specifications require direct incorporation of the Common Core and Massachusetts-specific standards, vetted curricula, assessment items, and related resources of the highest quality.
(2) We find many features of a small number of commercially available instructional improvement systems quite promising, however, their per-student subscription costs substantial (ranging from less than $10 to a high of $70 per student per year). Further, because transitioning Massachusetts LEAs to new teaching and learning practices is a massive effort that must continue beyond the four years of this RTTT grant, we are reluctant to commit our LEAs to subscription costs for which additional funding has not yet been secured. Hence, in this RTTT proposal we are proposing to build the major components of our teaching and learning system described in section (B).

Activities:
Develop and implement a Digital Library for use by all Massachusetts LEAs, schools and educators.

Additional Detail to Supplement Narrative Activities:

(1) Update ESE's Curriculum Frameworks by incorporating the common standards and any additional Massachusetts standards. These standards will be linked to all other resources contained in the Digital Library as well as to all items used by the teaching and learning system (see section (B)).
(2) Incorporate model curricula, units, lesson plans and instructional materials developed for and/or adopted by the teaching and learning system and submitted directly by local educators.
(3) Provide a search engine with multiple keys to provide teachers and curriculum developers with access to both vetted and non-vetted resources organized by standard and contained in the Digital Library and tools to assemble them into units and lesson plans.
(4) Develop training plan.

Activities:
Develop a "test builder engine" that enables educators to assemble, score, and access results from assessments

Additional Detail to Supplement Narrative Activities:.

(1) Identify user specific tools/pages by role to ensure all types of educators have access to the data they will need.
(2) Identify needs for adhoc reporting in addition to the search engine functionality.
(3) Ensure solution is fast.
(4) Tag all released MCAS items and performance tasks with their associated standards and load them into a two-part item bank: a secure bank for items designated for interim assessments and accessible only to designated LEA personnel and a non-secure item bank with items available to all educators and other interested users. Enable the inclusion in the non-secure item bank of locally developed formative assessment items.
(5) Establish a primary online delivery system for these assessments as well as a secondary hard copy backup with answer keys which can be scanned.
(6) As outlined in section (B)(3), ESE's assessment contractor will develop the interim assessments that will be delivered through this delivery engine.
(7) Automate scoring to the maximum feasible extent, support additional hand scoring, load results into the EDW and expedite the delivery of these data and related reports to LEAs, schools and teachers.

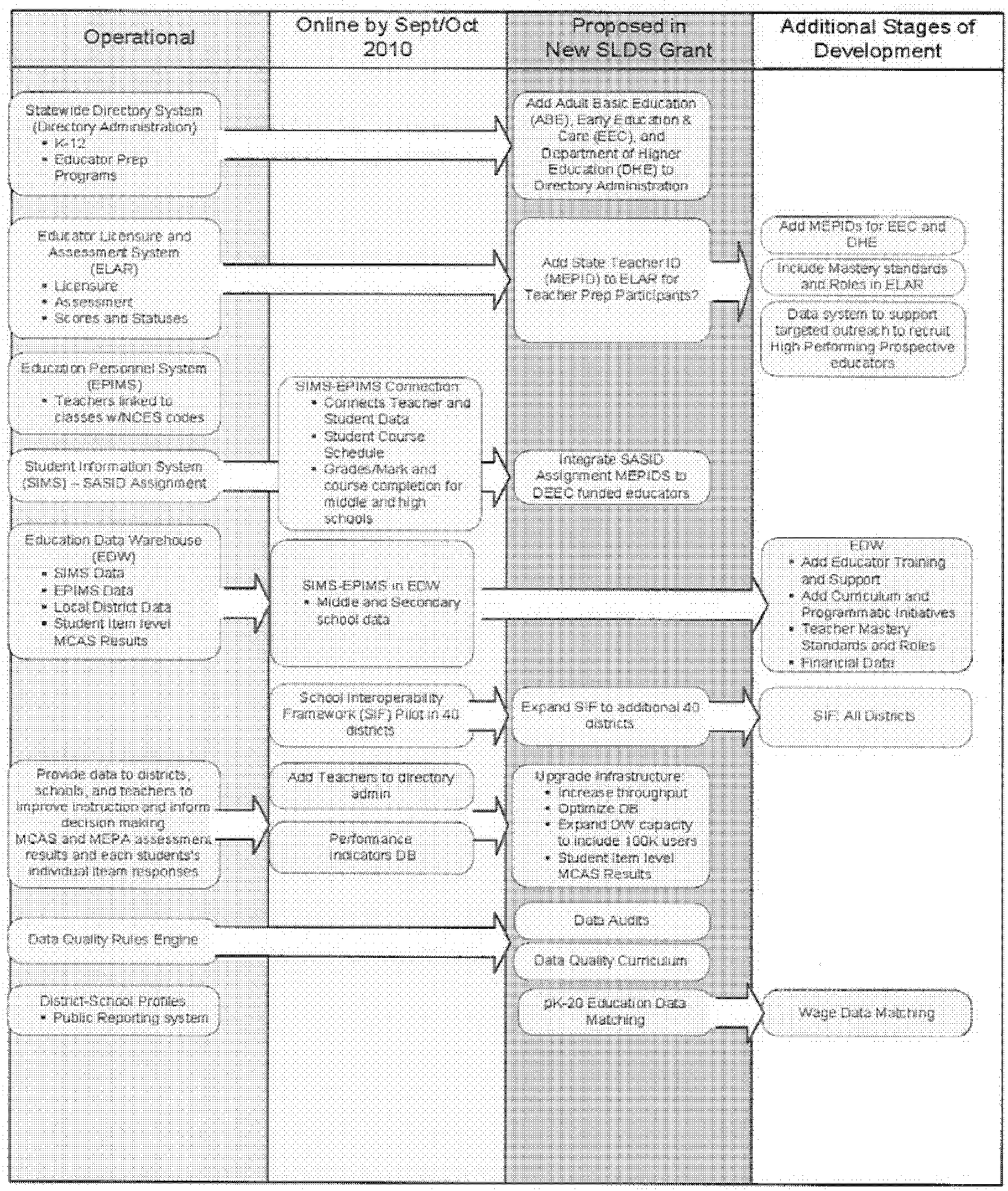
Activities:
Pilot a vendor-built comprehensively integrated instructional improvement system and evaluate its impact.

Additional Detail to Supplement Narrative Activities:

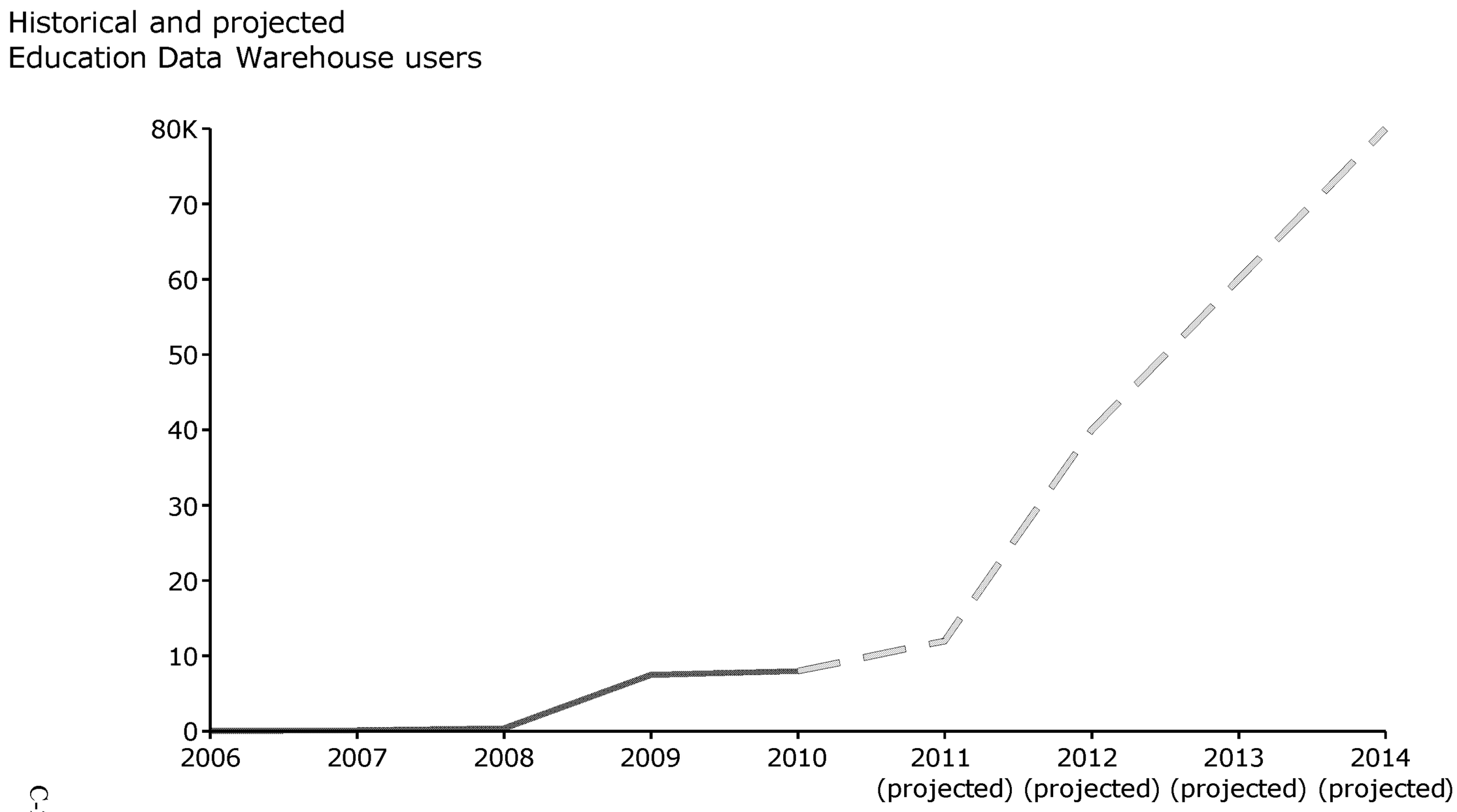
(1) Selected LEAs will provide an estimated 5,000 students with a comprehensive instructional improvement system that uses advanced logic / processing to integrate standards, curricula, lessons, materials, benchmark / formative assessment and networks of peer and expert support based upon profiles and patterns of student performance.
(2) Release an RFP and procure services of a vendor with demonstrated record of success in developing, deploying and supporting a comprehensively integrated instructional improvement system. Ensure solution supports SIF initiative and integration to the EDW.
(3) Evaluate the relative impact of this solution compared to the teaching and learning system.

Key Outcome: 80,000 educators will have rapid access to resources linked and organized by each learning standard. Educators will be able to develop or use instructional units and resources that meet specific student needs revealed in the results of formative and interim assessments. Participating LEAs will have valid and reliable interim assessment results; schools and teachers will have formative assessment results within 24 to 72 hours after the completion of scoring to guide instructional decisions and support targeted interventions.

Appendix C3: Current Data Systems and Planned Initiatives



Appendix C4: Graph of Historical and Projected Growth in Users of the Education Data Warehouse



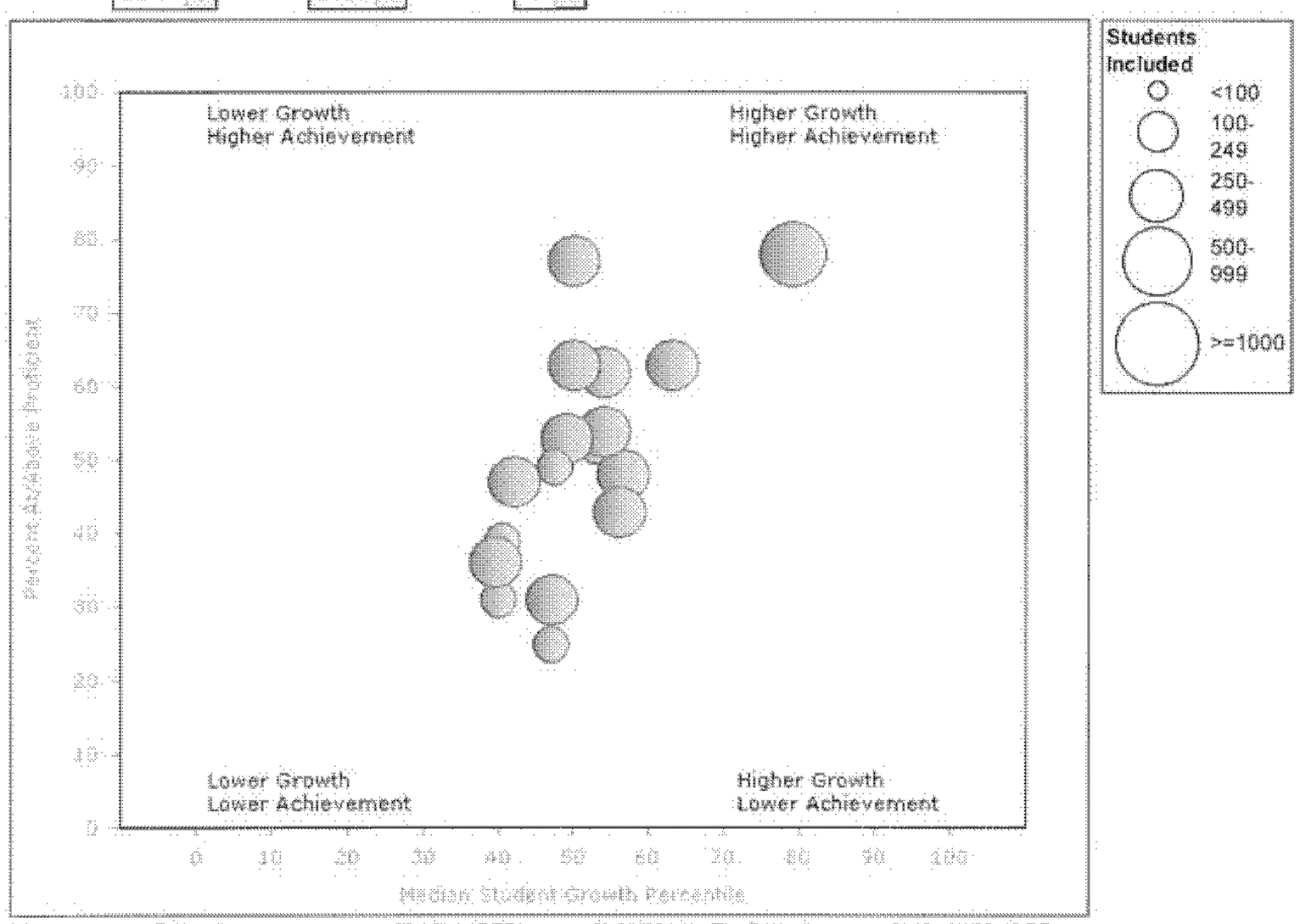
Appendix C5: Sample Student Growth Report

Description of report below: This aggregate Student Growth Percentile report is available through ESE's website for all LEAs and schools in Massachusetts for MCAS assessments in Math and ELA for grades 4-8 and grade 10. A user may hover over a bubble with a cursor to easily access more detailed information (e.g. the name of the school). Deeper access to these data is provided through the EDW differentiated by user type, allowing a subset of users (in compliance with FERPA) to drill-down from aggregate data (shown at the school-level below) to student-level data.

Massachusetts School and District Profiles
East Middle School

MCAS Student Growth Report - East Middle School

Subject: ELA Year: 2009 Grade: All



School	Median SGP	% At/Above Proficient	Included in SGP
Brockton High	79.0	78	696
Brookfield	40.5	39	244
Downey	40.0	31	189
Dr W Arnone Comm Sch	53.0	52	247
East Junior High	56.5	48	412
Edgar B Davis	54.0	54	476
Gilmore Academy	50.0	77	332
Hancock	49.0	53	293
Huntington	47.0	25	132
John F Kennedy	47.5	49	150
Joseph F Plouffe Elem	42.0	47	296
Louis F Angelo Elem	56.0	43	308
Mary E. Baker School	39.5	36	282
North Junior High	54.0	62	443
Oscar F Raymond	47.0	31	281
South Junior High	63.0	63	428
West Junior High	50.0	63	443

View Statewide MCAS Student Growth Report

Appendix C6: Sample Item Analysis Report

Description of report below: This report is available through ESE's website for all LEAs and schools in Massachusetts for all MCAS tested subjects. Each item is directly linked to the standard assessed by that item and clicking on the item number will provide a user direct access to the actual item; see the open response item that corresponds to #14 on the following page. Other related reports include student assessment results tabulated by standard. [NOTE: The EDW provides districts and schools with this and related reports at the individual student level.]

Massachusetts School and District Profiles
East Middle School

2009 Item by Item Results for GRADE 08 MATHEMATICS

Number of Students Included: 246

East Junior High - GRADE 08 MATHEMATICS

				AVERAGE ITEM SCORE			PERCENT OF SCHOOL'S TOTAL STUDENT RESPONSES (for each MC answer or OR score point)					
ITEM	TYPE	REPORTING CATEGORY	STANDARD	EAST JUNIOR HIGH	BROCKTON	STATE	BLANK/0	A/1	B/2	C/3	D/4	CORRECT MC ANSWER
01	MC	ME	8.M.3	58%	65%	70%	0	5	4	58	33	C
02	MC	GE	8.G.7	40%	47%	60%	1	13	43	2	40	D
03	MC	NS	8.N.12	69%	71%	75%	1	9	14	69	5	C
04	MC	PR	8.P.6	60%	67%	80%	1	22	7	60	11	C
05	MC	NS	8.N.1	77%	82%	87%	0	11	77	8	3	B
06	MC	NS	8.N.8	49%	54%	65%	0	11	13	49	28	C
07	MC	NS	8.N.7	74%	73%	78%	0	74	9	7	10	A
08	MC	NS	8.N.9	46%	44%	52%	0	4	18	30	46	D
09	SA	GE	8.G.1	72%	73%	74%	28	72	0	0	0	
10	SA	NS	8.N.3	62%	63%	75%	38	62	0	0	0	
11	OR	SP	8.D.4	1.33	1.43	1.90	11	57	23	8	2	
12	MC	SP	8.D.3	72%	76%	82%	0	8	15	5	72	D
13	MC	PR	8.P.8	78%	84%	88%	0	78	8	13	0	A
14	OR	PR	8.P.7	1.08	1.22	1.81	48	22	9	16	5	
15	MC	ME	8.M.1	63%	63%	73%	1	15	12	9	63	D
16	MC	NS	8.N.5	68%	67%	73%	0	8	8	68	16	C
17	MC	ME	8.M.2	42%	49%	62%	0	42	7	10	41	A
18	MC	SP	8.D.3	82%	88%	92%	0					
19	MC	NS	8.N.6	66%	57%	66%	0					
20	SA	PR	8.P.7	42%	49%	66%	58	42				
21	SA	GE	8.G.6	21%	26%	46%	79	21				
22	OR	NS	8.N.12	1.57	1.73	2.29	25	34	9	22	10	
23	MC	SP	8.D.3	35%	44%	47%	0					
24	MC	NS	8.N.4	48%	36%	62%	0					
25	MC	PR	8.P.10	53%	56%	71%	0					
26	MC	SP	8.D.4	34%	40%	55%	1					
27	MC	PR	8.P.4	57%	63%	75%	0					
28	SA	SP	8.D.1	76%	81%	85%	24	76				
29	MC	PR	8.P.2	53%	65%	76%	2					
30	MC	SP	8.D.4	48%	57%	70%	0					
31	MC	PR	8.P.4	47%	51%	65%	0					
32	OR	ME	8.M.3	1.48	1.77	2.40	26	35	12	15	11	
33	MC	PR	8.P.9	70%	71%	82%	1					
34	MC	SP	8.D.2	72%	82%	87%	0					
35	MC	PR	8.P.1	48%	50%	64%	1					
36	MC	PR	8.P.5	72%	66%	70%	0					
37	MC	PR	8.P.7	39%	46%	61%	1					
38	MC	NS	8.N.10	66%	53%	71%	0					
39	OR	GE	8.G.4	1.71	1.68	2.11	21	38	7	16	17	

View the Item Type and Reporting Category Key

2009, QUESTION 14 - Grade 8, Mathematics

Ms. Gleason is opening a new restaurant.

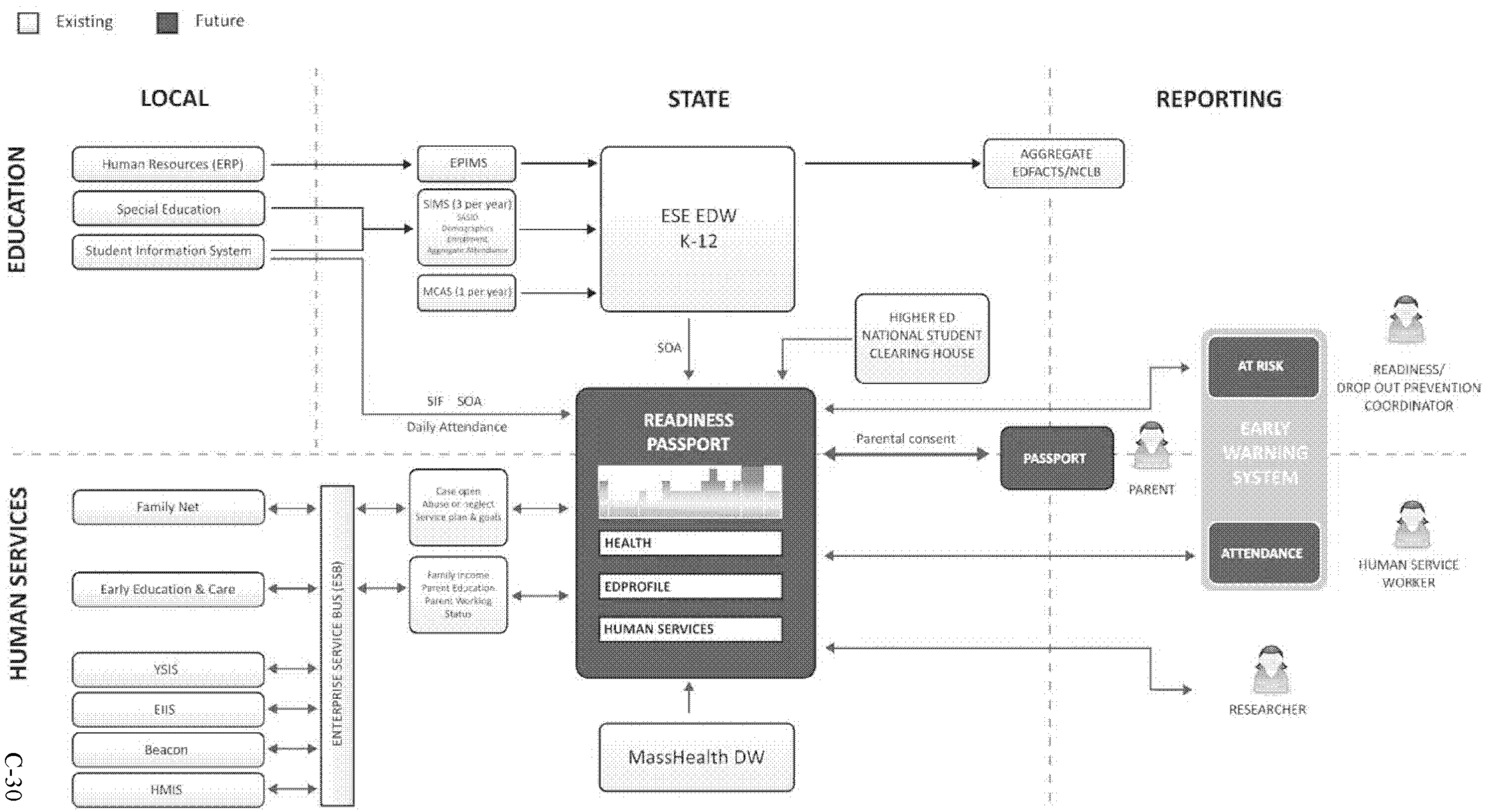
- She has enough booths to seat up to 40 people.
- She is ordering tables to fill the rest of the seating space.
- Each table can seat up to 6 people.

If t represents the number of tables Ms. Gleason orders, write an expression to show the total number of people that can be seated at booths and tables.

Write an inequality that could be used to determine t, the number of tables Ms. Gleason needs to order so that she has enough seating at booths and tables for at least 125 people.

Solve the inequality from part (b) to determine the number of tables Ms. Gleason needs to order. Show or explain how you got your answer.

Appendix C7: Massachusetts's Vision for a "Readiness Passport"



Appendix C8: Sample Profile Report

Description of report below: This summary report is available through ESE's website and includes aggregate data on every LEA and school in Massachusetts on dozens of measures (each of which has its own more detailed set of reports), from student demographic and performance data to teacher salaries to school technology resources. Historical data for these measures is available dating back to 2003.

Massachusetts Department of Elementary and Secondary Education (ESE)

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Brockton (00440000)

Districts ○ Schools

Brockton

2008

General | Students | Teachers | Finances | Assessment | Accountability

- Enrollment
- SPED
- Indicators
- Selected Populations
- Technology
- Plans of High School Graduates
- Graduation Rate

Related Links:
* Indicators Report

Indicators (2007-08)

PRINT PDF

	District	State
Grade 9-12 Dropout Rate	5.2	3.4
Attendance Rate	93.3	94.6
Average # of days absent	11.1	9.2
In-School Suspension Rate	12.7	3.6
Out-of-School Suspension Rate	18.8	6.2
Graduation Rate	72.8	81.2
Truancy Rate	0.0	2.2

Massachusetts Department of Elementary and Secondary Education

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Appendix C9: Legacy Development Track Record

ESE has an impressive track record of successfully building, implementing, and maintaining complex legacy IT projects. Below is a list of projects which ESE has played a substantial role in developing on its own or in partnership with vendors.

Application	Description	Launch Year	Partnership	Build
SIMS	Statewide Student Information System with unique identifier. Used by 392 LEA tracking approximately 1M students a year	1997/ 2001		√
ELAR	Transactional Educator Licensure System actively used by 80,000 educators[1]	2001/ 2002		√
EPIMS	Statewide Educator Identifier and Information System; tracking 80,000 educators in 392 LEAs	2006		√
Directory Admin	Single sign-on system and directory of LEA and state agency directory information	1999	√	
School and District Profiles	Public website user interface providing a wide range of comprehensive ESE reports including individual profiles, views that can be sorted and downloads of school and district directories and data reports.	2000		√
Curriculum Frameworks Search	Application which supports searches and retrieval of standards across any subject area, strand, and grade.	2009		√
Education Data Warehouse	Collaborative effort among ESE and LEAs to centralize PreK–12 educational performance demographic and growth data into one state coordinated data repository hosted by the Department.	2007	√	
MassOne (formerly VES)	Set of web-based tools for communication, collaboration, and curriculum planning, which are designed to support K–12 standards-based teaching and learning.	2000	√	

[1] Won "Outstanding Achievement Award" in the category of Digital Government from the National Association of State Chief Information Officers in 2002

Appendix C10: Memorandum of Understanding for Data Sharing with Researchers Template

MEMORANDUM OF AGREEMENT BETWEEN THE MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION AND [organization]

This Memorandum of Agreement ("the Agreement") is entered into on this _____ day of _____, _____ by and between the Massachusetts Department of Elementary and Secondary Education ("the Department") and [organization] for the purpose of conducting [title of study] (hereinafter "the project").

I. PARTIES. The Massachusetts Department of Elementary and Secondary Education is a state educational agency, authorized to collect and maintain student educational records and to receive information from local educational agencies (LEAs) consistent with applicable state and federal laws and subject to the federal Family Educational Rights and Privacy Act (FERPA), as authorized by 20 U.S.C. § 1232g(b) and 34 CFR Part 99, and the Fair Information Practices Act (FIPA), M.G.L. c. 66A.

[Organization] is…[insert description].

II. PURPOSE. The purpose of the Agreement is to document the terms under which the Department is authorized to release to [organization] personally identifiable student information for the project, and to designate [organization] as the authorized representative of the Department consistent with applicable federal and state laws concerning access to and confidentiality of student record information including FERPA and FIPA. As described herein, [organization], as the Department's authorized representative, may have temporary access to data in the custody of the Department for use in the project identified in this Agreement and any addenda to it. A description of the project is attached hereto.

III. AUTHORITY. Consistent with the federal Family Educational Rights and Privacy Act (FERPA), the Department designates [organization] as its agent for the purpose of disclosing personally identifiable information from students' education records.

[choose one below]

1. *for an audit/evaluation of state or federal programs or compliance with federal legal requirements related to those programs:* … in connection with the Department's audit or evaluation of a federal or state supported education program, or for the enforcement of or compliance with federal legal requirements which relate to those programs pursuant to 34 CFR §§ 99.31(a)(1) and 99.35(a).

2. *for studies to develop tests, administer aid, or improve instruction:* …in connection with the Department's conducting studies to develop, validate, or administer predictive tests; administer student aid programs; or improve instruction, pursuant to 34 CFR

§ 99.31(a)(6)(i).
Such disclosures are also consistent with the Fair Information Practices Act, M.G.L. c. 66A, § 2(c).

IV. DATA DISCLOSURE. The Department shall provide [organization] with the following data: [list data elements or information, the Department database from which it comes, periods that the data will cover, grades covered, and the timeline for disclosure].

V. TERMS AND CONDITIONS. To effect the transfer of data and information that is subject to State and Federal confidentiality laws and to ensure that the required confidentiality of personally identifiable information shall always be maintained, [organization] agrees to:

1. In all respects comply with the provisions of FERPA. For the purposes of the Agreement and the specific projects conducted pursuant to the Agreement and described in addenda to it, FERPA includes any amendments or other relevant provisions of federal law, as well as all requirements of 34 CFR Part 99 and 20 U.S.C. § 1232g. Nothing in this Agreement may be construed to allow either party to maintain, use, disclose, or share student record information in a manner not allowed under Federal law or regulation.
2. For purposes of this project and for ensuing [organization]'s compliance with the terms of this Agreement and all applicable state and federal laws, [organization] designates [name] as the temporary custodian of the Department's data. The Department will release all data and information for this project to the named temporary custodian. [name] shall be responsible for transmitting all data requests and maintaining a log or other record of all data requested and received pursuant to the Agreement, including confirmation of the completion of the project and the return or destruction of data as described below. The Department or its agents may upon request review the records required to be kept by [organization] under this Agreement.
   The Department designates Carrie Conaway as its liaison for all communications with [organization] regarding this project and the Agreement as it relates to the project.
3. Use data shared under the Agreement for no purpose other than the research project described in this Agreement, and as authorized under 34 CFR § 99.31(a)(6)(i). Nothing in the Agreement shall be construed to authorize [organization] to have access to additional data from the Department that is not included in the scope of the Agreement, or to govern access to the data by entities other than the Parties. [organization] further agrees not to share data received under the Agreement with any other entity without prior written approval from the Department. [organization] understands that the Agreement does not convey ownership of data to [organization].
4. Require all employees, contractors, and agents of any kind to comply with the Agreement and all applicable provisions of FERPA and other federal and state laws with respect to the data and information shared under the Agreement. [organization] agrees to require of and maintain an appropriate confidentiality agreement from each employee, contractor, or agency with access to data pursuant to the Agreement. Nothing in this section authorizes [organization] to share data and information provided under the Agreement with any other individual or entity for any purpose other than completing [organization]'s work as authorized by the Department consistent with this Agreement.
5. Not amend or alter the scope, design, format, or description of a project or report generated by [organization] for this project, except as consistent with the Agreement, without prior written notice to the Department. [*if desired]* [Organization] shall provide the Department with periodic status reports during the project term [specify content and due dates].
6. Not copy, reproduce, or transmit data obtained pursuant to the Agreement except to [organization]'s own agents acting for or on behalf of the Department and as necessary to fulfill the purpose of the project described herein. Data may be stored on a server with other data but

may not be merged with that data without prior permission from the Department. Data must be stored using industry-standard encryption and authentication to ensure that only authorized agents of the Department have access to the data. Data may not be taken outside the United States. All copies of data of any type, including any modifications or additions to data from any source that contains information regarding individual students, are subject to the provisions of the Agreement and in the same manner as the original data disclosed by the Department to [organization]. The ability to access or maintain data under the Agreement shall not under any circumstances transfer from [organization] to any other individual, institution, or entity.

7. Not disclose data contained under the Agreement to it in any manner that could identify any individual student, except as authorized by FERPA, to any entity other than the Department, or authorized employees, contractors, and agents of [organization] working as the Department's authorized representative on the project approved by the Department consistent with this Agreement. Persons participating in the approved project on behalf of the Parties shall neither disclose or otherwise release data and reports relating to an individual student, nor disclose information relating to a group or category of students without ensuring the confidentiality of individual students in that group. Publications and reports of this data and information related to it, including preliminary project descriptions and draft reports, shall involve only aggregate data and no personally identifiable information or other information that could lead to the identification of any student. No report of aggregate data based on an identifiable group of students fewer than ten in number shall be released to anyone other than the Department. [organization] shall require that all employees, contractors, and agents working on this project abide by that statistical cell size.
8. Not provide any data obtained under this Agreement to any entity or person ineligible to receive data protected by FERPA, or prohibited from receiving data from any entity by virtue of a finding under 34 CFR § 99.31(a)(6)(iii).
9. Destroy all data obtained under the Agreement and addenda to it when no longer needed for the purpose for which it was released by the Department. Nothing in this Agreement authorizes [organization] to maintain data beyond the time period reasonably needed to complete the project and respond to inquiries from other researchers, defined as [number of months] following the date of publication of the final report of this project. Upon termination of the Agreement or publication of reports generated under this Agreement, as authorized by the Department, whichever occurs first, [organization] will return all data files and hard copy records to the Department and purge any copies of data from its computer systems in compliance with 34 CFR §§ 99.31(a)(6)(ii)(b) and 99.35(b)(2). [organization] agrees to require all employees, contractors, or agents of any kind working on the project to comply with this provision. No other entity is authorized to continue research using the data obtained under the Agreement upon the termination of the Agreement and project described herein.
10. Provide the Department with an electronic copy of the final versions of all reports and other documents associated with the project. The Department, as the owner of the report, reserves the right to distribute and otherwise use the final report and associated documents as it wishes, in sum or in part. [organization], or its agents working on this project, retains the right to publish findings in other publications, given that it first shares a substantively similar report with the Department.
11. [organization] has the right, consistent with scientific standards, to publish, present, or use the study results it has gained in the course of the research under this Agreement. In order to protect the confidentiality of previously identified confidential information disclosed to [organization], the Principal Investigator agrees to provide to the Department any proposed publications or presentations which are to make public any findings, data, or results of the research under this Agreement for the Department's review at least thirty (30) days prior to submission of a manuscript or abstract for publication or the date of the presentation. [organization] agrees to delete any Department's previously identified confidential information therefrom.

12. [if desired] Provide the Department with an electronic copy of the program code created by [organization] to perform analyses within its statistical software platform (e.g., .do files created for use in Stata). The Department agrees to keep these files and a copy of the original data for at least seven years.
13. [organization] shall be provided reasonable notification of any changes in Department policies regarding limits on the use of confidential data and, as agents of the Department, shall either affirmatively agree to uphold these policies or relinquish access to the data.

VI. COMPLIANCE WITH FIPA. For the purposes of FIPA, M.G.L. c. 66A, [organization] is a "holder" of personal data and will comply in all respects with the applicable requirements of FIPA, a copy of which is available at http://www.mass.gov/legis/laws/mgl/gl-66a-toc.htm.

VII. RELATED PARTIES. [organization] represents that it is authorized to bind to the terms of the Agreement, including confidentiality, maintenance, publication, and destruction or return of data, all related or associated institutions, individuals, employees or contractors who may have access to the data or may own, lease, or control equipment or facilities of any kind where the data is stored, maintained or use in any way.

VIII. TERM. This Agreement takes effect upon signature by the authorized representative of each party and shall remain in effect until the data access time period defined in paragraph V9 has ended, or until canceled by either party upon 30 days written notice, whichever occurs first. The Agreement is renewable upon written approval by the authorized representative of each party.

IX. This Agreement expresses the entire agreement of the parties and shall not be modified or altered except in writing executed by the authorized representatives of the Department and [organization], and in a manner consistent with applicable state and federal laws.

_____ _____

Carrie Conaway Date
Director of Planning, Research, and Evaluation
Massachusetts Department of Elementary and Secondary Education

_____ _____

[principal investigator] Date
[title]
[organization]

_____ _____

[research officer, if needed] Date
[title]
[organization]

Attachment: Project description

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Appendix D1: Educator Certification Law

MASSACHUSTTS GENERAL LAWS

Chapter 71: Section 38G. Certification for certain teaching and administrative positions; provisional and standard certificates; policies and guidelines regarding requirements and qualifications; applications; recommendations; review; continuing education; renewal of certificate

Section 38G. As used in this section the following words shall have the following meanings:

"Board", the board of education established by chapter fifteen.

"Provisional educator", a person who holds a provisional educator certificate.

"Provisional educator with advanced standing", a person who holds a provisional educator certificate with advanced standing; said certificate shall be valid for five years of employment as an educator in the schools of the commonwealth and may be renewed for an additional five years of employment in accordance with regulations adopted by the board.

"Provisional educator certificate", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board. The provisional educator's certificate shall be valid for five years of employment as an educator in the schools of the commonwealth.

"Provisional educator certificate with advanced standing", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board for provisional certification and completed (1) a college program, graduate or undergraduate, approved by the board of education for the preparation of teachers; or (2) a college preparation program included in the National Association of State Directors of Teacher Education and Certification (NASDTEC); or (3) an out of state teacher education program approved by the National Council for the Accreditation of Teacher Education (NCATE); or (4) other program approved by the board.

"Regionally licensed or certified educator", an applicant for a teacher's certificate in Massachusetts who has been granted a regional license or certificate by another state jurisdiction under terms of a contract entered into pursuant to chapter seven hundred and forty-eight of the acts of nineteen hundred and sixty-eight, the Interstate Agreement on Certification of Educational Personnel. Such certificate shall be equivalent to the provisional educator certificate with advanced standing.

"Reciprocity of certified educators", the process and requirements established by the commissioner for candidates to obtain certification who have completed (1) a college preparation program included in the alternative certification reciprocity system of the National Association of State Directors of Teacher Education and Certification (NASDTEC); (2) out-of-state

programs approved by the National Council for the Accreditation of Teacher Education (NCATE); or (3) other programs approved by the board. Such certificate shall be equivalent to the provisional educator with advanced standing certificate.

"Standard educator", a person who holds a standard educator certificate.

"Standard educator certificate", a license to teach issued to a person who has successfully met the preparation and eligibility requirements as established by the board. The standard educator's certificate shall be valid for renewable terms of five years.

"Temporary certificate", a license to teach which the commissioner of education may, at his discretion, issue to a person who holds a valid teaching certificate from another state and who has been employed under the certificate for a minimum of three years but has not satisfied the certification testing requirements contained in this section. The temporary certificate shall be valid for one year and is nonrenewable. Service under a temporary certificate shall be counted as service in acquiring professional teacher status, contingent upon the teacher passing the applicable certification tests.

The commissioner of education shall have authority to grant, upon application, provisional educator, provisional educator with advanced standing, temporary, and standard educator certificates to persons who have satisfied the requirements for such certificates as established by the board. The board shall define the knowledge of subject matter and demonstration of competencies commensurate with attainment and renewal of such certificates.

To be eligible for certification as a provisional educator, the candidate shall (1) hold a bachelor's degree in arts or sciences from an accredited college or university with a major course in the arts or sciences appropriate to the instructional field; (2) pass a test established by the board which shall consist of two parts: (A) a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents; and (B) the subject matter knowledge for the certificate; and (3) be of sound moral character. Candidates who complete the requirements in this paragraph shall be issued provisional educator certificates which will permit them to seek employment in teaching positions requiring instructional certification in districts which have an approved provisional educator preparation program.

The commissioner shall establish standards for the training, support and supervision of provisional educators. During the period of employment, a person holding a provisional teaching certificate pursuant to this section shall be under the direct supervision of the principal or other appropriate supervisor who shall regularly observe and evaluate the performance of assigned duties by such holder of a provisional teaching certificate. Such evaluation shall be according to relevant to nationally recognized professional standards for personnel evaluation.

Each public school district seeking to hire a provisional educator must submit an provisional educator program plan to the department of education. No district shall be authorized to employ a provisional educator unless it has submitted a plan for such a program and received approval of the commissioner. Each plan shall describe the key elements of the proposed provisional

educator program in accordance with guidelines established and published by the department. Such guidelines shall require that provisional educators in district-based programs meet the equivalent standards that provisional educators with advanced standing meet in approved college and university programs. Districts shall show either evidence of joint sponsorship or collaboration of training programs with (1) colleges or universities, or (2) other districts, or (3) other programs approved by the commissioner to provide such programs. The department shall issue standard district plans which districts may implement in lieu of developing original plans. The department shall coordinate the training efforts of districts, shall insure that district programs meet fair, substantive and comprehensive professional development standards and shall establish regional programs for provisional educators. The department shall also provide orientation programs for support team members. Provisional educators shall be observed by a professional support team. The department of education shall devise standardized criteria for a final comprehensive evaluation of each provisional educator, conducted at the end of the provisional educator period by the professional support team. All such evaluations shall be conducted according to nationally recognized professional standards for personnel evaluation.

At the conclusion of each year of the approved district training program for provisional educators, the chairperson of the support team shall prepare a comprehensive evaluation report of the provisional educator's performance. Such report shall be submitted by the chairperson directly to the department of education. The final comprehensive evaluation report on each provisional educator shall be made on forms provided by the department of education. Said report shall include an assessment of the individual's on the job performance and one of the following recommendations:

(1) Approved: recommends that advanced standing status be granted upon completion of the other preparation and eligibility requirements as established by the board;

(2) Insufficient: recommends that the candidate be allowed to seek entry in the future into a district training program; or a candidate found insufficient twice shall not be allowed to enter another district training program; or

(3) Disapproved: recommends that advanced standing status not be granted and that the candidate not be allowed to enter into a district training program.

The support team chairperson shall provide the provisional educator with a copy of the written evaluation report and certification recommendation before submitting it to the commissioner of education.

If the recommendation is to disapprove, the provisional educator may, within fifteen days, submit to the chairperson written materials documenting the reasons why the provisional educator believes his provisional educator certification should continue to remain valid or a recommendation of insufficient granted. The chairperson shall forward all such documentation to the commissioner of education along with the evaluation report and recommendation concerning certification.

Candidates who receive a recommendation of "disapproved" or two or more recommendations of "insufficient" may appeal to the commissioner for approval of additional opportunities to seek provisional educator employment in districts other than those in which they received unfavorable recommendations. The candidate shall be responsible for demonstrating why he would be likely to succeed if granted the requested opportunity.

To be eligible for certification as a provisional educator with advanced standing, the candidate shall provide evidence that he (1) holds a bachelor's degree in arts or sciences from an accredited college or university with a major course in the arts or sciences appropriate to the instructional field or the equivalent baccalaureate degree; (2) has passed a test established by the board which shall consist of two parts: (A) a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents; and (B) the subject matter knowledge for the certificate; (3) has satisfactorily completed a board of education approved teacher preparation program; and (4) is of sound moral character. A candidate who completes the requirements of this paragraph shall be issued a provisional educator certificate with advanced standing which will permit him to seek employment in a teaching position requiring instructional certification.

Each public school district seeking to hire a provisional educator with advanced standing must submit a plan to the department of education which details how the district will supervise and support such provisional educators with advanced standing. No district shall be authorized to employ a provisional educator with advanced standing unless it has submitted a plan for the support and evaluation of such educator to the commissioner and received the approval of the commissioner. The department of education shall issue standard plans for provisional educators with advanced standing which districts may implement in lieu of developing an original plan.

In not less than one year after the issuance of a provisional educator certificate, the commissioner upon receipt of a proper application shall issue a standard educator certificate to such provisional certificate holder who has provided the commissioner with evidence, in such manner and form as prescribed by the board, that he has met the preparation and eligibility requirements set by the board through a master's degree program approved by the commissioner, or through an equivalent district program for standard certification approved by the commissioner, or other equivalent programs approved by the commissioner; and has met the requirements set by the commissioner for demonstration of successful performance.

Each standard educator certificate shall be valid for five years and continued every five years thereafter upon the successful completion of an individual professional development plan that meets the subject matter knowledge and teaching skill requirements set by the board. Such plan shall be designed to increase the ability of the person to improve student learning.

Certificates granted by the board prior to October first, nineteen hundred and ninety-four are hereby deemed standard certificates which shall be renewed every five years. All such certificates must be renewed by June eighteenth, nineteen hundred and ninety-nine.

The commissioner shall develop alternative paths for certifying school management and educational leadership personnel which shall facilitate a process whereby persons with significant managerial experience can obtain such certification.

Any certificate issued by the commissioner may be revoked for cause, pursuant to standards and procedures established by the board.

The board shall have the authority to promulgate, amend and rescind such rules and regulations as may be necessary to carry out the provisions of this section. Such regulations shall be presented to the joint committee for informational purposes ninety days before implementation.

All applications for any certificates granted under this section shall be accompanied by a fee to be determined annually by the commissioner of administration under the provisions of section three B of chapter seven. Said fees shall be established and limited to allow the department to carry out the certification and recertification responsibilities but in no case shall said applications exceed one hundred dollars per year with an annual increase no greater than the consumer price index.

Notwithstanding the foregoing, the board shall establish for each certification area alternate methods for fulfilling the professional development requirement, at least one of which shall be provided at no cost to persons employed by a school district, including paraprofessionals or assistant teachers, who are engaging in such activity for the purpose of satisfying the professional development requirement of this section.

No person shall be eligible for employment as a teacher, guidance counselor, director, school psychologist, school adjustment counselor, school social worker, school nurse, library media specialist, school business administrator, principal, supervisor, director, assistant superintendent of school, and superintendent of schools by a school district unless he has been granted by the commissioner a provisional, or standard certificate with respect to the type of position for which he seeks employment; provided, however, that nothing herein shall be construed to prevent a school committee from prescribing additional qualifications; and provided further, that a superintendent may upon request be exempt by the commissioner for any one school year from the requirement in this section to employ certified personnel when compliance therewith would in the opinion of the commissioner constitute a great hardship in securing teachers for that school district. During the time that such a waiver is in effect, service of an employee of a school district to whom the waiver applies shall not be counted as service in acquiring professional teacher status or other rights under section forty-one.

In addition to any other requirements of this section, the board shall require, as a provision of an administrator's or educator's initial certification, that all educators and administrators shall have training in strategies for effective inclusive schooling for children with disabilities, instruction of students with diverse learning styles and classroom organization and management. Such training shall include, at a minimum, practical experience in the application of these strategies.

In addition to any other requirements in this section, in order to receive a provisional or standard educator certificate, persons applying for such certification shall have completed such courses or training sessions as the board shall require in second language acquisition.

Competence in Braille instruction shall be a requirement for initial certification as a teacher of students with vision impairments. Such competence shall be verified through a testing program which meets the standards of the Library of Congress National Library Service for the Blind or its successor.

For the purposes of certifying educators, the board shall establish policies and guidelines and the commissioner may approve preparation programs devoted to the preparation of teachers and other educational personnel. A college or university or school or district or other institution offering such an approved program shall certify to the commissioner that a student has demonstrated satisfactory competence in the skills and knowledge expected of college graduates in the most advanced nations, and has completed the program approved. The college or university or school district or other institution shall also provide the commissioner with a transcript of the student's record.

At the end of each five-year period each standard educator shall attest to and provide appropriate supporting evidence and documentation to the state department of education, in such form and at such time as the commissioner shall prescribe, that the standard educator has successfully completed a professional development plan which meets the standards set by the board.

In addition to any other requirements of this section, the board shall require, as a provision of an administrator's or educator's recertification, that all educators and administrators shall have training in strategies for effective inclusive schooling for children with disabilities, instruction of students with diverse learning styles and classroom organization and management. Such training shall include, at a minimum, practical experience in the application of these strategies.

It shall be one of the objectives of all school districts' professional development plans to satisfy the individual professional development plans required by this section; provided, however, that this requirement shall not be construed to require that a school district or the commonwealth provide funding for the fulfillment of the professional development requirements of this section and section thirty-eight Q beyond the foundation budget.

The board shall establish policies and guidelines for approval for any continuing education units, inservice seminars, projects, courses and other activities which would be deemed sufficient to maintain the development of professional skills and the knowledge of subject matter pertinent to particular certificates in accordance with the same procedures used for initial approval of collegiate preparation programs. The commissioner shall establish for each certification alternate methods for fulfilling the professional development requirement, at least one of which must be at no cost to persons employed by a school district who are engaging in such an activity for the purpose of satisfying the professional development requirements for recertification of this section.

Such policies shall provide that a teacher who is to be employed in a position in an area of certification in which he is not currently employed, but for which he held a certificate which had been valid within five years immediately preceding the starting date of employment in this position, shall be given a reasonable period, as determined by the board, to fulfill a professional development plan which demonstrates currency in the subject matter knowledge and requalify him for certification in said area. In every instance, all evaluations and assessments shall follow nationally recognized professional standards.

Each local and regional school district shall attest to the department of education, in such form and at such time as the commissioner shall prescribe, that professional development activities for which credit toward certification renewal is granted meet the requirements set by the board and are documented in accordance with procedures established by the board.

The board shall, in establishing said policies and criteria for professional development, give special consideration to the best interests of the students in the commonwealth, including the need for high quality teachers of English language learners programs established under chapter 71A for limited English proficient students and the need to maintain the highest performance standards of teachers while taking into proper consideration the financial or time constraints these policies may require. In developing such policies, guidelines and assessment methods, the board shall obtain the input of teachers, administrators, educational experts, parents, business leaders and others interested in the improvement of the professional status of teachers.

Except as otherwise specifically provided in this section, no rights of any employees of a school district under the provision of this chapter shall be impaired by the provisions of this section.

Anyone granted either a provisional or standard certificate under this section or currently holding such certification shall be required to maintain the development of professional skills and the knowledge of subject matter pertinent to the areas of certification.

Teachers who were authorized, permitted or approved to teach in a subject or area for which there was no certification standard before September first, nineteen hundred and eighty-two, shall acquire and maintain the development of the skills and training required of persons certified to teach in said subject or areas after that date.

This section shall not apply to trade, vocational, temporary substitute teachers, exchange teachers, regionally licensed or certified teachers or to teaching or administrative interns; provided, however, that approval for the employment of such personnel shall be generated by the board under such rules and regulations as it may adopt.

The requirements of this section shall not apply to the certification of teachers of adult education. Nothing in this section or section 1H of chapter 69 shall be construed to prohibit a school committee from employing a teacher certified under this section to teach adult education.

Appendix D2: Educator Licensure Regulations

Educator Licensure and Preparation Program Approval Regulations (603 CMR 7:00) - Excerpts

7.02: Definitions

Sponsoring Organization: College, university, school district, professional association, or other organization that provides, or seeks to provide, approved preparation programs.

7.03: Educator Preparation Program Approval

(1) Program Approval.

(a) Candidates may qualify for licensure through successful completion of an approved preparation program leading to the license sought, providing they meet all other requirements. Individuals who complete approved programs are eligible for licensure reciprocity with other states that are parties to the NASDTEC Interstate Contract.

(b) Sponsoring organizations with approved preparation programs have the authority to review prior course work and work experience of their candidates and waive otherwise required course work, including the first half of the practicum or practicum equivalent, when designing programs of study for them. Granting such waivers is the official responsibility of the sponsoring organization. Records of candidates for whom coursework or other program requirements have been waived must be available during onsite review.

(c) A sponsoring organization that has received approval of one or more of its preparation programs is authorized to do the following:

1. Endorse a candidate who has completed an approved program.
2. Recommend a candidate for licensure, providing such candidate has both completed an approved program and passed all MTEL tests required for the Massachusetts license.

(d) A sponsoring organization seeking approval of its preparation program(s) shall invite the Department to review them. The sponsoring organization shall provide written evidence that it satisfies the requirements set forth in 603 CMR 7.03 (2) and (3) for each program for which approval is sought. The Department of Elementary and Secondary Education shall review the written information for each proposed program and verify it through an onsite review at the sponsoring organization. The Department shall use the same standards in reviewing all programs and sponsoring organizations for approval.

(e) Program approval will be for a period of five years, unless the program ceases to meet the requirements set forth in 603 CMR 7.03 (2) and (3).

(f) During the five-year approval period a sponsoring organization that seeks approval of a new program may ask the Department for an informal review of that program. Sponsoring organizations seeking approval for the first time may also request an informal review. If the review is favorable, individual candidates who complete the program will be deemed to have met the requirements for licensure in Massachusetts, providing they meet all other requirements. Approval of the program will be considered at the time of the next five-year program review.

(2) Required Program Components

(a) Initial License. All sponsoring organizations and approved programs leading to the Initial license shall provide the following components:

1. Preparation that addresses the following:
    1. Subject matter knowledge requirements for the license. See 603 CMR 7.06, 7.07, 7.09, and 7.11. The following additional requirements apply to baccalaureate teacher preparation programs:
        1. For elementary, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard of hearing, and teacher of the visually impaired licenses: not less than 36 semester hours in upper and lower level arts and sciences coursework addressing the relevant subject knowledge topics for those licenses set forth in 603 CMR 7.06. Some of this coursework might also count toward the required arts or sciences major or general education requirements.
        2. For middle school licenses: 36 semester hours in a mathematics/science or English/history program of studies. This does not exclude the possibility of obtaining a single subject license in any of these subjects for grades 5-8.
        3. For the general science license: at least 36 semester hours addressing the topics for the general science license.
    2. Knowledge of appropriate student learning standards in Massachusetts Curriculum Frameworks.
    3. Professional Standards for Teachers or Administrators (603 CMR 7.08 and 7.10), including the use of Massachusetts Curriculum Frameworks in instruction.
    4. Application of knowledge in practice.
2. Pre-practicum.
3. Practicum or practicum equivalent.
4. License-specific assessment of candidate performance during the practicum or practicum equivalent, using guidelines developed by the Department.
5. Appropriate services for advising candidates.
6. Official transcripts of all candidates enrolled in each program.
7. Preparation and expertise that is appropriate for the respective roles and responsibilities of all professional educational faculty, faculty in the academic discipline most appropriate to the instructional field, and school district personnel involved in approved programs to prepare educators for licensure.
8. An annual report to the Department that includes the following information:
    1. Substantial changes in program components previously approved.

2. Responses to any recommendations for improvement stated in previous program approval reports.
3. Standards and requirements for program admission, admission to the practicum or practicum equivalent, and exit from each program.
4. Number of candidates newly enrolled in each program.
5. Number of candidates newly enrolled in the practicum or practicum equivalent for each program.
6. Number and total list of program completers for each program.
7. Number and total list of program completers taking Massachusetts educator licensure tests and the explanation for any difference between 603 CMR 7.03 (2) (a) 7.f. and g.
8. Number and total list of program completers who sought and of those, who obtained a teaching position within the first year after program completion.
9. Single assessment and aggregate pass rates of program completers of all programs leading to Initial educator licensure on licensing tests or assessments required by the Board.
10. The sponsoring organization's summary pass rate, for completers of all programs leading to Initial licensure as a teacher, on licensing tests or assessments required by the Board.

(b) Professional License. Approved programs leading to the Professional license shall demonstrate the following components:

1. Preparation that satisfies the requirements in 603 CMR 7.04 (2) (c) 5.a., b.i., or c.i. Coursework and experiences used by candidates to satisfy the requirements for an Initial license may not be used to satisfy the requirements for the Professional license in the same field. The academic disciplines appropriate to the instructional field of the Professional license sought are specified in appropriate provisions of 603 CMR 7.06 for teachers and in 603 CMR 7.07 for specialist teachers.
    1. Approved teacher or specialist teacher license programs sponsored by a school district, collaborative, professional association, or other non-higher education institution of at least 50 contact hours of content-based seminars beyond the induction year.
    2. Approved programs sponsored by accredited higher education institutions.
        1. For early childhood, elementary, physical education, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard of hearing, teacher of the visually impaired, and other teacher licenses at levels PreK-8: at least half the credits are in any combination of: upper-level undergraduate or graduate courses in arts or sciences or in professional schools other than education, in the academic disciplines appropriate to the instructional field of the license sought; and pedagogical courses advanced beyond those for the Initial license and based on the academic discipline appropriate to the instructional field of the Professional license sought.
        2. For specialist teacher licenses and teacher licenses at levels 5-12 and All: at least half the credits are in upper level undergraduate or graduate level

courses in arts or sciences or in professional schools other than education and are in the academic disciplines appropriate to the instructional field of the Professional license sought.

3. For teacher licenses at levels 8-12: at least half the credits are in graduate level courses in arts or sciences or in professional schools other than education, in the academic disciplines appropriate to the instructional field of the Professional license sought.

2. Appropriate services for advising candidates.
3. Official transcripts of all candidates enrolled in the program.
4. Preparation and expertise that is appropriate for the respective roles and responsibilities of all professional educational faculty, faculty in the academic discipline most appropriate to the field of the license, and school district personnel involved in approved programs to prepare educators for licensure. Contributions of faculty in the academic discipline most appropriate to the field of the license are evident in all pedagogical courses for the academic discipline.
5. An annual report to the Department that includes the following information:
    1. Substantial changes in program components previously approved.
    2. Responses to any recommendations for improvement stated in the previous program approval report.
    3. Standards for admission to and exit from each program.
    4. Number of candidates newly enrolled in each program.
    5. Number and total list of program completers for each program.

(3) Required Minimum Pass Rate.

(a) All sponsoring organizations with approved programs and each approved program shall demonstrate an 80% pass rate of program completers who take state licensing tests and assessments required for Initial licensure in the field and at the level of preparation.

1. For sponsoring organizations, this shall be the summary pass rate.
2. For each approved program, this shall be the single assessment pass rate for subject matter tests or the aggregate pass rate for the Communication and Literacy Skills Test where there is no subject matter test.

(b) Sponsoring organizations and each of their approved programs shall report pass rates only when there are ten or more in a cohort of completers who take a test.

(c) The sponsoring organization shall publish, in official organizational publications, the initial and cumulative pass rates, for each cohort of program completers who take required state licensure tests:

1. Reading subtest (single assessment pass rate).
2. Writing subtest (single assessment pass rate).
3. Communication and Literacy Skills Test (aggregate pass rate).
4. Each Subject Matter Knowledge Test (single assessment pass rate).
5. All Subject Matter Knowledge Tests (aggregate pass rate).

6. All tests of subject matter knowledge and communication and literacy skills (summary pass rate).

(d) Organizations with fewer than ten program completers in any cohort shall aggregate the pass/fail status of test-takers over multiple years until the number of completers who take tests reaches ten. At that point, an organization shall be subject to the requirements set forth in 603 CMR 7.03 (3) (a) 2. and (c) 5., providing that approval shall not be revoked until the organization has a second total of at least ten new program completers who take required state licensure tests.

(e) Programs with fewer than ten program completers in any cohort are not obligated to report pass rates for such programs, and those with at least ten program completers in any cohort shall be subject to the requirements set forth in 603 CMR 7.03 (3) (a) 2. and (c) 4.

(4) Revoking Approval of Individual Preparation Programs.

(a) Any program that fails to demonstrate that it satisfies all of the requirements set forth in 603 CMR 7.03 (2) and (3) shall be subject to review and possible revocation of approval.

(b) The Department may initiate a review of such a program and request an improvement plan. The Department shall offer technical assistance where appropriate.

(c) The sponsoring organization shall submit an improvement plan to the Department for programs that are under review. The Department will monitor progress in meeting the goals of the improvement plan. If, after two years under review, a program has not made satisfactory progress, its approval may be revoked. The Commissioner may extend the review for a third year if additional data must be collected, e.g., for small programs.

(d) The Commissioner will make the final determination regarding revocation of state approval of an individual program.

(5) Revoking Approval of Sponsoring Organizations.

(a) Any sponsoring organization that fails to meet an 80% pass rate on all required state licensure tests taken by its program completers in any year (summary pass rate) or to demonstrate that it satisfies any other Program Components set forth in 603 CMR 7.03 (2) shall be subject to revocation of approval of all its programs and shall be referred to the Commissioner for review.

(b) The Commissioner shall initiate a review of all the programs offered by a sponsoring organization that has been referred for review and issue a report. Such report shall identify potential areas for improvement of those programs and offer technical assistance where appropriate.

(c) A sponsoring organization that has been referred for review shall have 60 days to submit an improvement plan to the Department. The Department will monitor progress in meeting the goals

of the improvement plan for two years. At the end of two years the Commissioner shall make a determination as to whether the organization has made satisfactory progress.

1. Sponsoring organizations whose programs have achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) and satisfy all other Program Components set forth in 603 CMR 7.03 (2) shall be taken off review.
2. Sponsoring organizations whose programs have not achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) but have made satisfactory progress shall be monitored for one more year.
3. Sponsoring organizations whose programs have not achieved an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate) and who have not made satisfactory progress shall be designated as "at risk of becoming low performing" in the state's annual report to the U.S. Department of Education.

(d) If, after three years under review, a sponsoring organization fails to achieve an 80% pass rate on all required state licensure tests taken by program completers (summary pass rate), the Commissioner shall designate the organization as "low performing" and recommend that the Board of Education revoke approval of all of the sponsoring organization's educator preparation programs. The Board will make the final determination.

(6) Restoring Approval of Individual Programs and Sponsoring Organizations.

(a) A sponsoring organization must wait two years after revocation before it can apply to the Department to restore approval. The sponsoring organization shall submit written documentation of how it will address the requirements set forth in 603 CMR 7.03 (2) and (3).

(b) The Department will review the written documentation to determine whether the organization and its program(s) satisfy all of the requirements set forth in 603 CMR 7.03 (2) and (3). Programs that demonstrate that they satisfy the requirements set forth in 603 CMR 7.03 (2) will be allowed to recruit students.

(c) Upon demonstration of an 80% pass rate on all required state licensure tests taken by the first cohort of program completers (summary pass rate), the Commissioner will restore approval to the program or sponsoring organization, providing it continues to satisfy the requirements set forth in 603 CMR 7.03 (2) and (3).

(7) Implementation

(a) All programs approved prior to October 1, 2001 must comply with 603 CMR 7.03 by October 1, 2003.

(b) Sponsoring organizations seeking approval of new programs after October 1, 2001 must comply with 603 CMR 7.03

(c) Individuals who complete an approved preparation program after October 1, 2003 will have to meet the requirements in 603 CMR 7.00 to qualify for licensure.

7.05: Routes to Initial Teacher and Specialist Teacher Licenses

(1) Route One is for teacher candidates who receive their preparation in approved undergraduate programs. Route One cannot be used to prepare for a license as a library teacher. Candidates seeking licensure under Route One shall meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

(2) Route Two is for teacher candidates who receive their preparation in approved post-baccalaureate programs, including approved alternative programs. Teacher candidates seeking licensure under Route Two must meet the following requirements:
(a) Bachelor's degree.
(b) Completion of an approved program as set forth in 7.03 (2) (a).
(c) Passing score on the Communication and Literacy Skills test.
(d) Passing score on the subject matter knowledge test(s) appropriate to the license sought, based on the subject matter knowledge requirements in 603 CMR 7.06 and 7.07.

(3) Route Three is for teacher candidates who hold a Preliminary license, serve in a school and are either hired as teachers of record or are serving an apprenticeship in a classroom under the direct supervision of a teacher who holds an appropriate license. Candidates seeking licensure under Route Three shall meet the following requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) An approved program for the license sought.

(4) Route Four is the Performance Review Program for Initial Licensure process for teacher candidates who hold a Preliminary license, are hired as teachers of record, and are working in a district that does not have an approved program for the Initial license. Route Four is not available for the following teacher and specialist teacher licenses: early childhood, elementary, library, teacher of students with moderate disabilities, teacher of students with severe disabilities, teacher of the deaf and hard-of-hearing, teacher of the visually impaired, academically advanced, reading, and speech/language/hearing disorders. Candidates seeking licensure under Route Four shall meet the following eligibility requirements:
(a) Possession of a Preliminary license in the field and at the level of the license sought. See 603 CMR 7.04 (2) (a).
(b) At least three full years of employment in the role of the Preliminary license.
(c) Documentation of seminars, courses, and experience relevant to the Professional Standards for Teachers in 603 7.08 (2).
(d) A recommendation from the principal of each school where the candidate was employed

under the Preliminary license or in the role of the license sought.
(e) A competency review for those license fields that have no subject matter knowledge test, or for which not all the subject matter knowledge required for the license is measured by the test.

(5) Route Five is for candidates from outside Massachusetts. Candidates seeking licensure under Route Five shall meet the following requirements:
(a) Evidence of one of the following:

1. Completion of a state-approved educator preparation program in a state with which Massachusetts has signed the NASDTEC Interstate Contract.
2. Completion of an educator preparation program sponsored by a college or university outside Massachusetts that has been accredited by the National Council for Accreditation of Teacher Education (NCATE).
3. Possession of a Regional Credential.
4. Possession of the equivalent of at least an Initial license/certificate issued by a state with which Massachusetts has signed the NASDTEC Interstate Contract and three years of employment under such license/certificate during the previous seven years.

(b) Passing score on the Communication and Literacy Skills test.
(c) Passing score on the subject matter knowledge test(s) appropriate to the license sought, where available, based on the subject matter knowledge requirements set forth in 603 CMR 7.06 and 7.07.

7.09: Licenses and Routes for Administrators

For candidates who were prepared outside Massachusetts, see 603 CMR 7.04 (2) (d) and 7.05 (5) (a) and (b). For candidates who hold a Massachusetts administrator license, see 603 CMR 7.14 (3).

(1) Superintendent/Assistant Superintendent (Levels: All)
(a) Preliminary License.

1. Completion of at least three full years of employment in an executive management/leadership role or in a supervisory, teaching, or administrative role in a public/charter school, private school, higher education, or other educational setting accepted by the Department.
2. Passing score on the Communication and Literacy Skills test.

(b) Initial License.

1. Possession of at least an Initial license in another educational role or Preliminary Superintendent/Assistant Superintendent license and completion of three full years of employment in a district-wide, school-based, or other educational setting.

2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the superintendent/assistant superintendent role.
    2. An administrative apprenticeship/internship (300 hours) in the superintendent/assistant superintendent role with a trained mentor, using Department guidelines.
    3. A Panel Review.
3. Passing score on the Communication and Literacy Skills test.

(c) Professional License.

1. Possession of an Initial license as superintendent/assistant superintendent.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial superintendent/ assistant superintendent license.

(2) School Principal/Assistant School Principal (Levels: PreK-6; 5-8; 9-12)

(a) Initial License.

1. Prerequisite Experience. Completion of at least three full years of employment in an executive management/leadership role or in a supervisory, teaching, or administrative role in a public school, private school, higher education, or other educational setting accepted by the Department.
2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the principal/assistant principal role and at the level of the license sought.
    2. An administrative apprenticeship/internship (300 hours) in the principal/assistant principal role and at the level of the license sought with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to candidates who have completed one of the following:
        1. A post-baccalaureate program in management/administration at an accredited college or university.
        2. Three full years of employment in an executive management/ leadership, supervisory, or administrative role.
3. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as principal/assistant principal.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial school principal/assistant principal license.

(3) Supervisor/Director (Levels: Dependent on Prerequisite License)

(a) Validity. A Supervisor/Director license is required for individuals employed for one-half time or more as a director, department head, or curriculum specialist in the field and at the level of the prerequisite license(s).
(b) Initial License.

1. Prerequisite Licenses. Possession of at least a Preliminary license as follows:
    1. Pupil personnel directors:
        1. School psychologist,
        2. School guidance counselor, or
        3. School social worker/school adjustment counselor
    2. School guidance directors:
        1. School guidance counselor or
        2. School social worker/school adjustment counselor
    3. Directors, department heads, and curriculum specialists:
        1. Teacher
        2. Specialist Teacher
2. Prerequisite Experience. Completion of three full years of employment in a leadership, supervisory, teaching, or administrative role in a public school, private school, higher education, or other educational setting accepted by the Department.
3. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 through completion of a Performance Assessment and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the supervisor/director role.
    2. An administrative apprenticeship/internship (300 hours) in a supervisor/director role for the license sought with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited institution or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
4. Passing score on the Communication and Literacy Skills test.
5. Additional requirements for directors, department heads, and curriculum specialists in the core academic subjects at the secondary level (5-12):
    1. A master's degree in the arts or sciences in one of the core academic subjects they will supervise, or
    2. At least 18 credits of advanced graduate studies in one of the core academic subjects they will supervise.

(c) Professional License.

1. Possession of an Initial license as supervisor/director.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial supervisor/director license.

(4) Special Education Administrator (Levels: All)

(a) Initial License.

1. Prerequisite Experience.
    1. Possession of at least an Initial license in special education, or as school guidance counselor, school principal/assistant school principal, school psychologist, school social worker/school adjustment counselor, or speech, language and hearing disorders teacher and completion of three full years of employment in a district-wide, school-based, or other educational setting, or
    2. Completion of at least three full years of employment in law, public policy, higher education, or other related field accepted by the Department.
2. Demonstration of successful application of the Professional Standards for Administrators set forth in 603 CMR 7.10 and appropriate knowledge of special education laws, regulations, and issues through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the special education administrator role.
    2. An administrative apprenticeship/internship (300 hours) in the special education administrator role, with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited college or university or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
3. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as special education administrator.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial special education administrator license.

(5) School Business Administrator (Levels: All)

(a) Initial License.

1. Prerequisite Experience.

1. Possession of at least an Initial license in another educational role and completion of three full years of employment in a district-wide, school-based, or other educational setting, or
2. Completion of at least three full years of employment in a business management/administrative role in a business, educational, or other setting accepted by the Department.

2. Subject Matter Knowledge.
    1. Financial planning and management methods.
    2. Accounting systems.
    3. Management of federal and state appropriations for special services (e.g., special education, food, and transportation).
    4. Municipal and school finance laws and regulations.
    5. Personnel matters including contract negotiations.
    6. Purchasing and district level facilities management.
    7. Insurance.
    8. Payroll.
    9. Scheduling.
3. Demonstration of successful application of appropriate Professional Standards for Administrators set forth in 603 CMR 7.10, as determined in Department guidelines, and successful application of school business administrator subject matter knowledge through completion of a Performance Assessment for Initial License and one of the following:
    1. An approved post-baccalaureate program of studies including a supervised practicum/practicum equivalent (300 hours) in the school business administrator role.
    2. An administrative apprenticeship/internship (300 hours) in the school business administrator role with a trained mentor, using Department guidelines.
    3. A Panel Review. Eligibility for a Panel Review is limited to those candidates who have either completed a post-baccalaureate program in management/administration at an accredited college or university or have three full years of employment in an executive management/leadership, supervisory, or administrative role.
    4. Passing score on the Communication and Literacy Skills test.

(b) Professional License.

1. Possession of an Initial license as school business administrator.
2. Completion of a one-year induction program with a trained mentor.
3. At least three full years of employment under the Initial school business administrator license.

(6) The Commissioner may waive the requirements listed in 603 CMR 7.09 (1) through (5), with the exception of a passing score on the Communication and Literacy Skills test, for candidates with significant leadership/managerial experience who meet the standards through both their experience and their formal education.

Appendix D3: Alternative Program Data

Profile of Organizations and Approved Programs in Massachusetts:

Organizations with preparation programs for teachers and principals	Number of Organizations	Number of Program Completers (2007-2008)
All organizations and approved programs		
Teachers	73	4624
Principals	33	437
Alternative organizations and preparation programs (as defined in the Race to the Top application)		
Teachers	32	843
Principals	11	194
Total	39	1037

Note: An organization may have programs for both principals and teachers, among other types of preparation programs.

Organizations with Alternative Programs

Higher Education Institutions:	**Number of Program Completers (2007-08, teachers):**	**Number of Program Completers (2007-08, principals):**
Bridgewater State College	52	n/a
Clark University (Teacher only	Data not available	n/a
Lesley University	75	n/a
Salem State College	18	28
Simmons College	Data not available	n/a
Tufts University	Data not available	n/a
UMass-Amherst	80	n/a
UMass-Boston	12	n/a
UMass-Dartmouth	43	25
Public School Districts:		
Boston	n/a	19
Cambridge	7	n/a
Lawrence	2	n/a
Lowell	15	n/a
Medford	24	n/a

Newton	4	n/a
Springfield	6	12
Worcester	11	n/a
Charter Schools:		
City on a Hill Charter School	3	n/a
Francis W. Parker Charter Essential	9	n/a
MATCH Charter School	24	n/a
Educational Collaboratives:		
EDCO Collaborative	n/a	16
Hampshire Educational Collaborative (Teacher only, no completers in Principal program)	44	n/a
Merrimack Education Center	42	27
South Coast Educational Collaborative	16	8
South Shore Educational Collaborative	n/a	4
The Education Cooperative	30	13
Foundations:		
Boston Plan for Excellence (Boston Teacher Residency Program)	72	n/a
National Organizations:		
Teach for America	n/a – not approved during reporting period	n/a
Private Schools:		
Shady Hill	15	n/a
Private Education Providers:		
Catherine Leahy Brine Education Consultants, Inc.	140	n/a
Class Measures	6	n/a
DeLet	8	n/a
French River Education Center	55	n/a
The Reading Institute	16	n/a
Professional Associations:		
Massachusetts Elementary School Principals Association	n/a	5
Massachusetts Secondary School Administrators Association	n/a	37
Norfolk County Teachers Association	14	n/a
Total:	**843**	**194**

The total number of teachers and principals licensed in 2008:

Type of License:	**Teachers**	**Principals**
Temporary	255	n/a
Preliminary	4,645	n/a
Initial	8,832	1,172
Professional	3,071	253
Total:	**16,803**	**1,425**

MCAS Student Growth Percentiles: State Report

October 2009

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Commissioner of Elementary and Secondary Education

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Mitchell D. Chester, Ed.D.
Commissioner

For years, educators across the Commonwealth have called for the state to develop a way to measure student *progress* as a complement to the measures of student *achievement* already available through the MCAS testing system. As a result of the efforts of educators around the state, I am pleased to release the first round of student growth reports statewide and for all districts and schools.

The public now has access to school and district results by going to the "School and District Profiles" (http://profiles.doe.mass.edu/state_report/mcas.aspx) on our Department's website. Support materials, including a tutorial video, as well as this report are available at: http://www.doe.mass.edu/mcas/growth.

As part of the development of the methodology used to generate growth data, the Department conducted a field test with a diverse group of nine districts from April 29th to July 2, 2009. The participating districts were: Community Day Charter Public School, Franklin, Lowell, Malden, Newton, Northampton, Sharon, Springfield, and Winchendon. I want to thank these nine districts for their generous contributions of time, talent and insights during one of the busiest periods in the school year. Districts and schools across the state will benefit from what our staff learned from this process including important refinements to reports, training and interpretive materials.

I am optimistic about the potential that this measure of student growth presents for the improvement of curriculum and instruction in all districts. While in no way do I want the growth measure to obscure our goal of getting all students to proficiency and beyond, I am confident that used in combination with MCAS achievement data, growth will provide a more robust profile of school and district performance. I am looking forward to our discussion of the student percentile growth model and the insights we are gaining about performance.

Mitchell D. Chester, Ed. D.
Commissioner of Elementary and Secondary Education

Introduction

This report describes a new method of interpreting student achievement using results from the Massachusetts Comprehensive Assessment System (MCAS). In the traditional view, measures of student performance reflect the extent to which students have mastered the standards contained in the English Language Arts (ELA) and Mathematics Massachusetts Curriculum Frameworks each school year.

In order to complement the traditional MCAS scaled scores and performance levels, we have designed Student Growth Percentiles (SGPs) to measure how much a student's or group of students' achievement has grown or changed over time. For K–12 education in Massachusetts, the phrase "growth model" describes a method of measuring individual student progress on statewide assessments by tracking student scores from one year to the next. Each student in grades 4 through 8 and 10 with at least two consecutive years of MCAS scores will receive a *student growth percentile,* which measures how much the student gained from one year to the next relative to other students statewide with similar MCAS test score histories. Student growth percentiles range from 1 to 99, where higher numbers represent relatively higher growth and lower numbers represent relatively lower growth.

The Importance of Measuring Growth

Making sense of results over time

In 2006 the Department began testing all students each year in ELA and Mathematics in Grades 3–8 and 10. Naturally, educators and parents with access to student results wanted to compare each student's performance from one year to the next. Although the tests and the curriculum frameworks for each grade are adjusted to cover different content in each subject each year, the scaled score results were not designed to allow direct comparisons of student scores from one year to the next.

The typical[1] "growth" or change in a typical student's score from one year to another varies widely depending on three factors: the student's grade level; the subject; and where on the MCAS scale each student started. So while it may be common for high performing 3rd graders to score lower when they move on to the more challenging 4th grade frameworks, the opposite can be true for tests in the other grades and other subjects. In order to accurately measure growth, we developed a method that accounted for all three factors.

Fairness

Student growth percentiles capture growth from each student's starting point. The growth percentile is not dictated by student performance on the MCAS in previous years, because growth is measuring change in performance rather than absolute performance.

[1] "Typical," throughout this document, means: "neither high growth nor low growth, but growth that was somewhere in the middle of the distribution."

In this way, all students at all performance levels are provided an equal chance to demonstrate growth at any percentile on the next year's test. Similarly, all districts, schools, grades, programs, or groups also have an equal opportunity to demonstrate growth regardless of the populations they serve.

What Is a Student Growth Percentile (SGP)?

A student growth percentile is a measure of student progress that compares changes in a student's MCAS scores to changes in MCAS scores of other students with similar achievement profiles. The model establishes cohorts of students with "similar performance profiles" by identifying all students with the same (or very similar) MCAS scores in prior years; all MCAS data for a student since 2006 are used (where available) to establish academic peers.

Percentiles are familiar to most educators and parents because they are used to report performance on some national standardized tests and in other common arenas such as pediatrics, where charts put children in percentiles depending on their height and weight. The key distinction between those customary uses of percentiles and those used to measure academic progress in this report is that student growth percentiles measure change instead of an absolute quantity. For example:

- A student with a growth percentile of 90 in 5th grade mathematics grew as much or more than 90 percent of her academic peers (students with similar score histories) from the 4th grade math MCAS to the 5th grade math MCAS. Only 10 percent of her academic peers grew more in math than she did.

- A student with a growth percentile of 23 in 8th grade English language arts grew as much or more than 23 percent of her academic peers (students with similar score histories) from the 7th grade ELA MCAS to the 8th grade ELA MCAS. More than three-fourths of her academic peers grew more in ELA than she did.

Student Growth Percentiles in the Aggregate: Median Growth Percentiles

To report student growth at the subgroup, grade, school, or district level, individual student growth percentiles can be aggregated. The most appropriate measure for reporting growth for a group is the median student growth percentile: the middle score if the individual student growth percentiles are ranked from highest to lowest. The average or mean is not an appropriate measure when comparing percentiles. A typical school or district in the Commonwealth would have a median student growth percentile of 50.

No matter how student growth percentiles are aggregated, whether at the subgroup, grade, school, or district level, the statistic and its interpretation remain the same. The comparison group is always the students' academic peers: students with similar MCAS test score histories. For example, if the students with disabilities in a district have a median student growth percentile of 53, it could be stated that that particular group of students progressed at a relatively higher level than their academic peers—a group of

students who may or may not be students with disabilities. The measure does not indicate that students with disabilities improved more than 53 percent of other students with disabilities.

Statewide trends in 2009

It is important to note that growth statistics are norm-referenced, therefore they will always be centered around 50. The figures below are designed to show how common or uncommon it is for schools to grow at various median percentiles. The first pair of graphs shows the distribution of median growth percentiles statewide at the school level. Figures 1 and 2 depict how many schools are growing at relatively higher (above 60), typical (between 40 and 60), or lower rates (below 40) on both the ELA and mathematics MCAS tests. Consistent with the nature of percentiles, the majority of schools (63 percent in ELA; 60 percent in mathematics) had medians between 40 and 60.

Figure 1: Distribution of School Median Student Growth Percentiles for ELA, 2009 (all grades)

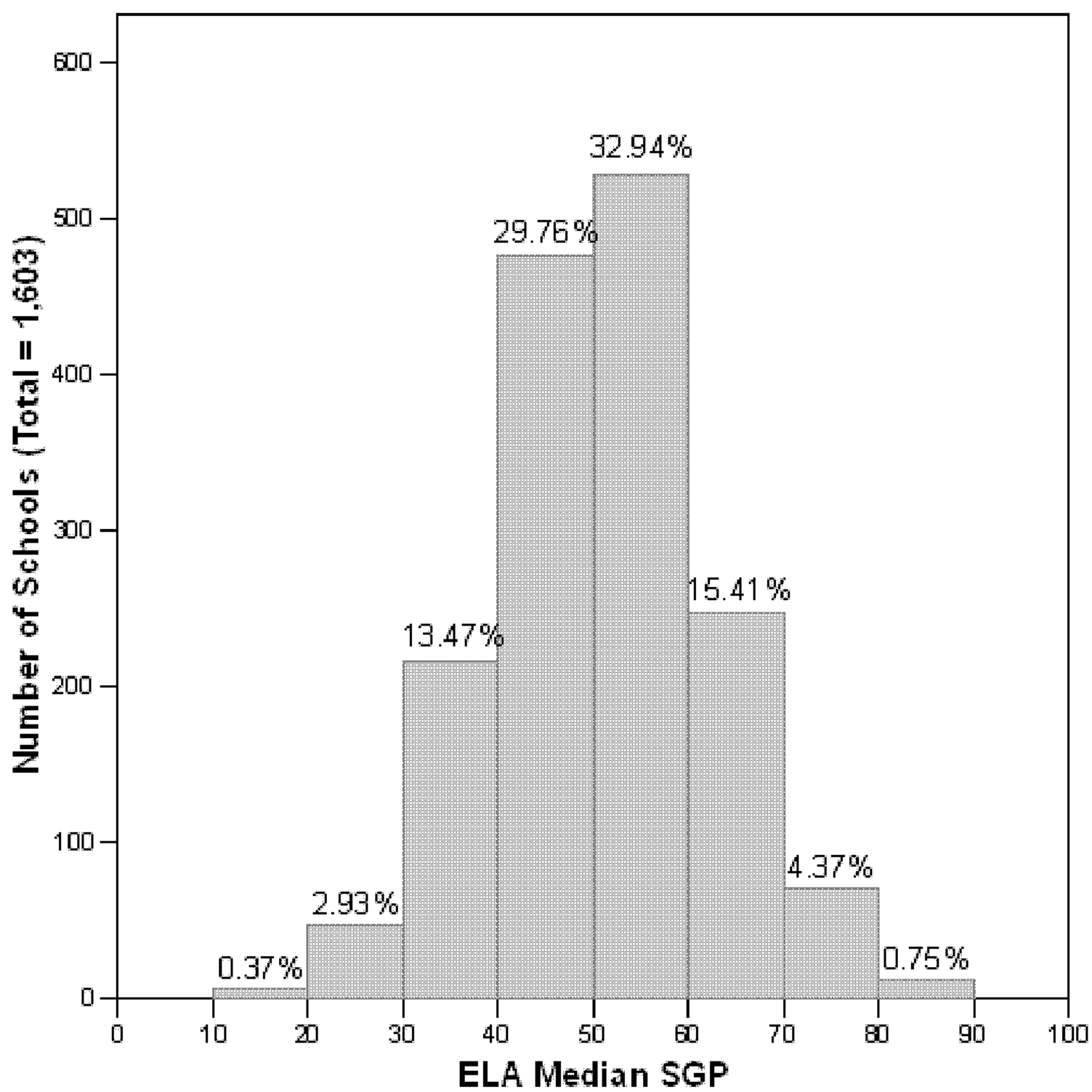
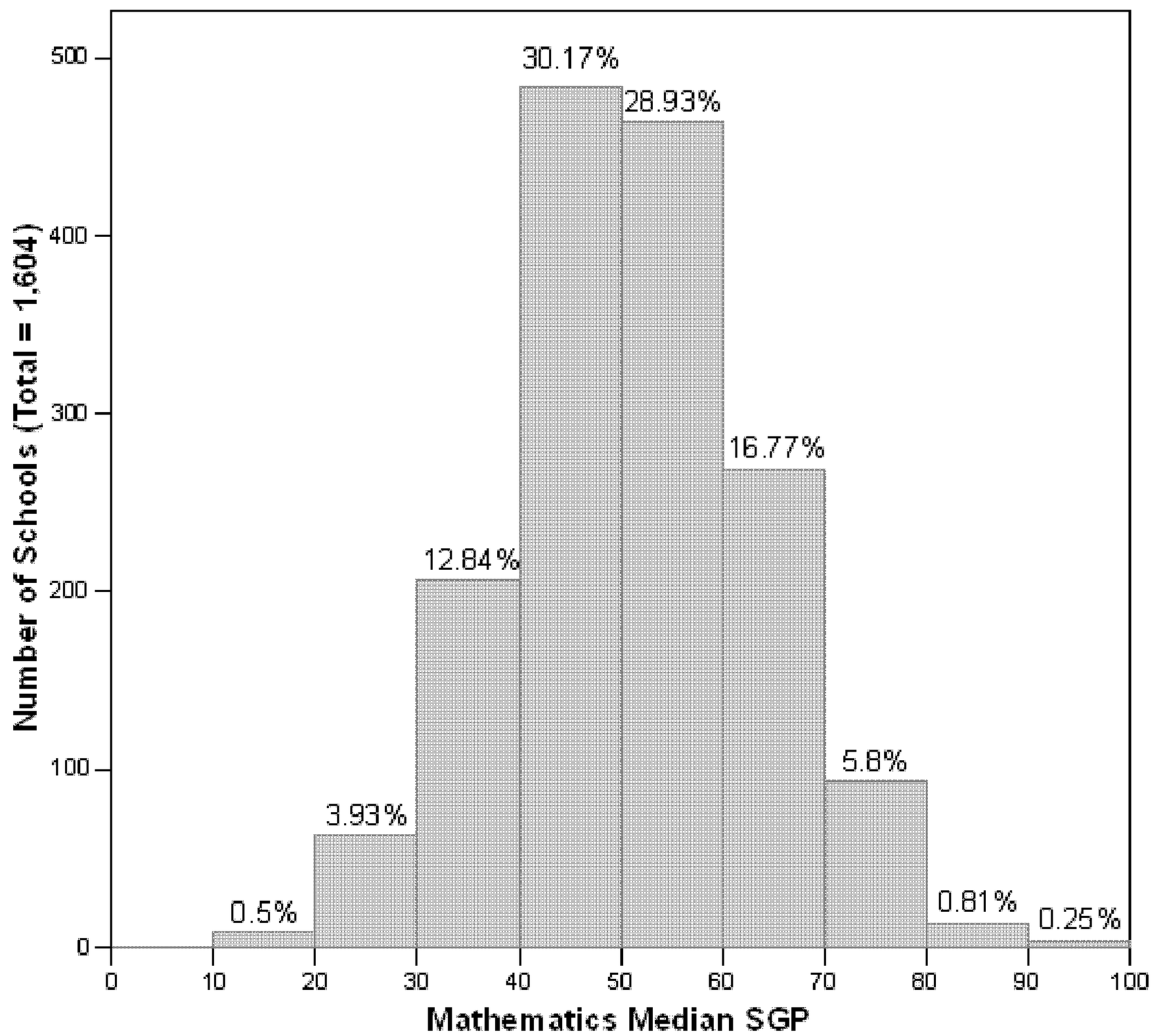


Figure 2: Distribution of School Median Student Growth Percentiles for Mathematics, 2009 (all grades)



The Education Data Warehouse provides districts and schools with several reports that will help them analyze their growth profile. For district and school personnel as well as the public at large, the "MCAS Student Growth Percentiles Interpretive Guide" provides examples of these reports and commentary on how to read and interpret them. The stacked bar charts" (pages 7–10 of the Interpretive Guide) are particularly helpful in highlighting how local and statewide performance compare.

The data presented in this next set of charts shows the median student growth percentiles for selected student groups. The median student growth percentile for all students at the state level is 50.[2] The median growth percentiles of select populations, however, reveal that some groups are progressing at a higher or lower rate from the statewide median student growth percentile.

[2] In rare instances when the number of score points in the baseline is limited, as in Grade 4, the median can vary from 50 by a point or two.

Table 1. 2009 Statewide ELA Median Student Growth Percentiles

Group	All Grades # Included	Median Student Growth Percentiles						
		All Grades	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All Students	396,371	50	50	50	50	50	50	50
African-American/Black	30,107	48	41	44	52	47	53	51
Asian	18,925	60	58	61	62	59	62	59
Hispanic/Latino	49,717	46	42	45	49	46	51	45
Multi-race/Non-Hispanic	7,341	50	48	50	49	51	53	49
Native American	1,089	47	46	49	48	50	46	46
White	288,750	50	52	51	49	50	49	50
Non-Low Income	277,329	52	54	53	51	52	50	51
Low Income	118,989	45	41	44	47	45	49	45
LEP	13,474	48	44	46	52	49	57	50
Formerly LEP	10,008	54	50	51	58	55	59	56
Female	194,583	53	55	53	55	54	49	50
Male	201,735	47	44	47	45	46	51	49
Students w/ Disabilities	66,224	40	34	42	41	41	43	39
Non-Title 1	298,227	51	54	52	51	51	50	51
Title 1	98,091	46	42	45	49	45	51	44

Table 2. 2009 Statewide Mathematics Median Student Growth Percentiles

Group	All Grades # Included	Median Student Growth Percentiles						
		All Grades	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
All Students	397,572	50	50	50	50	50	50	50
African-American/Black	30,260	46	40	48	46	45	50	48
Asian	18,987	60	61	62	62	58	58	60
Hispanic/Latino	50,091	44	41	43	46	45	48	45
Multi-race/Non-Hispanic	7,350	49	52	49	48	49	49	46
Native American	1,090	47	48	47	46	42	50	52
White	289,352	51	52	50	50	51	50	50
Non-Low Income	277,863	52	54	52	52	52	52	51
Low Income	119,659	44	42	44	45	45	47	46
LEP	13,727	48	40	46	51	53	55	48
Formerly LEP	10,030	52	49	50	55	53	56	52
Female	194,984	50	49	49	51	52	52	49
Male	202,538	50	51	51	49	49	49	51
Students w/ Disabilities	66,303	43	39	41	41	43	45	47
Non-Title 1	298,807	51	54	52	51	51	51	50
Title 1	98,715	46	42	46	47	46	48	49

Tables 1 and 2 help us answer questions such as:

- How did the growth of a subgroup compare to the growth of all students across all grades and in a given grade? For example,
  - The median growth percentile of 48 for African-American students in ELA across grades 3–8 and 10 is very close to the statewide median of 50 for all students.
  - The median growth percentile of 56 for formerly limited English proficient students in mathematics in grade 8 is higher than the corresponding median growth percentile of 50 for white students.
- How did the growth of a subgroup change as they progressed through the grades?
  - Hispanic/Latino students make steady progress from a lower median student growth percentile of 42 in ELA in grade 4 to an more typical median student growth percentile of 51 in grade 8, but then experienced slightly lower growth of 45 in 10th grade.
  - The 8th grade ELA results for LEP students show the typical student at that grade is growing at the 57th percentile when compared to students with similar MCAS scores in 7th grade and before. A reasonable interpretation of this median is that 8th grade LEP students are more than keeping pace with their academic peers.

One more finding of interest is that lower than typical growth in the lower grades increases to typical (or higher) growth in the later grades for many subgroups in ELA. This trend is particularly interesting and warrants further study.

Interpreting School, District and Group-level Growth

Because student growth percentiles are normative (they describe how each student changed relative to what was normal), the medians for all districts, schools, and subgroups will be centered around 50. Therefore, statewide, there should be just about as many schools above 50 as below 50 and this will be true even if achievement levels rise. Depending on the test, between 60 and 65 percent of groups will have a median somewhere between the 40th and 60th percentile.

As with all data driven decision making, educators are advised to use caution and not overemphasize small differences. Always consider the number of students being measured, as scores for small groups are likely to change much more than for larger groups. For this reason, the tables and charts used to display growth and achievement data include an indication of the number of students included in the growth calculations. Median growth percentiles are not calculated for groups smaller than 20.

Best Practices for Using Growth Data

Don't allow growth data to obscure achievement data. Use growth data to complement achievement data.
It is the Department's goal to help every student in the state reach proficiency and beyond. Achievement data, therefore, is still an extremely important measure of how students stand relative to proficiency. Growth data is best used to add context to achievement data.

Use two years of data if it's available.
The Department has gathered two years of growth data for students in grades 4 through 8. The 10th grade results could only be calculated for the first time in 2009; hence, only one year of growth data is available for grade 10.

Look at differences across grades as well as between grades.
Because every student has an equal opportunity to grow at a relatively high or low level, regardless of their grade, it is appropriate to combine grades at the school, district, or group level. However, be sure to look at the growth of groups in schools and grades and by subgroup, because overall growth scores can often mask patterns.

Differences in medians of less than 10 points are not likely to be meaningful.
At the school level there is a correlation[3] between median growth scores in 2008 and median growth scores in 2009. Despite the correlation, the average school saw its medians fluctuate by 10 points from year to year. Therefore, as a rule of thumb, differences in medians of less than 10 are not likely to be educationally meaningful at the school or district level, except in rare cases when those differences occur among particularly large numbers of students (i.e. 1,000 students or more).

Medians above 60 or below 40 are relatively unusual.
Figures 1 and 2 show that roughly one school in five had a median growth percentile higher than 60 and a slightly smaller proporation had medians below 40. About five percent had medians above 70 or below 30 and less than one percent had growth scores higher than 80 or below 20.

[3] Among the 1,304 elementary and middle schools with valid growth scores in 2008 and 2009, the correlation between ELA medians was .561 (R-squared = 32%) and mathematics medians was .527 (R-squared = 28%).

Rethinking Performance

The Department conducted a field test of the growth model with a diverse group of nine districts from April 29th to July 2, 2009. The participating districts were: Community Day Charter Public School, Franklin, Lowell, Malden, Newton, Northampton, Sharon, Springfield, and Winchendon. The field test provided important feedback and recommendations to improve the clarity and usability of growth model reports.

Soon after the start of this growth model field test, we realized that we needed to revisit our notion of student performance. With this added dimension of growth, we concluded that the definition of performance needs to be expanded from solely "achievement" to "achievement plus growth." This concept is illustrated in the following example:

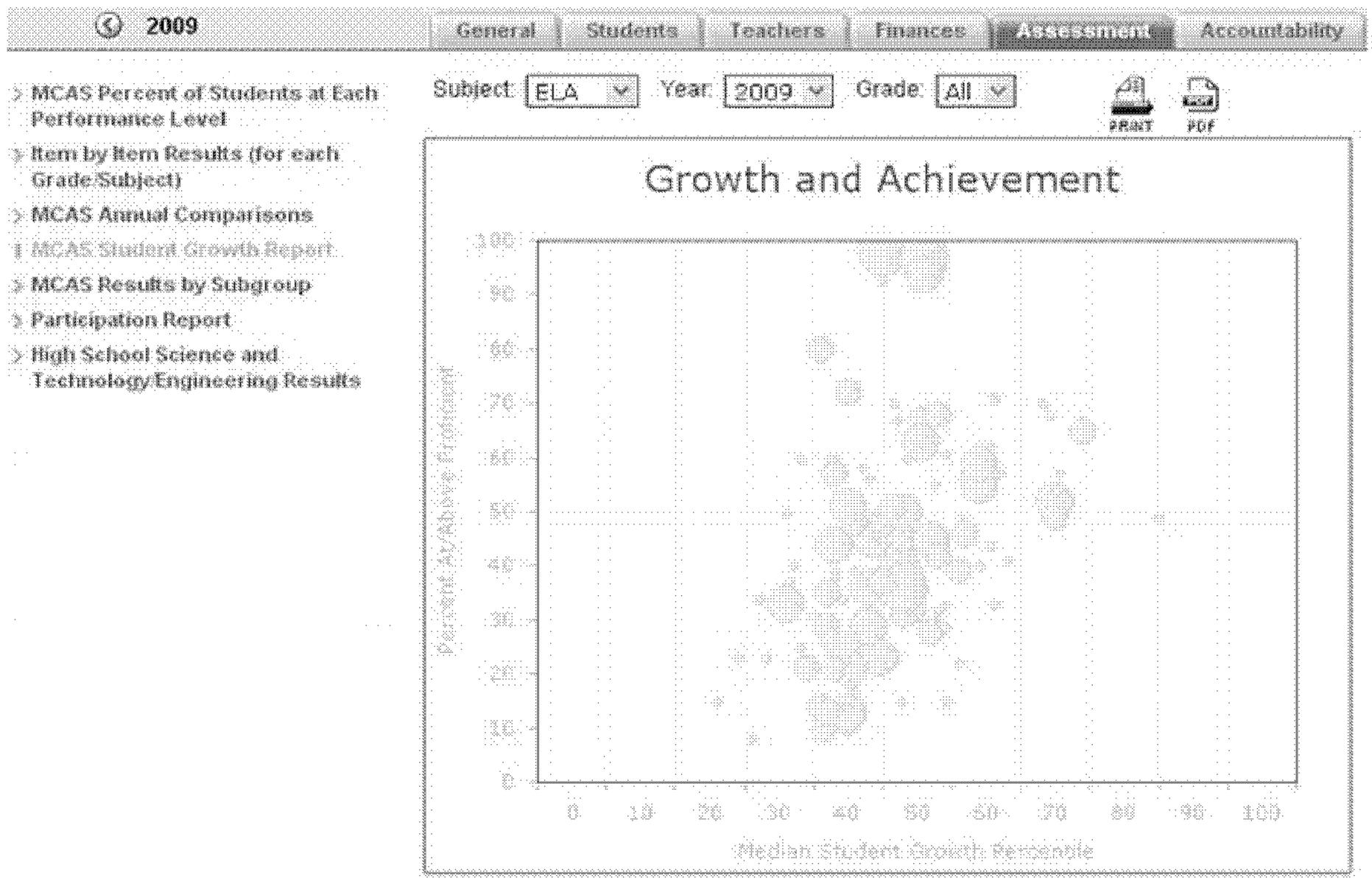
Table 3: ELA MCAS 2009: Grade 10 School Results

	ACHIEVEMENT		GROWTH
	% Proficient or Advanced	CPI	Median Growth Percentile
School A	75%	88.3	63
School B	75%	88.9	32

Schools A and B both had similar achievement profiles. They both saw exactly 75 percent of their students reach *Proficiency* or above, and their Composite Performance Index scores were virtually identical. However, School A had an unusually high median growth percentile of 63, meaning that half of its students grew at or above the 63rd percentile. Meanwhile, School B had an unusually low median growth percentile of 32, meaning that half of its students grew at or below the 32nd percentile. Therefore, while these two schools have extremely similar levels of achievement, School A, due to its high growth, is performing better than School B.

Availability of Growth Data

School and district growth reports are now available online alongside the MCAS test results posted to the Department's "School and District Profiles" (http://profiles.doe.mass.edu/). Tables of results by district, by grade, by school, and by subgroup have also been appended to the 2008 and 2009 MCAS results report (http://profiles.doe.mass.edu/state_report/mcas.aspx). In addition, graphical displays like the figure below are available on each district profile by clicking the "Assessment" then "MCAS Student Growth Report" tabs."



Moving Toward Better Conversations about Teaching and Learning

The advent of a statistically valid growth model in Massachusetts is intended to make it easier for instructional leaders to make inquiries and start meaningful conversations about good teaching and learning at the student and classroom levels, where the information can be most useful. In the Education Data Warehouse, users with access to student level data (mainly school and district administrators) can experience a dynamic interface that allows educators to identify factors associated with high growth rates.

It is important to keep in mind that the student growth percentile is another piece of data that educators may use to better understand their students' performance. There is a personal history behind every student growth percentile, a history that reflects the impact of the curricular and instructional program that the student experienced. The Department hopes that this new measure of student performance provokes high quality conversations about students, programs, schools, curriculum, and the teaching and learning that take place in every classroom across the Commonwealth.

Appendix D5: Measures of Effective Teaching Fact Sheet

Source: Bill & Melinda Gates Foundation, http://www.gatesfoundation.org/united-states/Pages/measures-of-effective-teaching-fact-sheet.aspx

Evidence shows clearly what most people know intuitively: teachers matter more to student learning than anything else inside a school. Yet the design of our school systems fails to value and support effective teaching, improve overall teacher effectiveness, or recognize and reward those who take on and excel at the most difficult teaching assignments. Teachers often bear the brunt of the failure to recognize effective teaching. We do little to study and share the best teachers' practices or recognize them for their contributions.

An important step toward supporting teachers and ensuring that all students have access to high quality instruction is to develop fairer and more useful measures of teacher effectiveness. This is the goal of the Measures of Effective Teaching (MET) project, which will support independent education researchers–in partnership with school districts, principals, teachers, and unions–to develop objective and reliable measures of effective teaching. Rather than relying solely on how well a teacher's students do on assessments, the MET project seeks to uncover and develop a set of measures that work together to form a more complete indicator of a teacher's impact on student achievement.

In addition, as part of its plan to promote and support effective teaching, the foundation is investing in four communities across the country to support bold and ambitious plans that will transform how teachers are recruited, developed, rewarded, and retained.

The MET project will enroll 3,700 teachers, including in the following sites:

- Charlotte-Mecklenburg (N.C.) Public Schools
- Denver Public Schools
- Hillsborough County (Fla.) Public Schools
- Memphis (Tenn.) City Schools
- New York City Public Schools
- Pittsburgh Public Schools

Participation in the Measures of Effective Teaching project is entirely voluntary. School districts applied to participate and were selected for the project based on criteria that included the level of support of district leaders, principals, teachers and unions. Both participating teachers and the schools will each receive $1,500 stipends as honoraria.

Funded by a $45 million commitment from the foundation, the project will be implemented over the 2009-10 and 2010-11 school years in: Math and English classes in grades four through eight; Algebra I at the high school level; high school Biology (or its equivalent); and English in grade nine. Year one will focus on teacher recruitment and data collection, while Year Two will focus on validating promising measures. While the findings and tools developed through this project

will be made available to the public, none of the individual teacher-level data will be shared with the public or with school or district personnel.

Researchers will collect seven types of data:

- Student feedback through surveys
- Student work
- Supplemental student assessments
- Videotaped classroom lessons
- Teacher reflections on their videotaped lessons
- Assessment of teachers' ability to recognize and diagnose student problems
- Teacher surveys on working conditions

There is no widely agreed upon measure for teacher effectiveness that exists today, and that is precisely why we are undertaking this work. The results of this project and what we learn will help districts across the country identify effective teaching in order to improve student achievement and help teachers ensure excellence in their profession.

Appendix D6: Description of Existing Partnerships

The WGEE-ESE Partnership on the Knowledge and Skills of Professional Teaching

In October 2008, seven members of the Working Group for Educator Excellence (WGEE) met with Commissioner of Education Mitchell Chester to discuss ways to pursue our shared and continued commitment to comprehensive support for educator professionalism in difficult financial times. The outcome was an agreement to pursue a joint project between the Department and the Working Group to define the knowledge and skills of professional teaching practice in a deep and detailed way, a project that would enable clearer communication and coordinated programs and practices (such as preparation, licensure, professional development, etc.), and the "Knowledge and Skills of Professional Teaching Project" was born.

Education stakeholders in Massachusetts have not had the opportunity to come together to agree upon a common professional knowledge base for teaching or to organize a centralized repository of professional knowledge. However, today there is a vast amount of validated, research-based knowledge about successful teaching waiting to be defined and organized into such a resource. Our theory of action is to bind together previously disconnected and often dysfunctional elements of the personnel pipeline with the glue of high-level professional knowledge and skill, and to do so comprehensively and forcefully. Accomplishing this goal requires a map of professional knowledge and skill that is detailed enough to guide the work. That is the project of this ESE/WGEE partnership.

The many teaching standards documents available throughout the 50 states list important competencies, but they do so at an abstract level that does not specifically list and explain what teachers need to know and be able to do. The WGEE-ESE partnership project will create a detailed and specific inventory of the great range of knowledge and skills that might be a part of the teacher's repertoire. Established as a dynamic tool, this ever-expanding resource will be organized by essential domains around which there is professional consensus. These domains include academic content and content-specific pedagogy in each of the major disciplines, generic pedagogy including the use of technology, addressing differences in students, family and community involvement, and professional culture. This map of professional knowledge is an absolute requirement for guiding policy and giving support and pressure to colleges and other teacher prep programs, and to school districts in their conduct of induction, teacher evaluation, and professional development.

Having completed a 4-month planning phase, a second 8-month phase of The Knowledge and Skills of Professional Teaching Project began in June 2009. During this phase, subcommittees of accomplished practicing teachers and other experts will pool their knowledge of existing standards efforts and current research to organize and describe what is known in each domain. A Steering Committee of ESE and WGEE members together with Educator Personnel Advisory Committee (EPAC) members will guide their processes and facilitate ongoing, two-way communication with the comprehensive list of associations and stakeholders they represent. Communication with the Board of Education and the Commissioner will be ongoing throughout the process as well. In addition, educator input will be solicited at each critical stage and an open

comment period will engage the public before the end of this first phase of work. The design of the process emphasizes transparency and thoroughness. The outcome will be a unique, groundbreaking, and practical catalogue of the knowledge and skills of professional teaching.

After this phase of the project, the groundwork will be laid for subsequent phases, which will specify which pieces of the knowledge base educators should know and be able to do at each stage of their careers. With broad-based involvement from major stakeholders throughout Massachusetts, this project will be a significant catalyst for uniting the many systems that now separately aim to support teaching quality. All those engaged in teacher preparation, teacher licensure, teacher hiring, teacher induction, teacher professional development, teacher evaluation, and the development of career ladders for accomplished teachers will be able to align their work toward this common vision of quality teaching. In this way we will have created in Massachusetts a coherent continuum that supports professional learning throughout teachers' careers and establishes strong conditions for the practice of professional teaching.

The Interstate New Teacher Assessment and Support Consortium and the State Consortium on Education Leadership

The Interstate New Teacher Assessment and Support Consortium (INTASC), sponsored by CCSSO, is comprised of state education agencies and national education organizations committed to reform of preparation, licensing, and on-going professional development of teachers. Its leadership counterpart, State Consortium on Education Leadership (SCEL), shares the same reform agenda with a focus on education leaders.

INTASC is currently working on updating the Core Standards for teachers, used widely by teacher preparation programs as key standards for teacher candidates or in concert with state mandated standards as a primary project. SCEL members are developing the *SCEL Toolkit to Increase District Capacity* with cross-state teams developing sections focused on building the leadership team; state policy key questions; recruit/train/retain/succession planning; building partnerships; and defining an effective district.

Another initiative for both INTASC and SCEL is forging a stronger collaboration between the two groups to help states develop an effective framework to articulate and operationalize an educator continuum, as detailed in CCSSO's white paper: *Transforming Education: Delivering on Our Promise to Every Child* (March 2009). This initiative is central to joint meeting discussions held twice a year between INTASC and SCEL, as well as through webinars, conference calls, and electronic sharing throughout the year.

The Wallace Foundation

Over the past three years, a grant from the Wallace Foundation and generous funding from the state legislature have supported development of a 21st century cohesive leadership system for Massachusetts (MCLS). Department staff and our partners in Springfield and Boston, and the Center for Education Policy (CEP) among others, have reviewed the research, analyzed emerging national (e.g., *Educational Leadership Policy Standards: ISLCC 2008*) and state (e.g., *Kentucky, Georgia, Alabama*) models, and worked with leaders and other national and state stakeholders to draft new standards for education leaders that are differentiated by key leadership role and career stage, and are designed to be teachable, actionable, and measurable. With Board of Elementary and Secondary Education approval of the new Standards for Policy Standards for Principals, Superintendents, and Other Leadership Roles in July 2009, the next phase of work will focus on aligning core components of a cohesive leadership system by establishing common performance indicators for leaders in various roles, and at each stage of the developmental continuum. Once in place, the indicators will drive:

- redesigning leadership preparation programs;
- changing licensure requirements, including aligning alternative pathways; and
- developing robust formative and evaluative assessments processes to support and measure the effectiveness of leaders as they continue to develop and refine their practice.

The conditions for collaborative development of teachable, actionable and measurable indicators of effective leadership have been fostered in the state during the first phase of the work. In addition, substantial groundwork for retooling in-service training and coaching that target the role of the leader as driver for instructional improvements and student achievement has already gained traction in the state. Most notably, these include the National Institute for School Leadership trainings conducted since 2005 and reaching over 800 principals in over 31 districts and a two-year pilot designed to build collaborative cultures within districts in order to distribute leadership for improving teaching and learning. Individual coaches supported superintendents in five districts with reflective and adaptive strategies to lead in this collaborative environment. The Department is also working closely with the two district-based preparation programs in Boston and Springfield as they align their formative coaching feedback and ongoing support for candidates.

Appendix D7: Current Evaluation Law

CHAPTER 71. PUBLIC SCHOOLS

SCHOOL COMMITTEES

Chapter 71: Section 38. Employment of teachers, aides, principals, etc.; designation of Horace Mann teachers; performance evaluations; performance standards

Section 38. No school district shall require that an individual reside within the city, town or regional school district as a condition of promotion, assignment, transfer or continued employment as a school teacher, instructional aide, assistant principal, principal, director, supervisor, deputy superintendent or professional employee; provided, however, that the provisions of this paragraph shall not apply to any individual appointed, reappointed or promoted to the position of superintendent, associate superintendent or assistant superintendent.

Subject to the collective bargaining provisions of chapter one hundred and fifty E, the school committee may designate each year Horace Mann teachers who meet the requirements and guidelines developed by the board of education pursuant to section one G of chapter fifteen. Any position designated as a Horace Mann teacher shall be included in an appropriate teacher collective bargaining unit. Each year the school committee may designate Horace Mann teachers who meet the requirements and guidelines developed by the board of education; provided, however, that a teacher may not be designated as a Horace Mann teacher more than two consecutive years.

The superintendent, by means of comprehensive evaluation, shall cause the performance of all teachers, principals, and administrators within the school district to be evaluated using any principles of evaluation established by the board of education pursuant to section one B of chapter sixty-nine and by such consistent, supplemental performance standards as the school committee may require, including the extent to which students assigned to such teachers and administrators satisfy student academic standards or, in the case of a special education student, the individual education plan, and the successful implementation of professional development plans required under section thirty-eight Q; provided, however, that such principles and standards be consistent with the anti-discrimination requirements of chapter one hundred and fifty-two B. The superintendent shall require the evaluation of administrators and of teachers without professional teacher status every year and shall require the evaluation of teachers with professional teacher status at least once every two years. The procedures for conducting such evaluations, but not the requirement for such evaluations, shall be subject to the collective bargaining provisions of chapter one hundred and fifty E.

Performance standards for teachers and other school district employees shall be established by the school committee upon the recommendation of the superintendent, provided that where teachers are represented for collective bargaining purposes, all teacher performance standards shall be determined as follows: The school committee and the collective bargaining representative shall undertake for a reasonable period of time to agree on teacher performance

standards. Prior to said reasonable period of time, the school district shall seek a public hearing to comment on such standards. In the absence of an agreement, after such reasonable period, teacher performance standards shall be determined by binding interest arbitration. Either the school district or the teachers' collective bargaining representative may file a petition seeking arbitration with the commissioner of education. The commissioner shall forward to the parties a list of three arbitrators provided by the American Arbitration Association. The school committee and the collective bargaining representative within three days of receipt of the list from the commissioner of education shall have the right to strike one of the three arbitrators' names if they are unable to agree upon a single arbitrator from among the three. The arbitration shall be conducted in accordance with the rules of the American Arbitration Association to be consistent with the provisions of this section. In reaching a decision, the arbitrator shall seek to advance the goals of encouraging innovation in teaching and of holding teachers accountable for improving student performance. The arbitrator shall consider the particular socioeconomic conditions of the student population of the school district. Both the parties and the arbitrator may adopt performance standards established by state or national organizations. The performance standards shall be incorporated into the applicable collective bargaining agreement; provided, however, that any subsequent modification of the performance standards shall be made pursuant to the procedures set forth in this section.

The results of such evaluations may be used in decisions to dismiss, demote or remove a teacher or administrator pursuant to sections forty-two, forty-two A and sixty-three.

Each school district shall conduct evaluations of teachers and administrators in accordance with the regulations of the board and shall be reimbursed for reasonable costs incurred thereby in accordance with section sixty of chapter fifteen.

Appendix D8: Current Evaluation Regulations

603 CMR 35.00
Evaluation of Teachers and Administrators

Section:

35.01: Authority, Scope and Purpose
35.02: Definitions
35.03: Principles of Evaluation
35.04: Performance Standards for Teachers and Administrators
35.05: Implementation and Reporting
35.06: Procedures for Evaluation
35.07: Board of Education Review

35.01: Authority, Scope and Purpose

(1) 603 CMR 35.00 is adopted pursuant to authority granted to the Board of Education in M.G.L. c.69, §1B and c.71, §38.

(2) The specific purposes of evaluation under M.G.L. c.71, §38 and 603 CMR 35.00 are:

(a) to provide information for the continuous improvement of performance through an exchange of information between the person being evaluated and the evaluator, and

(b) to provide a record of facts and assessments for personnel decisions.

(3) The purpose of 603 CMR 35.00 is to ensure that every school committee has a system to enhance the professionalism and accountability of teachers and administrators which will enable them to assist all students to perform at high levels. 603 CMR 35.00, together with the Principles of Effective Teaching and Principles of Effective Administrative Leadership adopted by the Board of Education, set out what Massachusetts teachers and administrators are expected to know and be able to do. 603 CMR 35.00 requires that school committees establish a rigorous and comprehensive evaluation process for teachers and administrators, consistent with these principles, to assure effective teaching and administrative leadership in the Commonwealth's public schools.

35.02: Definitions

Administrator shall mean any person employed in a school district in a position requiring a certificate as described in 603 CMR 7.10(34) through (38) or who has been approved as an administrator in the area of vocational education as provided in 603 CMR 4.00 *et seq.*

Evaluation shall mean the ongoing process of defining goals and identifying, gathering and using information as part of a process to improve professional performance (the "formative evaluation") and to assess total job effectiveness and make personnel decisions (the "summative evaluation").

Evaluator shall mean any person designated by a superintendent, consistent with the procedures set out in 603 CMR 35.06, who has responsibility for evaluation.

Performance Standards shall mean the performance standards locally developed pursuant to M.G.L. c.71, §38, 603 CMR 35.00, and the Principles of Effective Teaching and Principles of Effective Administrative Leadership adopted by the Board of Education.

School Committee shall mean the school committee in all cities, towns and regional school districts, local and district trustees for vocational education, educational collaborative boards, boards of trustees for the county agricultural schools and the board of trustees of a charter school.

Superintendent shall mean the person employed by the school committee pursuant to M.G.L. c.71, §59 or §59A. The superintendent is responsible for the implementation of 603 CMR 35.00. S/he shall be evaluated by the school committee pursuant to 603 CMR 35.00 and such other standards that may be established by the school committee.

Teacher shall mean any person employed in a school district in a position requiring a certificate as described in 603 CMR 7.10(1) through (33), and 603 CMR 7.10 (39) through (42), or who has been approved as an instructor in the area of vocational education as provided in 603 CMR 4.00 *et seq.*

35.03: Principles of Evaluation

(1) The performance standards shall be measurable.

(2) The performance standards shall reflect and allow for significant differences in assignments and responsibilities. These differences shall be described in evaluation reports.

(3) The performance standards shall be shared with the person being evaluated in advance of the evaluation process.

(4) The purpose of evaluation shall be stated clearly, in writing, to the person being evaluated.

(5) The evaluation process shall be free of racial, sexual, religious and other discrimination and biases as defined in state and federal laws.

(6) The person being evaluated shall be allowed to gather and provide additional information on his/her performance. Such information must be provided in a timely manner and must be considered by the evaluator.

(7) The person being evaluated shall have an opportunity to respond in writing to the evaluation reports.

35.04: Performance Standards for Teachers and Administrators

(1) School committees shall establish performance standards for teachers upon the recommendation of the superintendent and in accordance with the process described in M.G.L. c.71, §38, including conducting a public hearing and engaging in collective bargaining and, if necessary, in binding interest arbitration. All performance standards established for teachers shall be consistent with and meet the Principles of Effective Teaching adopted by the Board of Education.

(2) School committees shall establish performance standards for the evaluation of all administrators upon the recommendation of the superintendent. Performance standards for those administrators who are subject to collective bargaining shall be developed in accordance with M.G.L. c.150E. All performance standards established for administrators shall be consistent with and meet the Principles of Effective Administrative Leadership adopted by the Board of Education.

(3) School committees are encouraged to establish programs and standards which provide for a rigorous and comprehensive evaluation process for teachers and administrators. The evaluation process may include consideration of the extent to which students assigned to teachers and administrators satisfy student academic standards or individual education plans, and the successful implementation of professional development plans, as provided in M.G.L. c.69, §1B and c.71, §38.

35.05: Implementation and Reporting

Prior to September 1, 1996, each school committee shall file its evaluation procedures and performance standards for teachers and administrators with the Department of Elementary and Secondary Education unless such school committee is then engaged in the interest arbitration process described in M.G.L. c.71, §38. The superintendent shall certify that the performance standards established pursuant to 603 CMR 35.04 meet the requirements of 603 CMR 35.00 and are consistent with all of the Principles of Effective Teaching and Principles of Effective Administrative Leadership adopted by the Board of Education.

35.06: Procedures for Evaluation

(1) **Responsibility for Evaluation**

(a) The school committee is responsible for ensuring that adequate resources are available to evaluate all administrators and teachers without professional teacher status at least

annually and to evaluate teachers with professional teacher status at least once every two years and to assist teachers and administrators to improve their performance.

(b) The superintendent, by means of a comprehensive evaluation, shall cause the performance of all teachers and administrators within the school district to be evaluated pursuant to 603 CMR 35.00 and the Principles of Effective Teaching and Principles of Effective Administrative Leadership adopted by the Board of Education and any consistent, supplemental performance standards as the school committee may require.

(c) The superintendent is responsible for ensuring that all evaluators have training in the principles of supervision and evaluation and have, or have available to them, expertise in the subject matter and/or areas to be evaluated.

(2) **Gathering Information**

The evaluator shall use information from a variety of sources including direct observation and/or other documented information.

(3) **Reporting Results**

(a) Evaluation reports shall be communicated orally and in writing to the person being evaluated.

(b) Evaluation reports shall recognize areas of strength and identify all areas needing improvement.

(c) For any aspect of performance which needs improvement, the evaluation report shall specify what the individual needs to do to meet the performance standards.

(d) A reasonable amount of time shall be provided to permit the individual to implement the recommendations for improvement of performance and to meet the performance standards.

35.07: Board of Education Review

The Board of Education shall review the performance standards submitted pursuant to 603 CMR 35.05 no less than every two years in order to ensure that the evaluation standards and procedures established by each school committee meet the requirements of 603 CMR 35.00 and are consistent with the Principles of Effective Teaching and Principles of Effective Administrative Leadership adopted by the Board of Education.

TEACHER CAREER PATH

Until recently, most teachers spent their careers isolated in a classroom doing essentially the same job. However, as schools became collaborative cultures, the need for differentiating educators' roles and responsibilities to create a more effective workforce has become apparent. By creating various options within teacher career paths, individuals may adapt their knowledge and skills to the needs of the school and district

A career path is designed for those who wish to remain within the teaching ranks while

- Acknowledging the different levels of knowledge and expertise that teachers acquire during their careers;
- Seeking to identify additional roles and responsibilities as teachers become more expert; and
- Defining the professional knowledge and skills and field experiences needed to acquire additional credentials.

An educator-designed Teacher Career Path (TCP) is vital to retain effective practitioners and to acknowledge that a knowledge-based profession requires specialized knowledge and years of experience. Because educators' knowledge and skills vary at different career stages, a TCP plans for and acknowledges different levels of expertise.
The TCP outlined here articulates two separate paths along which an educator might travel during her/his career: Instructional Leadership and Education Management. The path an educator takes should be determined by the knowledge, skills, and expertise that s/he has attained along the legs of the path.

TWO-STAGE LICENSE

We recommend a two-stage teacher licensure path required for all practitioners: Undergraduate degree, pedagogical coursework and a series of practice-based field experiences.
Stage 1: Resident Teacher is a teacher of record who actively participates in and completes a district or regional New Teacher Induction Program. Professional Teacher Status (PTS) would be earned after three years of successful classroom practice. Resident teachers are evaluated every year with input from peers.
Stage 2: Career Teacher has successfully completed three years as a Resident Teacher, is fully-licensed, and is able to meet student learning needs with little or no guidance. Career Teachers are evaluated every other year with guidance from peers.

NATIONAL BOARD CERTIFIED TEACHER

A National Board Certified Teacher has successfully completed the National Board of Professional Teaching Standards process which research suggests identifies highly effective teachers who have a greater impact on student achievement than teachers without board certification. NBCTs have demonstrated an ability to teach all students to a level of deeper understanding. Incentives should be created to ensure a greater number of board-certified teachers representing the diversity of our student population in the schools that most need their skills.

INSTRUCTIONAL LEADERSHIP PATH:

Instructional Leadership Teachers (ILTs) assume additional duties for additional compensation while remaining within the teaching ranks. ILTs are fully-licensed and have Professional Teacher Status (PTS). Each role requires a DESE endorsement to the teaching license indicating the teacher has completed a graduate course in adult learning theory, one additional course and a field experience.

EDUCATION MANAGEMENT PATH:

Education Managers (EMs) are systems-oriented practitioners who leave the teaching ranks to manage a complex operation. EMs are fully-licensed teachers who have PTS and complete a graduate program mastering the skills needed to ensure schools are efficient, effective learning communities. Coursework would include understanding education policy development and implementation; creating school schedules; developing effective communications structures between home, school, and community; ensuring that teachers and students have the textbooks and instructional materials; overseeing the care and maintenance of the physical plant; and developing and implementing the school budget.

	INSTRUCTIONAL LEADERSHIP ROLE	COURSE WORK & FIELD EXPERIENCE
1.	**Community Liaisons** identify businesses, cultural organizations, youth agencies, and other community-based organizations and with whom the schools may partner and identify other resources to support student learning.	• Identification of and collaboration with community-based organizations. • Grant writing skills and strategies.
2.	**Content/Instructional Coaches** guide teachers in the use of curriculum materials and instructional strategies. In addition to demonstrated expertise in the content area.	• Presentation, facilitation, coaching skills. • Broad repertoire of instructional methods.
3.	**Curriculum Developers** guide the development of local curriculum adoption and adaptation with state or national standards and identify appropriate instructional materials and strategies.	• Curriculum models and design. • Models of teaching.
4.	**Data Analysts** read and interpret a variety of indicators of student, school, and district performance.	• Use and analysis of multiple measures of assessment. • Use of school data as a means of informing curriculum and instruction decisions.
5.	**Family Engagers** work with parents and families through two-way communication between the school and home to create more home-like schools and school-like homes.	• Effective engagement of parents and families from different ethnic, linguistic, cultural and socioeconomic groups.
6.	**Induction Leaders** plan, develop, and instruct Resident Teachers through on-site seminars, workshops, and courses addressing specific learning needs.	• Presentation, facilitation, and coaching skills. • Group process strategies.
7.	**Mentors** observe and conference with Resident Teachers through at least their two years of practice through frequent one-on-one or small group sessions; provide feedback and assistance about classroom and professional practice.	• Facilitation and coaching practices. • Formative assessment strategies.
8.	**New Teacher Developers** work with pre-service teachers completing their field experiences by making connections between classroom observations and the content of teacher preparation program courses.	• Facilitation and coaching practices with new educators. • Connection of PreK-12 practice with teacher preparation program requirements.
9.	**Peer Assistants** provide intense one-on-one support to veteran educators identified as needing assistance in improving their practice.	• Facilitation and coaching practices with veteran educators. • Formative assessment strategies.
10.	**Staff Developers** plan, develop and present professional learning experiences based on identified needs.	• Development of adult learning experiences. • Presentation, facilitation and coaching skills.

Appendix D10: Description of the Status of the Educator Workforce report

ESE has made a recent commitment to publish an annual Status of the Educator Workforce Report, which will draw data from multiple sources and provide the Commonwealth with a "data dashboard" regarding educator supply, demand, effectiveness, distribution, and retention issues. The publication of the Report was one of the recommendations included in the Readiness Report, and has also been recommended by the Educational Personnel Advisory Council for the Board of Elementary and Secondary Education (EPAC).

As new effectiveness measures are designed and implemented, the Report will allow for a more robust analysis of the equitable distribution of effective teachers. The proposed linkages between large State-wide data sets will also make analysis of data easier and more intuitive. For 2010, ESE will use proxies of teacher effectiveness, such as:

- % HQT
- % Classes in Core Academic Areas taught by HQTs
- % Teachers licensed in teaching assignment
- # Teachers on a licensure waiver

In addition, the report will provide correlational analysis of teacher demographics (such as years of experience, or age) with district demographics (such as average MCAS scores, % students receiving free/reduced lunch, district retention rates).

The first edition of the Status Report will provide a general view of the educational landscape of Massachusetts. We will be able to conduct some general trend supply/demand analysis and identify some characteristics of districts that have been effective (using the limited data of effectiveness currently on hand). Later editions of the Status Report will incorporate new effectiveness measures and data, which will allow the Report to be used in decision-making processes at the District-level, as well as informing policy decisions at the State level.

Data sources include:

- Education Personnel Information Management System (EPIMS)
- Educator Licensure and Recruitment (ELAR)
- MA Retirement System and Boston Public Schools Retirement System
- ESE Anticipated Program Approval Survey
- Title II Program Reporting
- District profiles
- Massachusetts Teaching, Learning and Leading Survey (Mass TeLLS)
- Readiness Report

Appendix D11: Readiness Centers Initiative

Governor Patrick's Education Action Agenda included a recommendation to establish regional Readiness Centers, multipurpose and collaborative hubs focused on improving the quality of teaching both across the education continuum and across Massachusetts. The Executive Office of Education (EOE) established the Readiness Centers in October 2009, and they will offer instructional and professional development services to address both local/regional educational needs and statewide priorities such as closing achievement gaps among different groups of students, improving the quality of instruction for English language learners and in STEM courses of study, and using data more effectively to assess student progress and improve the quality of instruction.

The Readiness Centers are being managed and will continue to be developed by regional consortia of partners that include public and private institutions of higher education, school districts, early education and out-of-school-time providers, educational collaboratives, and business and community partners. This robust network of partners will increase the capacity of Massachusetts to support educators by: 1) supporting the development of more aligned and comprehensive models for teacher induction, professional development, and mentoring; 2) significantly improving the content and delivery of instructional and professional development services to educators; 3) developing new partnerships between different state agencies and local/regional stakeholders; and 4) leveraging existing programs and resources to maximize the benefits to educators across the education continuum.

The regional partners will also utilize this network to convene representatives from early education, elementary and secondary education, higher education, and other sectors to address P-20 initiatives including school readiness, vertical alignment across the educational continuum, college and career readiness, and expanding the supply of effective and culturally competent educators, particularly educators of color and those teaching STEM courses, English language learners, and students with disabilities.

Each Readiness Center will provide a site and basic operational support for a District and School Assistance Center (DSAC) that will provide targeted assistance and focused professional development to selected districts and schools that are identified pursuant to regulations of the Board of Elementary and Secondary Education. The DSACs will collaborate with the regional partners for the Readiness Centers and other organizations to design, deliver, and evaluate the targeted assistance and focused professional development services that are provided to educators in the region.

The six Readiness Centers and the primary regional partners are as follows.

Berkshire Readiness Center – Massachusetts College of Liberal Arts, Berkshire Community College, and the Berkshire Compact for Higher Education.

Central Massachusetts Readiness Center – Fitchburg State College, Massachusetts Elementary School Principals' Association, and Worcester State College.

Greater Boston Readiness Center – Framingham State College, University of Massachusetts Boston, Wheelock College, Massachusetts Bay Community College, and the Greater Boston Regional Collaboratives Organization.

Northeast Regional Readiness Center – Salem State College, University of Massachusetts Lowell, North Shore Community College, Middlesex Community College, Northern Essex Community College, Merrimack College, Endicott College, and Gordon College.

Pioneer Valley Readiness Center – Westfield State College, University of Massachusetts Amherst, Hampshire Educational Collaborative, and the Lower Pioneer Valley Educational Collaborative.

Southeastern Massachusetts Readiness Center – Bridgewater State College, University of Massachusetts Dartmouth, Bristol Community College, Cape Cod Community College, Massasoit Community College, Massachusetts Maritime Academy, Brockton Workforce Investment Board, New Bedford Workforce Investment Board, Southeast Collaboratives Regional Organization, Lighthouse Superintendents' Group, and the Lighthouse Assistant Superintendents' Group.

The Readiness Centers initiative will remain a major focus of the Patrick Administration's education agenda and a central strategy to improve the content and delivery of instructional and professional development services across regions.

Readiness Centers Network

The Readiness Centers Network (RCN) was established to support the development of effective relationships among the regional partners that will manage and sustain the Readiness Centers. The primary goals of the RCN are as follows:

1) Disseminate information about best practices and replicable instructional, professional development, and other educational models to the regional partners and other stakeholders across Massachusetts;

2) Establish mechanisms that will promote effective and consistent communication among the regional partners;

3) Support the development and implementation of strategies that can address common goals across regions; and

4) Support the assessment of progress to date, both with regard to the establishment of the Readiness Centers and the impact of services and activities on student, educator, and other outcomes.

The RCN will also serve as the primary system through which the EOE and the Departments of Early Education and Care, Elementary and Secondary Education, and Higher Education will provide statewide technical assistance and support to the regional partners.

Appendix D12: Definitions of High-Poverty and High-Minority Schools

For the purposes of the State's Teacher Equity Plan, the State defines **high-poverty schools** as schools in the top quartile for percentage of students receiving free or reduced price lunch. **Low-poverty schools** are schools in the low quartile for percentage of students receiving free or reduced price lunch.

The State currently does not have a definition of high minority schools for the Teacher Equity Plan. For the purposes of Race to the Top, and in parallel with the definition of high poverty schools, the State defines **high-minority schools** as schools in the top quartile of the state for percentage of non-white student enrollment. **Low-minority schools** are schools in the low quartile for percentage of non-white student enrollment.

Appendix D13: Preparation Program Approval Pilot

In 2006 the Massachusetts Department of Elementary and Secondary Education (ESE) identified and invited representative organizations to participate in the development of a new outcomes-based approach to program approval.

The mission of the work was to develop and implement a statewide system for Educator Preparation Program (EPP) approval that focuses more directly on program and candidate outcomes, to inform program development and improvement and related efforts.

The vision was to create a program approval process with a focus on establishing a:

- Continuous improvement system that examines program effectiveness through the compilation and analysis of data, both quantitative and qualitative
- System that will enable each sponsoring organization to reflect and assess its performance in the delivery of educator preparation programs
- Process for ESE to analyze the effectiveness and impact of programs and program completers in relation to student achievement and other measures

Effectiveness Indicators were developed to capture, measure and analyze candidate, program and program completer data.

ESE has piloted this new program approval process, using effectiveness indicators, with 12 representative organizations. These reviews began in March 2009 and will be completed in January 2010. The following organizations were part of the pilot:

Endicott College
Curry College
Bay Path College
Anna Maria College
Elms College
Emerson College
Emmanuel College
Hellenic College
Lowell Public Schools
Shady Hill School
UMass-Boston
Springfield College

Appendix D14: Educator Preparation Annual Report Card

Draft as of January 8, 2010

ORGANIZATIONAL INFORMATION
Type of Organization (public, private, alternative)
Full-Time Student Enrollment
Part-Time Student Enrollment
# of Staff
# of Full-Time Teaching Faculty
# of Part Time Teaching Faculty
% of Classes with under 30 students

Educator Preparation Program(s) At-A-Glance

Contact Information:

CONTACT INFORMATION	
Admissions/General	Preparation Program
Phone:	Phone:
Email:	Email:
Website:	Website:

General Information:

GENERAL INFORMATION
Average SAT
Average ACT
Average GRE
Average MAT
Average High School GPA
Average Undergraduate GPA
Student/Teacher ratio

District Partnerships and Support:

DISTRICT PARTNERSHIP AND SUPPORT
Description of collaboration Partner districts Effectiveness in meeting staffing needs as reported by district and state # of completers employed in high poverty districts # of completers employed in high need license areas Effectiveness of program and completers in increasing student achievement/academic success as reported by district and state Retention rate of completers employed in district/school

Faculty:

DEMOGRAPHICS OF FACULTY
Race/Ethniciy (%) African American or Black Asian Hispanic/Latino Multi-race, Non-Latino Native American Native Hawaiian or Pacific Islander White Gender (%) Female Male

Students:

DEMOGRAPHICS OF STUDENTS
# of Students who applied
% of enrolled admitted
% from Massachusetts
Race/Ethniciy (%)
African American or Black
Asian
Hispanic/Latino
Multi-race, Non-Latino
Native American
Native Hawaiian or Pacific Islander
White
Gender (%)
Female
Male

Program Enrollment Requirements:

PROGRAM ENROLLMENT REQUIREMENTS
Minimum GPA
MTEL
Field experience
Course requirements
Other

MTEL Preparation and Pass Rates:

MTEL PREPARATION & PASS RATES
# of Candidates Attempting
# of Attempts to Pass
Description of Services/Supports in Place to Prepare Candidates
Average scaled score
Taking test
Passing test
Pass Rate %

Program Offerings:

PROGRAM OFFERINGS
List of approved programs Description of program features and delivery

Field-Based Experience Information:

REQUIREMENTS FOR ADMISSION TO THE PRE-PRACTICUM AND PRACTICUM
Practicum Pre-Practicum

PRACTICUM PROGRAM DATA
Average number of weeks Average number of hours Total number of students enrolled Number of Full Time Faculty members who supervised student teachers Number of Part time Faculty members who supervised student teachers List of practicum settings
PRE-PRACTICUM PROGRAM DATA
Average number of weeks Average number of hours List pre-practicum settings

Program Completion:

PROGRAM COMPLETION REQUIREMENTS
Average # of course required for program completion: Content courses Pedagogy courses MTEL(s) required Field-Based experience Other

PROGRAM COMPLETER INFORMATION

Total # of completers
Response rate to follow-up
% employed in position of license/program completed
% employed in position of license outside of Massachusetts
% employed in Massachusetts public school
% pursuing additional training
% employed in another field

Manner of Exit From Program and Persistence Rate:

MANNER OF EXIT FROM PRORGAM AND PERSISTENCE RATE

students entered the program
Total % transferred out of program
    % transferred to another institution
    % transferred out of program due to change of career interest
    % transferred out of program due to inability to pass MTEL
students graduated from the teacher licensure program

Overall Persistence Rate:

Annual Goals for the Program:

ANNUAL GOALS FOR THE PROGRAM

DRAFT

	Effectiveness Indicator 1			Candidate Attainment and Performance - Content (SMK) Standards	
	Effective preparation in subject matter knowledge (SMK) standards, employment of assessments that enable analysis of candidate mastery of SMK, and support resources, as needed, for successful completion of MTEL(s) required for licensure.				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
A.	80% Pass Rate on MTEL	Report MTEL Test Results for SMK	Pearson Results & State Annual Report	Chart/Table with Summary Of Outcomes for the last 5 years	Analysis of pass rate results
B.1	Subject Matter Knowledge (SMK) - **Bacc**	Matrices depicting SMK Coverage	Syllabi Matrices Analysis	Completed Reporting Templates/Matrices for SMK	Analysis of the depth of coverage of SMK across the program (as a whole)
			Catalog/Website	Program of Study (Listing of Courses including course name, number & description)	Identification of "Licensure Core" and "Variety of Fields" opportunities
			Course Evaluations	Course Evaluation Rating Summary	Analysis of the Course Evaluation Rating Summaries (as a whole)
			Interviews with Faculty, Candidates (current & graduates), program supervisors, supervising	Organization Interview Findings	Analysis of Organization Interviews
			Candidate Surveys	Summary of Survey Results	Analysis of Summary
			Focus Groups	Summary of Findings	Analysis of Summary
B.2	Subject Matter Knowledge (SMK) - **Post Bacc**	Program Assessment of post-bacc content readiness	Candidate transcripts	Document used to capture findings of transcript review	Analysis of Findings from transcript review process
C.**	Program Specific Assessment of Candidate Performance pertaining to SMK	Program Specific	Assessments	Chart/Table Depicting year-by-year candidate performance outcomes using a four level rating system (exceeds/meets/further development needed/insufficient)	Candidate performance on program specific assessments
			POSSIBLE SOURCES: Course Assessments Projects Portfolio Teacher Work Samples Capstone Experiences Tests Other		
D.	100% Use of the License Specific Questions (PPA)	Report Rate of Utilization of the assessment instrument	Candidate Records containing Department Approved Performance Assessment Instrument Completed Performance Assessment Instruments	Chart/Table showing aggregate results of Use of the License Specific Questions	Analysis of candidate performance on the performance assessment/license specific questions
	**** Bold - Pilot Standards**				

	Effectiveness Indicator 2A				Candidate Attainment and Performance - Professional Standards for Teachers (PST)				
	Effective preparation in professional standards and use of performance assessments to inform instruction								
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT/SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce				
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**	**Organization will submit & ESE will review in advance**	**Organizaton will present during site visit**	**ESE will reference/conduct during site visit**	**Refer to:**
A.	Professional Standards Teachers (PST) Coverage	PST Matrix	Syllabi	Completed Matrix	Analysis of the depth of coverage across the program (as a whole) in the analysis	X	X	X	PSA Template/Reporting Matrix
B.	100% Use of Department Approved Preservice Performance Assessment Instrument	Report on Rate of Utilization of the assessment instrument	Completed Preservice Performance Assessments (PPA -**teacher & specialist teacher**)	Chart/Table showing aggregate candidate performance, standard by standard, of the Department Approved Performance Assessment Instrument	Analysis of the results of candidate performance on the Professional Standards	No	X - Through Sampling of Student Records	X	Advisory for Recordkeeping PPA & Guidelines
C.	100% Use of Department's rubric to evaluate candidates' performance on the PSTs	Performance Assessment Rubric Analysis	Completed Preservice Performance Assessment (PPA -teacher & specialist teacher)	Description of the process and summary of the outcomes of candidates' performance using the Department's rubric	Analysis of the results of candidates' performance using the Department's rubric	No	X - Through Sampling of Student Records	X	Advisory for Recordkeeping PPA & Guidelines
****D.**	**100% Use of an organization's rubric to evaluate candidate performance on the PPA**	Performance Assessment Rubric Analysis	Completed Preservice Performance Assessment (PPA -**teacher & specialist teacher**)	Description of the process and summary of the candidates' performancethe outcomes of the organization's rubric	Analysis of the results of candidates' performance using the organization's rubric	No	X - Through Sampling of Student Records	X	TBA
	**** Bold - Pilot Standards**								

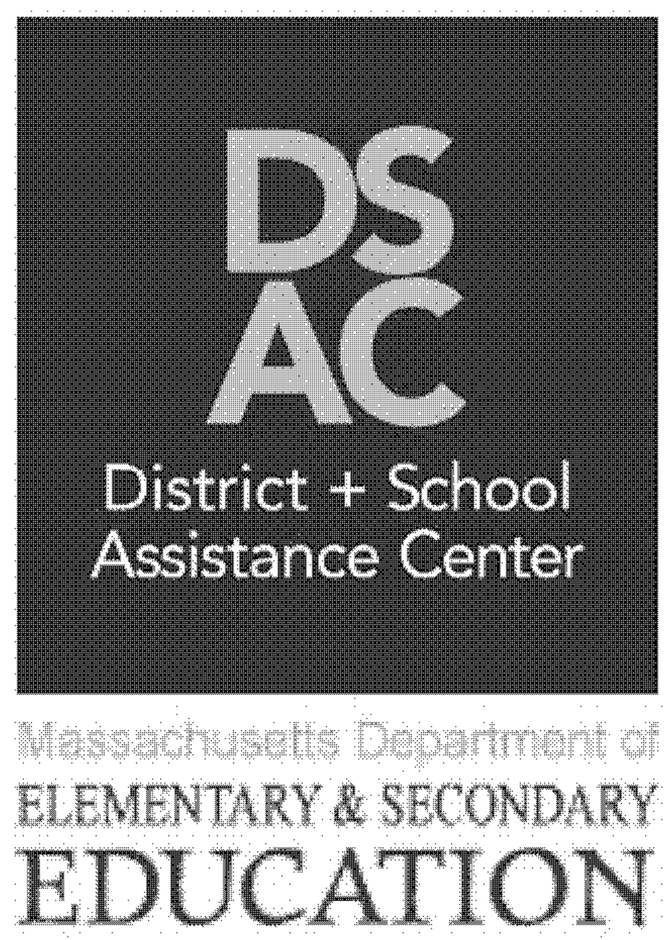
	Effectiveness Indicator 2B				Candidate Attainment and Performance - Professional Standards for Administrators				
	Effective preparation in professional standards and use of performance assessments to inform instruction								
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT/SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce				
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**	**Organization will submit & ESE will review in advance**	**Organizaton will present during site visit**	**ESE will reference/conduct during site visit**	**Refer to:**
A.	Professional Standards for Administrators (PSA) Coverage	PSA Matrix	Syllabi	Completed Matrix	Analysis of the depth of coverage across the program (as a whole) in the analysis	X	X	X	PSA Template/Reporting Matrix
B.	100% Use of Department Approved Performance Assessment Instrument	Report on Rate of Utilization of the assessment instrument	Completed Performance Assessments	Chart/Table showing aggregate candidate performance, standard by standard	Analysis of the results of candidate performance on the Professional Standards	No	X Through Sampling of Student Records	X	TBA
C.	100% Use of a rubric to evaluate candidate performance on the PSAs	Performance Assessment Rubric Analysis	Completed PerformanceAssessment	Description of the process and summary of the outcomes of the candidates' progress using the organization's rubric	Analysis of the results using the rubric	No	X Through Sampling of Student Records	X	TBA
****D.**	**100% Use of an organization's rubric to evaluate candidate performance on the PPA**	Performance Assessment Rubric Analysis	Completed Preservice Performance Assessment (PPA	Description of the process and summary of the candidates' performancethe outcomes of the organization's rubric	Analysis of the results of candidates' performance using the organization's rubric	No	X - Through Sampling of Student Records	X	TBA
	**** Bold - Pilot Standards**								

	Effectiveness Indicator 3				Program Delivery - Organizational & Program Data and Documentation					
	Effective use of data and documentation of program components (regulatory) & proposed standards (pilot)									
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce					
	STANDARD	MEASURE	Possible SOURCES of DATA & DOCUMENT(S)	COMPILATION OF EVIDENCE	ANALYSIS OF EVIDENCE Plan limited to 1-2 page	Organization will submit & ESE will review in advance		Organization will present during site visit	ESE will reference/ conduct during site visit	Refer to:
						Education Unit	Program			
A.**	**Outreach and Recruitment to enroll a diverse candidate pool	Documentation of outreach and recruitment efforts	Materials, presentations, mailings, surveys	Summary depicting outreach strategies & results of outreach and recruitment	Plan for increasing diversity of candidate pool	X	n/a	X	X	TBA
B.	Admissions standards & process reflecting regulatory requirements	Documentation of availability, accuracy & clarity of admissions requirements & materials	Website, Catalog, Degree/Program Checklist, Surveys, Focus Groups, Interviews with students	Compilation of admissions materials	Plan to ensure program admission requirements are in compliance	X	X	X	X	Refer to Advising Requirements for Educator Preparation Programs
C.	Advising process reflecting regulatory requirements	Document ion of availability, accuracy & clarity of advising requirements & materials	Advisment sheets, program flow sheets/charts, program of study, catalog, web site, Interviews with students, surveys	Compilation of advising materials	Plan to ensure program advising requirements are in compliance	X	X	X	X	Refer to Advising Requirements for Educator Preparation Programs
D.**	**MTEL Support services to increase candidate success in passing required state licensure test(s). SMK(s) & C&L	Documentation of availability and accessibility of organizational resources committed to candidate success	Supports: tutoring, courses/seminars, materials, faculty involvement, surveys	Compilation of MTEL Support Services Information	Plan to ensure MTEL support services is in place and in use	X	X	X	X	TBA
E.	Pre-Practicum experiences reflecting regulatory requirements	Demonstrate that candidates participate in diverse pre-practicum experiences in a variety of settings related to the role of the license	Handbook(s), Course Name & Number, Syllabi, Candidate Pre-practicum logs, student files, Surveys, Interviews, Candidate Evaluations of Supervising Practioners & Program Supervisor	Chart summarizing pre-practicum placements, number and length of experiences	Plan to address Pre-Practicum regulatory requirements for each candidate	X	X	X	X	TBA
F.**	**Program DATA - candidates**	Persistence & Completion Data, Manner of Exit from Program, Completers obtaining education employment in & out of MA	SAR, Title II Report, databases, surveys, students files, program & organizational resources, EPIMS							
G.	Practicum/Practicum Equivalent experiences reflecting regulatory requirements	Demonstrate that candidates are provided a quality practicum experience that prepares them for the role and license.	Handbook(s), Course/Seminar Name & Number, Syllabi, Candidate PPA, student files, Surveys, Interviews, Candidate Evaluations of Supervising Practioners & Program Supervisor	Chart summarizing pre-practicum placements, number, length and types of experiences	Plan to address Practicum regulatory requirements for each candidate	X	X	X	X	PPA & Guidelines TBA - Administrators
H.**	**Career Development & Placement Services to support candidate employment and effectiveness	Document availability and accessibility of resources and guidance to assist candidates/graduates with securing employment and being effective in their role.	Website, Materials, Catalog, Staff Resources, Interviews with students, Surveys, Feedback from school personnel	Compilation of Career Development & Placement Service materials	Plan to ensure Career Development and Placement Services is in place and in use	X	n/a	X	X	Refer to Advising Requirements for Educator Preparation Programs & TBA
	** Bold - Pilot Standards									

	Effectiveness Indicator 4								Progam Review and Improvement
	Effective engagement in a process of self evaluation to foster continuous improvement at the organizationation, unit and program level(s).								
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce				
	STANDARD	MEASURE	Possible SOURCES of DATA & DOCUMENT(S)	COMPILATION OF EVIDENCE	ANALYSIS OF EVIDENCE	Organization will submit & ESE will review in advance	Organizaton will present during site visit	ESE will reference/conduct during site visit	Refer to:
A.**	**Organizational Program Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	Describe the organization's process established for program review & improvement	Program Self-Assessment Advisory Committees/Councils Focus Groups, Data						
B.**	**Education Unit Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	Describe the Education Unit's process established for program review & improvement							
C.**	**Licensure Program Review Process that engages the program provider in a periodic, reflective self analysis to support continuous improvement**	Describe the licensure program(s)' process established for program review & improvement							
**D	**Annual Goal Achievement**	Deecribe how goals were set and achieved annually							
	** Bold - Pilot Standards								

	Effectiveness Indicator 5			District Support and Evaluation of Educator Preparation Programs	
	Effective analysis of district(s) needs and ability to support district through preparation programs				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
****A.**	**Program Alignment to District Needs**	Needs assessments conducted	Focus groups		
****B.**	**Program Responsiveness**	High need licensure areas			
		Low incidence licensure areas			
****C.**	**Partnership development**	Stakeholder engagement & satisfaction			
****D.**	**Production and placement in high need areas**				
	** Bold - Pilot Standards				

	Effectiveness Indicator 6			Program Completer Impact on Student Achievement and Success	
	Effective examination on impact of educator preparation progams completers on effectiveness as beginning teachers and impact on student achievement and success.				
	REQUIREMENT	OUTCOME/EXPECTATION	LOOK AT /SPEAK TO	TALLY & SYNTHESIZE	ASSESS - Must Produce
	STANDARD	**MEASURE**	**Possible SOURCES of DATA & DOCUMENT(S)**	**COMPILATION OF EVIDENCE**	**ANALYSIS OF EVIDENCE**
**A.	**Evaluation of induction/mentoring programs by beginning teachers**	Aggregate data provided by beginning teachers to determine their level of satisfaction with the induction and mentoring program	Surveys	TBD	TBD
**B.	**Evaluation of impact on student achievement**	Impact of educators on student achievement	MCAS and Other Formative Assessments	TBD	TBD
**C.	**Impact in student achievement to close the acheivement gap with focus in high need areas**				
	** Bold - Pilot Standards				



Menu of Professional Development + Targeted Assistance Offerings 2009-2010

District and School Assistance Center
Menu of Professional Development and Targeted Assistance Offerings
2009-2010

The Department of Elementary and Secondary Education (ESE)'s regionally based District and School Assistance Centers (DSACs) will make available professional development and targeted assistance to support identified districts and their schools. During the course of the first year and summer, DSACs will offer a limited menu of professional development and targeted assistance aimed at addressing key district and regional needs. **Districts that are in Level 3 and Level 4 (that are not Commissioner's districts[1]) and their schools have priority for these offerings during 2009-2010, unless otherwise noted**.

Through the DSACs, ESE is making assistance available in the following categories:

First, ***focused professional development*** offerings are directed at building essential knowledge and skills of educational leaders and teachers in major content areas and for key student groups. While limited, the ESE developed or contracted professional development is researched-based, *technical* information that has successfully engaged and addressed the needs of Massachusetts educators over the past several years.

Second, ***targeted assistance*** is designed to support districts and schools to systematically use and implement professional development, leadership practices, and program resources to improve school and district performance. Educational research on school and district improvement consistently shows that these *adaptive* activities are critical for effecting sustained change. DSAC staff will emphasize collaboration and sharing of effective practices among each region's districts, along with the modeling of tools and resources aligned to some of ESE's *Conditions for School Effectiveness.*

Third, one-time ***orientation sessions*** on assistance tools and resources available from ESE to support decision-making and program improvement will be available to all districts in the region.

DSACs will collaborate with Level 3 districts to **link assistance** from the first and second categories, whenever possible, to develop robust and coherent plans for raising student achievement across the districts and region.

Menu Format

This initial menu details the offerings available through the DSACs from January – August 2010. (In some cases, professional development began in the late fall of 2009, as well.) The information is organized in the following sections:

Section 1: Summary List of ***Focused Professional Development*** and ***Targeted Assistance offerings***

Section 2: Descriptions of ESE's DSAC ***Focused Professional Development*** and ***Targeted Assistance offerings***, locations, timing and any notable requirements and expectations for participation. This section has separate descriptions for ***Focused Professional Development*** courses and for ***Targeted Assistance*** activities. The descriptions are organized by relevant ***Conditions for School Effectiveness.***

Section 3: Summaries of ***One-Time Orientation*** sessions that will be available to all districts through the DSACs.

[1] Commissioner's Districts are Boston, Brockton, Fall River, Holyoke, Lawrence, Lowell, Lynn, New Bedford, Springfield and Worcester

General Expectations for Participation

These assistance offerings are being made available to eligible Level 3 districts by leveraging a combination of federal Title I, IID, Special Education and very limited state resources. These offerings are being targeted to districts with high need. ESE has found that certain clearly established expectations increase the likelihood of greater impact. These expectations are described below and in more detail for certain focused professional development offerings. The general conditions and expectations are as follows:

1. All participants are expected to attend every course session.
2. The supervisors, principals, and/or superintendents of participants should establish:
   - Routines for participants to share the knowledge they are gaining through the professional development or assistance activity, as appropriate
   - Routine systems to ensure that effective practices are being implemented
   - Processes to resolve barriers to implementation, as needed

How to Use the DSAC Menu and General Process for Accessing Assistance

1. Review section 2, to:
   - Determine whether any of the offerings available through your region's DSAC will help your district address its key strategic initiatives, as well as address gaps in your district's ability to meet certain *Conditions for School Effectiveness* in identified schools
   - Determine whether your district meets any noted eligibility requirements and will be able to implement the activities described in the expectations section.
2. Identify selections during a planning meeting with DSAC staff to:
   - Describe how these selections support district strategic initiatives and
   - Detail how the district will meet expectations for participation.
3. The district leadership and DSAC staff will reach agreement on selections once the DSAC staff gathers sufficient information from the regions' districts seeking to participate in DSAC assistance.
4. The district leadership will apply for grant funding to support participation in all selected and agreed upon offerings.

NOTE: Districts will be provided the opportunity to participate in menu offerings based on the match between district priorities, the district's demonstration of ability to meet expectations for readiness to use the resources, and in certain cases, the Title I status of schools in the district. If demand for assistance surpasses supply, priority for participation will be in the following order:

- Districts in Corrective Action with multiple schools in Corrective Action or Restructuring
- Districts with multiple schools in Corrective Action or Restructuring
- Districts with single schools in Corrective Action or Restructuring

Section 1 – Summary List

A. FOCUSED PROFESSIONAL DEVELOPMENT OFFERINGS

Condition #1 EFFECTIVE SCHOOL LEADERSHIP:

- ☐ National Institute for School Leadership's Instructional Leadership Training [1PD10001]
- ☐ Special Education Leadership Academy [1PD010002]

Condition # 6 STUDENTS' SOCIAL, EMOTIONAL, AND HEALTH NEEDS:

- ☐ Creating Positive Learning Environments [6PD10023]
- ☐ Youth Development and Self Determination [6PD10024]
- ☐ Transition Planning [6PD10025]

Condition #9 EFFECTIVE INSTRUCTION:

MATHEMATICS

- ☐ Mass Intel Math Initiative (MIMI) [9PDM10003]
- ☐ Developing Algebraic Thinking for Middle and High School Math Teachers [9PDM10004]
- ☐ Understanding Rational Numbers [9PDM10005]
- ☐ The Coaching Cycle [9PDM10006]
- ☐ Increasing Accessibility to Algebra and Geometry for All Students [9PDM10007]
- ☐ Academic Youth Development [9PDM10008]

LITERACY

- ☐ Differentiated Writing Instruction to Close the Achievement Gap - Grades 3-4 [9PDL10009]
- ☐ Foundations of Literacy Courses - Grades K-3 [9PDL10010]
- ☐ Language Essentials for Teachers of Reading and Spelling (LETRS) - Grades K-3 [9PDL10011]
- ☐ Reading and Writing Informational Text – Grades K-6 [9PDL10012]
- ☐ Reading in the Content Areas – Grades 6-8 [9PDL10013]
- ☐ Teaching Expository and Persuasive Writing – Grades 6-12 [9PDL10014]
- ☐ Oral Language and Vocabulary – Grades K-5 [9PDL10015]
- ☐ Writing in Response to Reading – Grades 2-5 [9PDL10016]

SHELTERED INSTRUCTION FOR ENGLISH LANGUAGE LEARNERS

- ☐ Introduction to Second Language Learning and Acquisition [9PDE10017]
- ☐ Enhancing English Language Learning in Elementary Classrooms [9PDE10018]
- ☐ Enriching Content Classes for Secondary ESOL Students [9PDE10019]
- ☐ From Language to Literacy - Reading and Writing for English Language Learners in Sheltered Elementary Classrooms [9PDE10020]
- ☐ Making the Connection – English Language Learners and Subject Matter Texts [9PDE10021]

INCLUSIVE PRACTICES

- ☐ Universal Design for Learning (UDL) [9PDI10022]

B. TARGETED ASSISTANCE OFFERINGS

Condition #1 EFFECTIVE SCHOOL LEADERSHIP*:*

- ☐ **Guided Self-Assessment on the Conditions for School Effectiveness [1TA10026]**
- ☐ **Leadership Networks [1TA10027]**
- ☐ **Instructional Leadership Coaching [1TA10028]**

Condition #3 EFFECTIVE DISTRICT SYSTEMS OF SUPPORT*:*

- ☐ **Data Reporting and Analysis [3TA10029]**

Condition #7 PROFESSIONAL DEVELOPMENT AND STRUCTURES FOR COLLABORATION*:*

- ☐ **Orientation to PLC Guidance [7TA10030]**
- ☐ **Common Planning Time Self-Assessment [7TA10031]**
- ☐ **Mathematics Learning Community [7TA10032]**

Condition #9 EFFECTIVE INSTRUCTION*:*

- ☐ **The Learning Walk Toolkit [9TA10033]**

Possible Networks for Content or Student Groups Program Improvement

- ☐ **Literacy Network [9TA10034]**
- ☐ **Mathematics Network on Instructional Practices [9TA10035]**
- ☐ **Mathematics Network on District Systems [9TA10036]**

C. ONE-TIME ORIENTATION SESSIONS (See Section 3)

- ☐ **ESE's New District Standards and Indicators as Tools for Self Assessment (December)**
- ☐ **Teacher Contract Database (December/January)**
- ☐ **Self Assessment Rubric and Resources to Support Implementation of Conditions for School Effectiveness (January)**
- ☐ **Annual District Data Review (January)**
- ☐ **Professional Learning Communities: The "Learning Walk" Protocol (February)**
- ☐ **Special Populations: Promising Practices for Students with Special Needs (March)**
- ☐ **Professional Learning Communities: District Data Teams (April)**

Section 2: DESCRIPTIONS OF FOCUSED PROFESSIONAL DEVELOPMENT OFFERINGS

Condition #1: **EFFECTIVE SCHOOL LEADERSHIP: THE DISTRICT AND SCHOOL TAKE ACTION TO ATTRACT, DEVELOP, AND RETAIN AN EFFECTIVE SCHOOL LEADERSHIP TEAM.**

National Institute for School Leadership's Instructional Leadership Training [1PD10001]The training is designed to give principals and other district leaders the critical knowledge and skills needed to be instructional leaders and improve student achievement in schools. The NISL Executive Development for School Leadership curriculum focuses on: standards based instruction systems aligned with Massachusetts Curriculum frameworks; taking learning theory into practice by providing skills and knowledge to enable principals to be instructional leaders in literacy, math, and science; and training principals in distributed leadership strategies.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: Start date determined by regional needs (spring or summer 2010)
Up to 18 days through summer 2010; 27 total days over 18-24 months
Eligibility: Principals and district leaders in Title I districts identified for corrective action or improvement and principals in Title I Schools with NCLB status.
Expectations: District leaders and principals from all or most of the district's schools will participate in every session. The district will establish systems and structures to support NISL trained principals in the implementation of NISL concepts and practices in their schools and the district.

Special Education Leadership Academy [1PD010002] The academy provides special education administrators training on the development of leadership skills as transformational leaders and change agents within their school system in order to contribute to positive educational outcomes for students with disabilities and their families.

Locations: One region TBD in spring, two regions TBD in summer
Schedule: Start dates determined by regional needs; three days with overnight stays

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Condition #6 **STUDENTS' SOCIAL, EMOTIONAL, AND HEALTH NEEDS: THE SCHOOL ADDRESSES THE SOCIAL , EMOTIONAL, AND HEALTH NEEDS OF ITS STUDENTS BY CREATING A SAFE SCHOOL ENVIRONMENT IN WHICH STUDENT NEEDS ARE MET IN SYSTEMIC AND SYSTEMATIC WAYS.**

Creating Positive Learning Environments [6PD10023]The course is designed to provide participants with a tiered framework for understanding how to use primary, secondary and tertiary prevention and intervention strategies to create positive classroom and school environments. General and special educators and administrators learn to improve classroom management strategies by creating an environment that encourages positive behaviors by developing physical and social context for positive behavior.

Locations: **Spring:** 1 region TBD based on interest and need
Summer: 2 regions TBD based on interest and need
Schedule: Facilitated on line using Mass One with regular facilitated face-to face-time

Youth Development and Self Determination [6PD10024] Special and general education teachers gain an understanding of youth development strategies based on promising, research-based practices in self-determination, self-advocacy and emergent adulthood, including decision-making, problem solving, goal setting, and effective communication skills. Strategies support youth development and self-determination for students with disabilities to take the lead in their education, career development and community participation.

Locations: **Spring:** 1 region TBD based on interest and need
Summer: 2 regions TBD based on interest and need
Schedule: Facilitated on line using Mass One with regular facilitated face-to face-time

Transition Planning [6PD10025] Builds skills of special and general educators, guidance counselors and Special Education Administrators in the application of research-based transition practices including youth leadership, family involvement, community experiences, and post-secondary planning.

Locations: **Spring:** 1 region TBD based on interest and need
Summer: 2 regions TBD based on interest and need
Schedule: Facilitated on line using Mass One with regular, facilitated face-to face-time

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Condition #9: **EFFECTIVE INSTRUCTION: INSTRUCTION REFLECTS EFFECTIVE PRACTICE AND HIGH EXPECTATIONS FOR ALL STUDENTS; THE SCHOOL HAS A COMMON UNDERSTANDING OF THE FEATURES OF HIGH –QUALITY STANDARDS BASED INSTRUCTION AND A SYSTEM FOR MONITORING INSTRUCTIONAL PRACTICE.**

MATHEMATICS:

Mass Intel Math Initiative (MIMI) [9PDM10003] The course is for K-8 teachers, teacher leaders, and coaches of mathematics. It provides intensive mathematics content and pedagogy skill development concentrating on conceptual understanding of fractions, operations and linear functions. This course was derived from a professional development program that successfully linked course completion with improved student mathematics achievement.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: 80 hours in the summer; dates are flexible and can be determined collaboratively with participants and instructors
Eligibility: Teachers, school leaders, or district staff supporting mathematics in Title I schools identified for restructuring, corrective action, or improvement under NCLB.
Expectations: A minimum of three teachers participate in complete program. Principals and coach/teacher leader attend day-long orientation prior to course to understand what they should see in their teachers' practice as a result of their participation in the course. Teachers will receive embedded support and the leaders will routinely look for evidence of learning from the course being implemented in classroom practice.

Developing Algebraic Thinking for Middle and High School Math Teachers **[9PDM10004]** The content course for teachers, teacher leaders, and coaches has an explicit emphasis on pedagogical approaches to teaching variables, equations, and functions through development of concepts across grades, use of manipulative and drawings and connections to student thinking. Teachers will get exposure to standards-based practices and math habits of mind by using high cognitive demand tasks related to algebra.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: 5 days in the summer and 3 days the following fall

Eligibility: Teachers, school leaders, or district staff supporting mathematics in Title I schools identified for restructuring, corrective action, or improvement under NCLB.
Expectations: A minimum of three teachers participate in complete program. Principals and coach/teacher-leader attend half-day orientation prior to course to understand what they should see in their teachers' practice as a result of their participation in the course. Teachers will receive embedded support and the leaders will routinely look for evidence of learning from the course being implemented in classroom practice.

Understanding Rational Numbers **[9PDM10005]** The content course is for teachers and coaches of mathematics in Grades K- 5 with focus on fractions, decimals, percents, and ratios. Elements and strategies of effective instruction will be modeled and incorporated into the class. Teachers will get exposure to standards-based practices by using specific hands-on strategies to engage with significant math content related to fractions and decimals.

Locations: Winter/Spring: Greater Boston, Southeast or Central (will be in 2 of these 3 regions)
Summer: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: Winter/Spring: 1 Saturday per month starting in January 2010
Summer: Dates are flexible and can be determined collaboratively with participants and instructors
Note: Course can be run with an online component
Eligibility: Teachers, school leaders, or district staff supporting mathematics in Title I schools identified for restructuring, corrective action, or improvement under NCLB.
Expectations: A minimum of three teachers participate in complete program. Principals and coach/teacher-leader attend 3 hour orientation prior to course to understand what they should see in their teachers' practice as a result of their participation in the course. Teachers will receive embedded support and the leaders will routinely look for evidence of learning from the course being implemented in classroom practice.

The Coaching Cycle **[9PDM10006]** The Interactive Online Course is for K-8 Mathematics Coaches and Mathematics teacher leaders. The course is designed to develop the mathematics content knowledge and consulting skills used by mathematics coaches as they assist teachers in acquiring and deepening specialized knowledge and skills required for teaching K-8 students. The coaches and teacher leaders will also participate in an online support community.

Locations: Winter/Spring: Available online for up to 20 participants from multiple regions
Summer: Available online for up to 40 participants from multiple regions
Schedule: 8 online sessions plus participation in an online support community
Eligibility: Coaches and leaders supporting Title I schools identified for restructuring, corrective action, or improvement under NCLB
Expectations: Ensure participants complete all coursework. Principals will participate in an online orientation prior to the course and online follow up session (available any time) to

provide examples of what principals should see their coaches do as a result of their participation in the course. Coaches should be provided with time for pre and post conferences with teachers to implement the skills learned in the course.

Increasing Accessibility to Algebra and Geometry for All Students [9PDM10007] The course offers foundational math content and pedagogical strategies for general education, inclusion and special education teachers and coaches. It strengthens teachers' understanding of concepts and relationships between concepts from the Patterns, Relations, and Algebra and Geometry strands. Teachers will learn universal design strategies and techniques to increase accessibility of rigorous mathematics to a broad range of learners.

Locations: Northeast (June 28 – July 9); Greater Boston, Berkshire & Pioneer Valley, Central (2 courses from July 19 – July 30 and 1 course from August 2 – August 13)
Schedule: 7 days of face-to-face sessions
Expectations: A minimum of three teachers participate in complete program. Principals and coach/teacher leader attend day-long orientation prior to course to understand what they should see in their teachers' practice as a result of their participation in the course. Teachers will receive embedded support and the leaders will routinely look for evidence of learning from the course being implemented in classroom practice.

Academic Youth Development [9PDM10008] provides high school algebra teachers with training and support to deliver a 12-day summer course to middle-level (e.g., B- or C in math) students on the importance of effort and collaboration for math learning. Teachers receive training to prepare them to provide a summer bridge and academic year follow up program for rising algebra students.

Locations: Greater Boston (available for all regions to participate)
Schedule: 3 face-to-face days (June 2 – June 4, 2010)
Eligibility: Teachers, school leaders, or district staff supporting mathematics in Title I schools identified for restructuring, corrective action, or improvement under NCLB.
Expectations: Middle and high school principals are provided opportunities to work together and attend a half-day orientation. A cohort of 20 rising Algebra I students are recruited and attend the summer 12-day course and school year follow up sessions.

LITERACY

Differentiated Writing Instruction to Close the Achievement Gap (Grades 3-4) [9PDL10009] The course provides training on the use of Writer's Express methods to help develop motivated, confident, and effective writers and readers. Topics will include the development of teaching and assessment tools, the classroom application of these tools, and the documentation of one student's writing over time.

Locations: ***Winter/Spring:*** Greater Boston, Northeast, Southeast (can support courses in 2 of 3 regions)
Summer: Two more regions TBD based on interest and need
Schedule: 45 hours; 3 full days with 4 follow up half day sessions
Eligibility: Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Foundations of Literacy Courses - Grades K-3 [9PDL10010] (Scholastic Red, Voyager U, LETRS: Foundations) Participants will be introduced to best practices in early literacy instruction. Topics will include evidence-based instructional strategies for teaching phonemic awareness, phonics, fluency,

vocabulary, and comprehension. The courses combine online learning, resources for classroom application, and facilitated study groups.

Locations:	***Spring &Summer:*** Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule:	Approximately 35 hours of online learning time and 4-6 meetings of facilitated study groups of approximately 2 hours
Eligibility:	Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Language Essentials for Teachers of Reading and Spelling (LETRS) Grades K-3 [9PDL10011] Participants will build upon foundational literacy knowledge to improve early literacy instruction. Topics will include research and instructional practices related to phonemic awareness, phonics and word study, spelling, fluency, oral language and vocabulary, comprehension, and assessment.

Locations:	***Spring:*** 2 regions TBD depending on interest and need Summer: 2 different regions TBD depending on interest and need
Schedule:	54 hour course; 9 full days flexibly scheduled
Eligibility:	Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Reading and Writing Informational Text- Grades K-6 [9PDL10012] Participants will learn how language and literacy skills can be used as tools for acquiring content knowledge. Topics will include informational text features and structures, strategic vocabulary development, reading comprehension skills, writing to demonstrate comprehension, and integrating technology. Participants will apply knowledge of standards-based curriculum and instructional planning to develop a unit of study.

Locations:	***Spring:*** 3 regions TBD depending on interest and need ***Summer:*** Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule:	15-hour course; 2 and ½ days or 5 three hour workshops
Eligibility:	Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Reading in the Content Areas – Grades 6-8 [9PDL10013] Participants will learn about research and instructional practices for helping middle-school students gain critical reading and writing skills across content areas. Teachers will discuss how to help all students read, write, and think like scientists, historians, and mathematicians. The course will address the use of technology in content area classrooms, the role of the literacy coach in supporting content area instruction, and how to scaffold instruction for struggling readers and English language learners.

Locations:	***Spring:*** Either Greater Boston or Northeast ***Summer:*** Up to 3 regions TBD
Schedule:	45 hours—5 full days with additional time as online threaded conversation
Eligibility:	Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Teaching Expository and Persuasive Writing – Grades 6-12 [9PDL10014] Participants will use a rhetorical framework and instructional strategies for teaching expository and persuasive writing in a

range of genres. Topics will include genre, audience, purpose, voice, elements of argument and elements of the writing process. Participants will read and critique examples of expository and persuasive writing and media, complete a personal writing project relevant to the content they teach, and create and implement a curriculum project for using expository and persuasive writing in their classrooms.

Locations: ***Summer:*** Berkshire & Pioneer Valley (combined)
Schedule: 45-hour course; 3-4 full days with follow up days
Eligibility: Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Oral Language and Vocabulary – Grades K-5 [9PDL10015] Participants will learn how to develop a comprehensive approach to vocabulary instruction while deepening their understanding of related learning standards. Topics will include the strategic selection of vocabulary from literary and informational text, approaches for developing students' oral language, independent word learning strategies, and instructional techniques that promote word consciousness.

Locations: ***Summer:*** 3 regions TBD depending on interest and need
Schedule: 15-hour course; 2 ½ days or 5 three hour workshops
Eligibility: Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Writing in Response to Reading – Grades 2-5 [9PDL10016] Participants will learn how to help students demonstrate comprehension of informational and literary text through writing. Topics will include standards-based lesson planning, evaluating student work and providing written feedback, and use of technology in instruction.

Locations: ***Summer:*** 3 regions TBD depending on interest and need
Schedule: 15-hour course; 2 ½ days or 5 three hour sessions
Eligibility: Teachers, school leaders, or district staff supporting literacy in Title I schools identified for restructuring, corrective action, or improvement under NCLB.

Literacy Note: The DSAC Literacy Specialists could deliver a course on "Creating and Supporting a Tiered Model of Literacy Curriculum" as a substitute for Reading and Writing Informational Text, Oral Language and Vocabulary, or Writing in Response to Reading described above depending on interest and need.

SHELTERED INSTRUCTION FOR ENGLISH LANGUAGE LEARNERS

Introduction to Second Language Learning and Acquisition (Category 1 Elementary and Secondary) [9PDE10017] Introductory training for K-12 teachers of English language learners on factors impacting second language acquisition and cultural considerations for teachers in Sheltered English Immersion classrooms.

Locations: Greater Boston, Northeast, Southeast, Central and Berkshire (through regional collaboratives)
Schedule: 12 hours; generally delivered in 2 days with at least one week between the first and second day

Enhancing English Language Learning in Elementary Classrooms (Category 2 Elementary) [9PDE10018] and **Enriching Content Classes for Secondary ESOL Students (Category 2 Secondary) [9PDE10019]** Prepares elementary and secondary teachers, respectively, to use sheltered strategies to make content more comprehensible to English language learners.

Locations: Northeast, Southeast, Central (through regional collaboratives)
Schedule: 4 non-consecutive days during the school year or in the summer

From Language to Literacy - Reading and Writing for English Language Learners in Sheltered Elementary Classrooms (Category 4 Elementary) [9PDE10020] Prepares elementary teachers of English language learners at the intermediate level of English proficiency or higher in delivering reading and writing instruction that is optimally sheltered for these students, while still promoting their ongoing development of English.

Locations: Greater Boston, Northeast, Southeast, Central and Berkshire (through regional collaboratives)
Schedule: 4 day training

Making the Connection – English Language Learners and Subject Matter Texts (Category 4 Secondary) [9PDE10021] Prepares secondary content teachers who have English language learners (ELLs) in their classrooms to shelter their instruction. The curriculum focuses on the challenge of making textbooks more accessible to ELLs, and using writing activities to promote content learning.

Locations: Greater Boston, Northeast, Southeast, Central and Berkshire (through regional collaboratives)
Schedule: 15 hours generally delivered in 3 days

INCLUSIVE PRACTICES

Universal Design for Learning (UDL) [9PDI10022] Trains general and special educators and administrators in the instructional paradigm shift to Universal Design for Learning. This course is designed to provide participants with the framework for using UDL to examine brain networks, students' strengths and needs, and how to redesign lesson plans to implement UDL in the classroom.

Locations: **Spring:** 1 region TBD based on interest and need
Summer: 2 regions TBD based on interest and need
Schedule: Facilitated on line using Mass One with regular facilitated face-to face-time

Section 2 – DESCRIPTIONS OF TARGETED ASSISTANCE ACTIVITIES

The following ***Targeted Assistance*** opportunities are designed to support the systematic implementation of effective practices to improve school and district performance. School and district improvement is challenging work that is fostered by using *adaptive* strategies promoting collaboration in and among the region's districts, establishing routines to measure implementation of effective practices, and using a range of data sources to assess progress and plan next steps. Based on current research, some tools and processes have been developed and piloted in collaboration with Massachusetts' urban districts.

DSAC staff and consultants will provide direct support in some Level 3 districts on the use of tools and processes aligned to ESE's *Conditions for School Effectiveness.* The selection of particular targeted assistance processes will be determined collaboratively with districts and schools. The timing for targeted assistance activities will be determined through an analysis of districts' needs and the capacity of DSAC staff to deliver the assistance to participating districts.

Condition #1: ***EFFECTIVE SCHOOL LEADERSHIP:*** **THE DISTRICT AND SCHOOL TAKE ACTION TO ATTRACT, DEVELOP, AND RETAIN AN EFFECTIVE SCHOOL LEADERSHIP TEAM**

Guided Self-Assessment on the Conditions for School Effectiveness [1TA10026]:
The Conditions articulate research based practices necessary for schools to continue to effectively raise and sustain high achievement for their students. Using rubrics describing a range of implementation indicators, school and district leaders will be able to identify their strengths and challenges and collaboratively develop plans to build capacity to address specific issues. DSAC staff will be available to support district and school analysis, discussions, and identification of potential resources to address certain needs.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: Pilot of Conditions rubric beginning January or February 2010;
Eligibility: Interested districts able to commit time for participation

Leadership Networks [1TA10027]: One of the primary missions of each DSAC is to support organized analysis and knowledge sharing among the regions' districts to enhance leadership capacity in specific aspects of school and district improvement. In partnership with districts and/or building on existing regional networks, short term or ongoing support groups may be established to address particular leadership challenges by determining: 1) common areas of investigation, 2) accessing and reviewing relevant data and information, and 3) sharing resources and effective statewide and regional practices. Networks could include:

- Superintendents' or other district leader networks facilitated by Regional Assistance Directors
- Principals' networks facilitated by Support Specialists

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: TBD by districts' interests and needs
Eligibility: Interested districts able to commit time for participation and, in some cases, districts participating in certain *focused professional development* activities will be part of a leadership support network. Networks facilitated by Support Facilitators must have participants from Title I schools in NCLB status.

Instructional Leadership Coaching [1TA10028]: NISL coaching provides leadership coaching assistance in establishing systems to support the implementation of instructional leadership practices aligned with the National Institute for School Leadership (NISL) training for principals (see Focused Professional Development National Institute for School Leadership's Instructional Leadership Training).

Locations: TBD depending on interest and need
Schedule: TBD depending on interest and need
Eligibility: Districts with multiple principals from Title I schools in NCLB status participating in and/or having recently completed NISL training

Condition #3: ***EFFECTIVE DISTRICT SYSTEMS OF SUPPORT:*** **THE DISTRICT HAS SYSTEMS AND PROCESSES FOR ANTICIPATING AND ADDRESSING SCHOOL STAFFING, INSTRUCTIONAL, AND OPERATIONAL NEEDS IN TIMELY, EFFICIENT, AND EFFECTIVE WAYS**

Data Reporting and Analysis: [3TA10029] Data Specialists will provide analytical reports and training to support districts' use of data. They will help districts begin to use the new Growth Model data as well as the other information available through the Data Warehouse. Data specialists will also be available to model the **District Data Teams** toolkit that offers ways to use a range of vital data for districts to continuously improve teaching and learning through inquiry and decision-making on resource allocation, program evaluation, and performance improvement.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: Begin support by January 2010 (some regions' Data Specialists may be available by December 2009)
Eligibility: All Level 3 districts may participate in trainings offered by Data Specialists; specific in-district assistance on use of District Data Team tools and other direct assistance will be available for specific Level 3 districts based on district interest and readiness.

Condition #7: ***PROFESSIONAL DEVELOPMENT AND STRUCTURES FOR COLLABORATION:*** **PROFESSIONAL DEVELOPMENT FOR SCHOOL STAFF INCLUDES JOB-EMBEDDED AND INDIVIDUALLY PURSUED LEARNING AND STRUCTURES FOR REGULAR, FREQUENT COLLABORATION TO IMPROVE IMPLEMENTATION OF THE CURRICULUM AND INSTRUCTIONAL PRACTICE**

Structures for Regular, Frequent Collaboration to Improve Implementation of Curriculum and instructional Practice: Building on extensive educational research on school and district improvement, ESE has developed written guidance and helpful tools for districts and schools to strengthen their systems and practices for collaboration to improve student achievement. Available assistance activities include:

Orientation [7TA10030]: DSAC staff can orient districts to the ESE guidance and vision on collaborative practices using the **Guidance for Establishing and Maintaining Professional Learning Communities (PLC Guidance)** that articulates six developmental stages of a district-wide culture of collaborative learning and planning. This guidance is designed to build on the model of Instructional Leadership taught through the National Institute for School Leadership (NISL) and is aligned with many of the Conditions including: Leadership, Coordinated Use of Resources, Aligned Curriculum, Effective Instruction, Tiered Instruction models, and Assessment. For each stage, actions are identified that could be accomplished by teacher teams, school leadership teams and district leadership to cultivate a collaborative approach to improved teaching and learning. While the guidance provides helpful suggestions for schools and districts to consider, it is not a set of requirements that districts must implement.

Common Planning Time (CPT) Self-Assessment [7TA10031]: DSAC staff can guide schools and districts to collect information on and foster district-level thinking about how to best leverage Common Planning Time as a crucial aspect of a professional learning community's work to effect instructional change. The Self-Assessment includes surveys of teachers and administrators as well as tools to analyze the information and determine next steps in establishing effective CPT.

Mathematics Learning Community (MLC) [7TA10032]: Mathematics Specialists can use the MLC curriculum materials to facilitate and guide teacher and teacher leader discussions about how children learn mathematics through regular collegial discussions throughout the school year that deepen knowledge of content and pedagogy using looking at student work (LASW) as a methodology. MLC is designed to focus primarily on deepening teachers' understanding of how students think about mathematics, and deepening teachers' understanding of mathematics and their own teaching practice.

Related Resources: Implementation of the PLC Guidance is supported by a number of other assistance activities and tools including the **Learning Walk Toolkit** (see Effective Instruction) and the **District Data Team toolkit** (see Effective District Systems of Support).

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: TBD by district interest and readiness
Eligibility: Level 3 Districts in Corrective Action or Improvement and/or with Title I Schools in NCLB status of Restructuring, Corrective Action or Improvement.

Condition #9: EFFECTIVE INSTRUCTION: **INSTRUCTION REFLECTS EFFECTIVE PRACTICE AND HIGH EXPECTATIONS FOR ALL STUDENTS; THE SCHOOL HAS A COMMON UNDERSTANDING OF THE FEATURES OF HIGH-QUALITY STANDARDS-BASED INSTRUCTION AND A SYSTEM FOR MONITORING INSTRUCTIONAL PRACTICE**

The **Learning Walk Toolkit [9TA10033]:** DSAC Support Facilitators and Content Specialists will provide training, modeling and direct assistance on the use of ESE developed tools for observing instructional practice and using the collected information to inform school and district decision-making for improvement. The **Learning Walk Toolkit** includes an array of research-based guidance and sample forms that districts can choose from to meet their needs for systematically overseeing their schools' consistent implementation of high quality standards-based instruction. The toolkit includes: guidance on collaborating on and communicating about the purpose and focus of observations; protocols for preparing for, conducting and following up on observations; and a continuum that provides examples of standards-based classroom practices.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: TBD by district interest and readiness
Eligibility: Level 3 Districts in Corrective Action or Improvement and/or with Title I Schools in NCLB status of Restructuring, Corrective Action or Improvement.

Networks for Content or Student Group Program Improvement: Led by Content Specialists, networks will be established with practitioners and leaders and customized to support specific aspects of regional work. For example:

- **Literacy Networks [9TA10034]** may be formed with teachers and leaders from districts receiving literacy partnership grants or participating in literacy focused professional development opportunities to discuss critical issues, deliver targeted training on

challenging issues, and support regional collegial arrangements to enhance capacity in literacy instruction.

- **Mathematics Networks on Instructional Practices [9TA10035]** may be convened with mathematics leaders and/or teacher leaders to provide opportunities for understanding and sharing effective practices connected with focused professional development courses and inclusive practices.

- **Mathematics Networks on District Systems [9TA10036]** may be convened with math leaders to collect and share information on comprehensive and coherent systems for math programs to address the needs of all math learners. Information includes: curriculum materials, assessments, time allocation, professional development and coaching.

Locations: Berkshires, Pioneer Valley, Central, Northeast, Greater Boston, Southeast
Schedule: February 2010 - TBD by district interest and readiness
Eligibility: Districts participating in certain Focused Professional Development offerings.

Section 3
One-Time Orientation Sessions
Available to All Districts

1. **December 2009/January 2010 - ESE's New District Standards and Indicators as Tools for Self-Assessment and Improvement**

   ESE's new Framework for Accountability and Assistance forms the foundation for an aligned and coordinated system of district and school accountability and assistance. The Framework introduces six standards and thirty nine indicators of district performance including eleven *Conditions for School Effectiveness.* The standards and indicators form the basis for ESE's new district review process that replaces the former process conducted by the Office of Education Quality Accountability. They can also serve as benchmarks for on-going district and school improvement efforts. This session will introduce participants to the standards and indicators, as well as a draft of a rubric that is being designed as a self-assessment tool for school and district teams. District teams participating in this orientation session will use the rubric and a companion tool, "Resources and Promising Practices," to begin to assess one or more indicators of their choosing. Teams will be asked to provide feedback to ESE staff before final versions of the rubric and promising practices tool are published later this year. (90 minutes)

2. **January 2010 - Teacher Contract Database**

   For the first time, every teacher bargaining agreement in the state is available publicly on a searchable database through ESE's website. This hands-on orientation session will begin with a short demonstration of the contents and search features of the database, including how to find a specific contract or group of contracts and how to use keyword searching to find useful information in contracts. Sessions will be held in computer labs so participants can get hands-on experience with the search tools. Some practice exercises will give participants a chance to research several agreements to answer one or more questions provided by the session leader. During the workshop these answers will be entered in a shared datasheet, with the goal of collecting a sample dataset from all 300 contracts as ESE runs the workshop in every region. The session will include time for participants to discuss their interest in ongoing information-gathering or networking about collective bargaining agreements in each region.
   (90 minutes)

3. **February 2010 - Self-Assessment Rubric and Resources to Support Implementation of *Conditions for School Effectiveness***

   District and school leaders will have opportunity in this orientation session to use a newly-designed rubric and other resources to begin to identify where and how they can strengthen implementation of one or more of eleven *Conditions for School Effectiveness.* The *Conditions* are the key indicators of school effectiveness that appear in ESE's new Framework for District and School Accountability. Participants will be introduced to the *Conditions*, along with a protocol for using the rubric and accessing research and other resources designed to support district and school improvement. *(90 minutes)*

4. **February 2010 - Professional Learning Communities: The "Learning Walk" Protocol**

District and school leaders will explore one of the key resources in *The Framework for Establishing and Maintaining Professional Learning Communities*, a toolkit designed to identify actions that district leaders, principals and teachers can take to support improvement in instruction and learning in every classroom. The orientation to the *Learning Walk Protocol* will introduce participants to the processes and protocols of "learning walks", a systematic and coordinated method of gathering data to inform district and school level decision making. Developed in partnership with district and school leaders over several years, the *Learning Walk Toolkit* incorporates a continuum of standards-based classroom practice and protocols for structuring learning walks and using data generated by them to improve instruction and student learning. (*90 minutes*)

5. **March 2010 - Special Populations: promising MA practices for students with special needs**

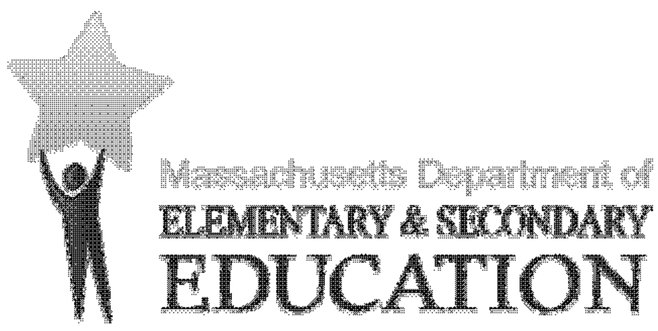
This session will introduce teams of district leaders to the district systems and structures that have been identified through field research in Massachusetts as particularly effective in addressing the needs of students with special needs. Participants will have the opportunity to explore whether or not to establish a regional network of district leadership teams interested in collaborating to learn how to implement related systems and structures more effectively in their own districts. *(90 minutes)*

6. **April 2010 - Professional Learning Communities: District Data Teams**

District and school leaders will explore another of the key resources in *The Framework for Establishing and Maintaining Professional Learning Communities*, a toolkit designed to identify actions that district leaders, principals and teachers each can take to support improvement in instruction and learning in every classroom. The *District Data Team* toolkit consists of six modules and a self-assessment tool to guide District Data Teams through a cycle of inquiry through which they examine a variety of data sources to inform better district decision-making at a systemic level. This orientation session introduces participants to the cycle of inquiry and the resources available in the toolkit. *(90 minutes)*

7. **April 2010 - Annual District Data Review**

This orientation session will demonstrate for district leadership teams a new online tool: The District Data Review. The District Data Review tool is designed to provide an annual "snapshot" of five-year trend data for every district and school on more than 40 separate indicators. In order for district leadership teams to obtain a more robust and complete view of a district or school, the District Data Review tool allows users to analyze a school or district's demographics, resources, finances, educator data, postsecondary outcomes, achievement data, growth data, and achievement gap data. In addition, a comparison tool will help district teams identify trends and promising practices in settings similar to their own. As a result of the session, district team members will be able to navigate the tool, make accurate interpretations of data, spot promising or troubling trends, and make meaningful comparisons among schools and districts. *(90 minutes)*



Supporting School and District Improvement With Professional Learning Communities

ESE Office of Urban District Assistance
Vision for Professional Learning Communities

Research suggests that in order for all students to achieve academic proficiency, schools and districts must learn how to operate as Professional Learning Communities, where, rather than working in isolation, all members are committed to working collaboratively to continually reflect on and improve their practice. A Professional Learning Community can be defined by the following characteristics:[1]

1. Shared mission, vision, and values that are 'embedded in the hearts and minds' of all members;
2. Collective inquiry that includes public reflection, shared meaning, joint planning, coordinated action, and analysis of results;
3. Collaborative teams at all levels, focused on continuous improvement;
4. Action orientation and experimentation, including 'a tolerance for results that may be contrary to what was anticipated';
5. Continuous improvement and 'a constant search for a better way';
6. Results orientation, with work 'assessed on the basis of *results* rather than *intentions*.'

While many activities – such as common planning time and learning walks – can contribute to the development of a Professional Learning Community, establishing an effective PLC requires members to adopt a culture and mindset that permeates all aspects of their work.

The Massachusetts Department of Elementary and Secondary Education (ESE) recognizes the importance of this research, and also recognizes that many schools and districts need and want support in moving their collaborative practice to higher levels. To that end, ESE has prepared a number of resources for district leaders to use to help establish and maintain Professional Learning Communities that can achieve and sustain improvement in instruction and learning in classrooms, and in systems that support classrooms.

These toolkits and resources are grounded in research and can support districts in fulfilling the 11 Essential Conditions for School Effectiveness that are part of Massachusetts regulation. Conditions such as having leaders who regularly gather and utilize information on classroom practice to ensure effective instruction, having processes in place to promote data-driven decision making, and having professional development and structures to support teacher collaboration are all essential to school effectiveness. The belief is that if educators are operating within the context of a Professional Learning Community, the Essential Conditions will have a greater likelihood of being implemented successfully. Due to the importance of these conditions and the challenge associated with getting them in place, ESE developed frameworks and

[1] DuFour, Richard, and Robert Eaker. 1998. Professional Learning Communities at Work: Best practices for enhancing student achievement. New England Educational Service. Bloomington, Indiana.

protocols to assist with their establishment and implementation. All resources were designed collaboratively by ESE and district representatives with the support of external consultants.

The **PLC Guidance Document: Establishing and Maintaining Professional Learning Communities** articulates six stages of development of a district-wide culture of collaborative learning and planning. For each stage, actions are identified that would take place at the level of teacher, principal, and district leadership. Implementation of this framework is supported by a number of toolkits, all of which are aligned:

- The **Common Planning Time (CPT) Self-Assessment** fosters district-level thinking about how to best leverage this crucial aspect of a professional learning community to effect instructional change.
- The **Learning Walks** toolkit provides a continuum of standards-based classroom practice and protocols for structuring learning walks and using data generated by them.
- The **District Data Teams** toolkit offers ways to use a wide range of data (including data generated by the CPT Self-Assessment and/or Learning Walk toolkit[s]) for inquiry development and decision-making at a systemic level.

See the *Resources from the Office of Urban District Assistance* for more details on each tool kit.

ESE's vision is to have these toolkits available to focus districts on key aspects of the work that should ultimately be part of a coordinated system. Learning Walks done in isolation, for example, would have limited value. However, Learning Walks done as part of a coordinated plan for utilizing data and fostering reflection and collaboration on the data are more likely to result in measurable improvement.

Understandably, districts just beginning the work of using Common Planning Time, Learning Walks, District Data Teams would be hard-pressed to focus on all aspects of the work at once. Districts, instead, are likely to enter into one or a few specific pieces of the work for which there is readiness and with which they can gain leverage. (Entry points can be determined with help from self-assessments and other tools that are part of some of the kits.) Once the work gets under way, the districts will expand focus. ESE's vision is for districts to have these tools available for framing and support as they build a coordinated system.

All toolkits have been designed for use at the district level. ESE provides varying levels of support to districts to aid in implementation of the toolkits and increase district capacity to continue the work independently. The toolkits give districts a logical (yet fluid and customizable) plan to follow as they view classroom practice, use data, foster collaboration, and thus make learning a richer experience for every child in every classroom.

Appendix D18: NSDC Standards for Staff Development
(Revised, 2001)

Source: National Staff Development Council (NSDC) website, http://www.nsdc.org/standards

Context Standards
Staff development that improves the learning of all students:

- Organizes adults into learning communities whose goals are aligned with those of the school and district.
- Requires skillful school and district leaders who guide continuous instructional improvement.
- Requires resources to support adult learning and collaboration.

Process Standards
Staff development that improves the learning of all students:

- Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement.
- Uses multiple sources of information to guide improvement and demonstrate its impact.
- Prepares educators to apply research to decision making.
- Uses learning strategies appropriate to the intended goal.
- Applies knowledge about human learning and change.
- Provides educators with the knowledge and skills to collaborate.

Content Standards
Staff development that improves the learning of all students:

- Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.
- Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately.
- Provides educators with knowledge and skills to involve families and other stakeholders appropriately.

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Attachment Title	Relevant Selection Criterion	Page #
E1: Applicable Legal Documents	(E)(1)	E-1
E2: Framework for District Accountability and Assistance	(E)(2)(i)	E-54
E3: Stakeholder Group Membership Lists	(E)(2)(i)	E-55
E4: District Standards and Indicators	(E)(2)(i)	E-60
E5: Conditions for School Effectiveness	(E)(2)(i)	E-66
E6: Summary of Academic Research on Conditions	(E)(2)(i)	E-68
E7: Detail on Priority School Supports	(E)(2)(ii)	E-76
E8: Detail on Turnaround Intermediary	(E)(2)(ii)	E-80
E9: An Evaluation of the Commonwealth Pilot Schools Initiative	(E)(2) Evidence	E-83
E10: Summary of Lessons Learned from the Holyoke Turnaround Partnership	(E)(2) Evidence	E-94

AN ACT RELATIVE TO THE ACHIEVEMENT GAP

SENATE NO. 2247

PASSED BY THE MASSACHUSETTS LEGISLATURE (GREAT AND GENERAL COURT), JANUARY 14, 2010

EXCERPTS RELATING TO TURNING AROUND THE LOWEST ACHIEVING (UNDERPERFORMING) SCHOOLS AND DISTRICTS

SECTION 3. Chapter 69 of the General Laws is hereby amended by striking out sections 1J and1K, as so appearing, and inserting in place thereof the following 2 sections:-

Section 1J. (a) The commissioner of elementary and secondary education may, on the basis of student performance data collected pursuant to section 1I, a school or district review performed under section 55A of chapter 15, or regulations adopted by the board of elementary and secondary education, designate 1 or more schools in a school district other than a Horace Mann charter school as underperforming or chronically underperforming. The board shall adopt regulations establishing standards for the commissioner to make such designations on the basis of data collected pursuant to section 1I or information from a school or district review performed under section 55A of chapter 15. Upon the release of the proposed regulations, the board shall file a copy thereof with the clerks of the house of representatives and the senate who shall forward the regulations to the joint committee on education. Within 30 days of the filing, the committee may hold a public hearing and issue a report on the regulations and file the report with the board. The board, pursuant to applicable law, may adopt final regulations making revisions to the proposed regulations as it deems appropriate after consideration of the report and shall forthwith file a copy of the regulations with the chairpersons of the joint committee on education and, not earlier than 30 days of the filing, the board shall file the final regulations with the state secretary. Schools that score in the lowest 20 per cent statewide among schools serving common grade levels on a single measure developed by the department that takes into account student performance data

and, beginning on July 1, 2011, improvement in student academic performance, shall be deemed eligible for designation as underperforming or chronically underperforming. Not more than 4 per cent of the total number of public schools may be designated as underperforming or chronically underperforming at any given time.

In adopting regulations allowing the commissioner to designate a school as underperforming or chronically underperforming, the board shall ensure that such regulations take into account multiple indicators of school quality in making determinations regarding underperformance or chronic underperformance, such as student attendance, dismissal rates and exclusion rates, promotion rates, graduation rates or the lack of demonstrated significant improvement for 2 or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based special education, low-income, English language proficiency and racial classifications.

Before a school is designated chronically underperforming by the commissioner, a school must be designated underperforming and fail to improve.

An underperforming or chronically underperforming school described in the following subsections shall operate in accordance with laws regulating other public schools, except as such provisions may conflict with this section or any turnaround plans created thereunder. A student who is enrolled in a school at the time it is designated as underperforming or chronically underperforming shall retain the ability to remain enrolled in the school while remaining a resident of the district if the student chooses to do so.

(b) Upon the designation of a school as an underperforming school in accordance with regulations developed pursuant to this section, the superintendent of the district, with approval by the commissioner, shall create a turnaround plan for the school, under subsections (b) to (e), inclusive. The commissioner may allow for an expedited turnaround plan for schools that have

been previously designated as underperforming and where the district has a turnaround plan that has had a public comment period and approval of the local school committee.

Before the superintendent creates the turnaround plan required in this subsection, the superintendent shall convene a local stakeholder group of not more than 13 individuals, for the purpose of soliciting recommendations on the content of such plan to maximize the rapid academic achievement of students at the school. The superintendent shall provide due consideration to the recommendations of the stakeholder group. The group shall include: (1) the commissioner, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local teacher's union, or a designee; (4) an administrator from the school, who may be the principal, chosen by the superintendent; (5) a teacher from the school chosen by the faculty of the school; (6) a parent from the school chosen by the local parent organization; (7) representatives of applicable state and local social service, health and child welfare agencies, chosen by the superintendent; (8) as appropriate, representatives of state and local workforce development agencies, chosen by the superintendent; (9) for elementary schools, a representative of an early education and care provider chosen by the commissioner of the department of early education and care and, for middle schools or high schools, a representative of the higher education community selected by the secretary; and (10) a member of the community appointed by the chief executive of the city or town. If the school or district does not have a parent organization or if the organization does not select a parent, the superintendent shall select a volunteer parent of a student from the school. The superintendent shall convene such group within 30 days of the commissioner designating a school as underperforming and the group shall make its recommendations to the superintendent within 45 days of its initial meeting. Meetings of the local stakeholder group shall be open to the public and the recommendations submitted to the superintendent under this subsection shall be publicly available immediately upon their submission.

(c) In creating the turnaround plan in subsection (b) the superintendent shall include, after considering the recommendations of the local stakeholder group, provisions intended to maximize the rapid academic achievement of students at the school and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected pursuant to section 1I or information from a school or district review performed under section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined in chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance, dismissal rates and exclusion rates.

The superintendent shall also include in the creation of the turnaround plan, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social service and health needs of students at the school and their families, to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school community, in order to promote a safe and secure learning environment; (3) steps to improve workforce development services provided to students and their families at the school, to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students; and (5) alternative English language learning programs for limited English proficient students, notwithstanding chapter 71A; and (6) a financial plan for the school, including any additional funds to be provided by the district, commonwealth, federal government or other sources.

The secretaries of health and human services, labor and workforce development, public safety and other applicable state and local social service, health and child welfare officials shall coordinate with the superintendent regarding the implementation of strategies under clauses (1) to (3), inclusive, of the second paragraph that are included in a final turnaround plan and shall, subject to appropriation, reasonably support such implementation consistent with the requirements of state and federal law applicable to the relevant programs that each such official is responsible for administering. The secretary of education and the commissioner of elementary and secondary education shall assist the superintendent in facilitating the coordination.

To assess the school across multiple measures of school performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to: (1) student attendance, dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of twenty-first century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among school faculty and staff and; (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(d) Notwithstanding any general or special law to the contrary, in creating the turnaround plan required in subsection (b), the superintendent may, after considering the recommendations of the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the school, including the implementation of research-based early literacy programs, early

interventions for struggling readers and the teaching of advanced placement courses or other rigorous nationally or internationally recognized courses, if the school does not already have such programs or courses; (2) reallocate the uses of the existing budget of the school; (3) provide additional funds to the school from the budget of the district, if the school does not already receive funding from the district at least equal to the average per pupil funding received for students of the same classification and grade level in the district; (4) provide funds, subject to appropriation and following consultation with applicable local unions, to increase the salary of any administrator, or teacher in the school, to attract or retain highly-qualified administrators, or teachers or to reward administrators, or teachers who work in underperforming schools that achieve the annual goals set forth in the turnaround plan; (5) expand the school day or school year or both of the school; (6) for an elementary school, add pre-kindergarten and full-day kindergarten classes, if the school does not already have such classes; (7) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the school, with full discretion vested in the superintendent regarding his consideration of and decisions on rehiring based on the reapplications. (8) limit, suspend or change 1 or more provisions of any contract or collective bargaining agreement, as the contract or agreement applies to the school; provided, that the superintendent shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; (9) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the school; (10) include a provision of job-embedded professional development for teachers at the school, with an emphasis on strategies that involve teacher input and feedback; (11) provide for increased opportunities for teacher planning time and collaboration focused on improving student instruction; (12) establish a plan for professional development for administrators at the school, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (13) establish steps to assure a continuum of high-expertise teachers by aligning the following processes with a common

core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and organizational structure; (14) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the school; (15) establish strategies to address mobility and transiency among the student population of the school; and (16) include additional components based on the reasons why the school was designated as underperforming and the recommendations of the group of stakeholders in subsection (b).

If the superintendent does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in the school or if an employee does not submit a reapplication for a position in the school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include, without limitation, an explanation of the reason why the superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided, further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided, further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures in section 42 of chapter 71 within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided, further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any

personnel evaluations conducted that are consistent with the guidelines established pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a school with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (10) to (12), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of limited English-proficient students at the school.

(e) Within 30 days of the local stakeholder group making recommendations under subsection (b), the superintendent shall submit a turnaround plan to the local stakeholder group, the school committee and the commissioner, all of whom may propose modifications to the plan. The superintendent shall make such plan immediately available to the public upon the submission. The stakeholder group, the school committee and the commissioner shall submit any proposed modifications to the superintendent not more than 30 days after the date of submission of the turnaround plan and the proposed modifications shall be made public immediately upon their submission to the superintendent. The superintendent shall consider and may incorporate the modifications into the plan if the superintendent determines that inclusion of the modifications would further promote the rapid academic achievement of students at the school or may alter or reject the proposed modifications submitted under this subsection. Within 30 days of receiving any proposed modifications under this subsection, the superintendent shall issue a final turnaround plan for the school and the plan shall be made publicly available.

(f) Within 30 days of the issuance of a final turnaround plan under subsection (e) a school committee or local union may appeal to the commissioner regarding 1 or more components of the plan, including the absence of 1 or more modifications proposed under subsection (e). The commissioner may, in consultation with the superintendent, modify the plan if the commissioner

determines that: (1) such modifications would further promote the rapid academic achievement of students in the applicable school; (2) a component of the plan was included, or a modification was excluded, on the basis of demonstrably-false information or evidence; or (3) the superintendent failed to meet the requirements of subsections (b) to (e), inclusive. The decision of the commissioner regarding an appeal under this subsection shall be made within 30 days and shall be final. (g) If, after considering the recommendations of the group of stakeholders, the superintendent considers it necessary to maximize the rapid academic achievement of students at the applicable school by altering the compensation, hours and working conditions of the administrators, teachers, principal and staff at the school or by altering other provisions of a contract or collective bargaining agreement applicable to the administrators, teachers, principal and staff, the superintendent may request that the school committee and any union bargain or reopen the bargaining of the relevant collective bargaining agreement to facilitate such achievement. The bargaining shall be conducted in good faith and completed not later than 30 days from the point at which the superintendent requested that the parties bargain. The agreement shall be subject to ratification within 10 business days by the bargaining unit members in the school. If the parties are unable to reach an agreement within 30 days or if the agreement is not ratified within 10 business days by the bargaining unit members of the school, the parties shall submit remaining unresolved issues a joint resolution committee for dispute resolution process on the next business day following the end of the 30-day bargaining period or failure to ratify.

The joint resolution committee shall be comprised of 3 members, 1 of whom shall be appointed by the employee organization within 3 business days following the submission of unresolved issues to the joint resolution committee, 1 of whom shall be appointed by the school committee within 3 business days following the submission of unresolved issues to the joint resolution committee and 1 who shall be selected through the American Arbitration Association who shall forthwith forward to the parties a list of 3 conciliators, each of whom shall have

professional experience in elementary and secondary education, from which the parties may agree upon a single conciliator provided, however, that if the parties cannot select a conciliator from among the 3 within 3 business days, the American Arbitration Association shall select a conciliator from the remaining names. The joint resolution committee shall conduct a dispute resolution process to be concluded within 10 business days of selection. This process shall be conducted in accordance with the rules of the American Arbitration Association and consistent with this section. The fee for the process shall be shared equally between the 2 parties involved.

The joint resolution committee shall consider the positions of the parties, the designation of the school as underperforming and the needs of the students in the school. Notwithstanding any other provision of this chapter, the decision of the joint resolution committee shall be dispositive of all the issues in dispute and shall be submitted to the parties within 10 business days of the completion of the process. Under no circumstance, shall a time extension be granted beyond 10 business days of the completion of the process. If a decision is not submitted to the parties within 10 business days, the commissioner will resolve all outstanding issues.

(h) The superintendent may select an external receiver to operate the school and implement the turnaround plan or to assist the superintendent with the implementation. The superintendent may appoint the receiver if the superintendant determines that conditions exist in the district that are likely to negatively affect his ability to implement the plan successfully. A school committee may appeal to the commissioner the decision of the superintendent to appoint an external receiver. The commissioner may reverse such decision only if he determines that the superintendent made the decision on the basis of demonstrably-false information or evidence. A receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or the academic performance of disadvantaged students. A receiver shall be subject to section 11A ½ of chapter 30A and chapter 66. A receiver who is an individual shall also be subject to chapter 268A.

(i) An external receiver selected by the superintendent to operate a school shall have full managerial and operational control over the school as provided in the turnaround plan. For all other purposes, the school district in which the school is located shall remain the employer of record.

(j) Each turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (k). The superintendent or external receiver, as applicable, may develop additional components of the turnaround plan pursuant to subsections (b) to (g) inclusive and shall develop annual goals for each component of the plan, in a manner consistent with subsections (b) to (g), inclusive. The superintendent or external receiver, as applicable, shall be responsible for meeting the goals of the plan.

(k) Each school designated by the commissioner as underperforming under subsection (a) shall be reviewed by the superintendent, in consultation with the principal of the school, at least annually. The purpose of the review shall be to determine whether the school has met the annual goals in its turnaround plan and to assess the overall implementation of the turnaround plan. The review shall be in writing and shall be submitted to the commissioner and the relevant school committee not later than July 1 for the preceding school year. The review shall be submitted in a format determined by the department of elementary and secondary education.

If the commissioner determines that the school has met the annual performance goals stated in the turnaround plan, the review shall be considered sufficient and the implementation of the turnaround plan shall continue. If the commissioner determines that the school has not met 1 or more goals in the turnaround plan and that the failure to meet the goals may be corrected through reasonable modification of the plan, the superintendent may amend the turnaround plan in a manner consistent with the provisions of subsection (b) to (g) inclusive. If the commissioner determines that the school has substantially failed to meet 1 or more goals in the plan, the

commissioner may appoint an examiner to conduct an evaluation of the school's implementation of the turnaround plan.

If the commissioner determines that the school has substantially failed to meet multiple goals in the plan, the commissioner may require changes to the turnaround plan to be implemented by the superintendent in the following year or the appointment of an external partner to advise and assist the superintendent in implementing the plan the following year. If the changes to the turnaround plan require changes in a collective bargaining agreement applicable to administrators, teachers or staff in the school, the bargaining procedure in subsection (g) shall be used. If an underperforming school is operated by an external receiver, the commissioner may require the superintendent to terminate the receiver and develop a new turnaround plan; provided, however, that the superintendent shall not terminate the receiver before the completion of the first full school year of the operation of the underperforming school.

(l) Upon the expiration of a turnaround plan, the commissioner shall conduct a review of the school to determine whether the school has improved sufficiently, requires further improvement or has failed to improve. On the basis of such review, the commissioner may determine that: (1) the school has improved sufficiently for the designation of the school as underperforming to be removed; (2) the school has improved, but the school remains underperforming, in which case the superintendent may, with the approval of the commissioner, renew the plan or create a new or modified plan for an additional period of not more than 3 years, consistent with the requirements of subsections (a) to (g); or (3) consistent with the requirements of subsection (a),the school is chronically underperforming. The commissioner may recommend the appointment of an external receiver by the superintendent if the commissioner believes that a new or modified turnaround plan implemented by the superintendent will not result in rapid improvement. In carrying out this subsection, the superintendent shall: (1) in the case of a renewal of a turnaround plan, determine subsequent annual goals for each component of the plan

with the input of the local stakeholder group as defined in subsection (b); or (2) create a new or modified turnaround plan as necessary, consistent with the requirements of this section.

(m) Upon the designation of a school as a chronically underperforming school in accordance with the regulations developed under this section, the commissioner shall create a turnaround plan for the school under this subsection and subsections (n) to (p), inclusive.

Before creating the turnaround plan required in this subsection, the commissioner shall convene a local stakeholder group of not more than 13 individuals for the purpose of soliciting recommendations on the content of such plan in order to maximize the rapid academic achievement of students. The commissioner shall provide due consideration to the recommendations of the stakeholder group. The group shall include: (1) the superintendent, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local teacher's union, or a designee; (4) an administrator from the school, who may be the principal, chosen by the superintendent; (5) a teacher from the school chosen by the faculty of the school; (6) a parent from the school chosen by the local parent organization; (7) representatives of applicable state and local social service, health and child welfare agencies, chosen by the commissioner; (8) as appropriate, representatives of state and local workforce development agencies, chosen by the commissioner; (9) for elementary schools, a representative of an early education and care provider chosen by the commissioner of the department of early education and care and, for middle schools or high schools, a representative of the higher education community selected by the secretary of education; and (10) a member of the community appointed by the chief executive of the city or town. If the school or district does not have a parent organization or if the organization does not select a parent, the commissioner shall select a volunteer parent of a student from the school. The commissioner shall convene the group within 30 days of the designation of a school as chronically underperforming and the group shall make its recommendations to the commissioner within 45 days of its initial meeting. Meetings of the local

stakeholder group shall be open to the public and the recommendations submitted to the commissioner under this subsection shall be publicly available immediately upon their submission.

(n) In creating the turnaround plan required in subsection (m), the commissioner shall include, after considering the recommendations of the local stakeholder group, provisions intended to maximize the rapid academic achievement of students at the school and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected under section 1I or information from a school or district review performed under section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner, as appropriate; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance ,dismissal rates and exclusion rates.

The commissioner shall include in the creation of the turnaround plan, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social service and health needs of students at the school, and their families, in order to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school community, in order to promote a safe and secure learning environment; (3) steps to improve workforce development services provided to students at the school, and their families, in order to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students; (5) alternative English language learning programs for limited-English proficient students, notwithstanding chapter 71A;

and (6) a financial plan for the school, including any additional funds to be provided by the district, commonwealth, federal government or other sources.

The secretaries of health and human services, labor and workforce development, public safety and other applicable state and local social service, health and child welfare officials shall coordinate with the secretary of education and the commissioner regarding the implementation of strategies under clauses (1) to (3), inclusive, of the second paragraph that are included in a final turnaround plan and shall, subject to appropriation, reasonably support the implementation consistent with the requirements of state and federal law applicable to the relevant programs that each official is responsible for administering.

In order to assess the school across multiple measures of school performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to, the following: (1) student attendance ,dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of 21st-century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among school faculty and staff; and (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(o) Notwithstanding any general or special law to the contrary, in creating the turnaround plan required in subsection (m), the commissioner may, after considering the recommendations of

the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the school, including the implementation of research-based early literacy programs, early interventions for struggling readers and the teaching of advanced placement courses or other rigorous nationally or internationally recognized courses, if the school does not already have such programs or courses; (2) reallocate the uses of the existing budget of the school; (3) provide additional funds to the school from the budget of the district, if the school does not already receive funding from the district at least equal to the average per pupil funding received for students of the same classification and grade level in the district; (4) provide funds, subject to appropriation, to increase the salary of an administrator ,or teacher in the school, in order to attract or retain highly-qualified administrators or teachers or to reward administrators,. or teachers who work in chronically underperforming schools that achieve the annual goals set forth in the turnaround plan; (5) expand the school day or school year or both of the school; (6) for an elementary school, add pre-kindergarten and full-day kindergarten classes, if the school does not already have such classes; (7) limit, suspend, or change 1 or more provisions of any contract or collective bargaining agreement, as the contract or agreement applies to the school; provided, however, that the commissioner shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; and provided further, that the commissioner may require the school committee and any applicable unions to bargain in good faith for 30 days before exercising authority pursuant to this clause; (8) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the school, with full discretion vested in the superintendent regarding his consideration of and decisions on rehiring based on the reapplications; (9) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the school; (10) include a provision of job-embedded professional development for teachers at the school, with an emphasis on strategies that involve teacher input and feedback; (11) provide for increased opportunities for teacher planning time and

collaboration focused on improving student instruction; (12) establish a plan for professional development for administrators at the school, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (13) establish steps to assure a continuum of high expertise teachers by aligning the following processes with the common core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and organizational structure; (14) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the school; (15) establish strategies to address mobility and transiency among the student population of the school; and (16) include additional components, at the discretion of the commissioner, based on the reasons the school was designated as chronically underperforming and the recommendations of the local stakeholder group in subsection (m).

If the commissioner does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in the school or if an employee does not submit a reapplication for a position in the school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement, in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include without limitation an explanation of the reason why the commissioner or superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures

in section 42 of chapter 71 within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided, further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any personnel evaluations conducted that are consistent with the guidelines established pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a school with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (10) to (12), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of the limited English-proficient students.

If the commissioner proposes to reallocate funds to the school from the budget of the district under clause (3), the commissioner shall notify the school committee, in writing, of the amount of and rationale for the reallocation.

(p) Within 30 days of the local stakeholder group making recommendations under subsection (m), the commissioner shall submit a turnaround plan to the local stakeholder group, the superintendent and the school committee, all of whom may propose modifications to the plan. The commissioner shall make the plan immediately available to the public upon submission. The stakeholder group, the superintendent and the school committee shall submit any proposed modifications to the commissioner within 30 days after the date of submission of the turnaround plan and the proposed modifications shall be made public immediately upon their submission to the commissioner. The commissioner shall consider and incorporate the modifications into the plan if the commissioner determines that inclusion of the modifications would further promote the rapid academic achievement of students at the applicable school. The commissioner may alter or reject modifications submitted pursuant to this subsection. Within 30 days of receiving

any proposed modifications, the commissioner shall issue a final turnaround plan for the school and the plan shall be made publicly available.

(q) Within 30 days of the issuance of a final turnaround plan under subsection (p), a superintendent, school committee or local union may appeal to the board of elementary and secondary education regarding 1 or more components of the plan, including the absence of 1 or more modifications proposed under subsection (p). A majority of the board, may vote to modify the plan if the board determines that: (1) such modifications would further promote the rapid academic achievement of students in the applicable school; (2) a component of the plan was included, or a modification was excluded, on the basis of demonstrably-false information or evidence; or (3) the commissioner failed to meet the requirements of subsections (m) to (p), inclusive. The decision of the board regarding an appeal under this subsection shall be made within 30 days and shall be final.

(r) In the case of a chronically underperforming school, the commissioner may, under the circumstances described in this subsection, send a targeted assistance team to the school to assist the superintendent with the implementation of the turnaround plan, require the superintendent to implement the turnaround plan, or select an external receiver to operate the school and implement the turnaround plan. The commissioner may appoint such receiver if the commissioner determines that: (1) the superintendent is unlikely to implement the plan successfully; or (2) conditions exist in the district that are likely to negatively affect the ability of the superintendent to implement such plan successfully. A receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low performing schools or the academic performance of disadvantaged students. A receiver shall be subject to section 11A½ of chapter 30Aand chapter 66. A receiver who is an individual shall also be subject to chapter 268A.

The commissioner may select the external receiver upon the designation of a school as chronically underperforming. The external receiver may serve as the commissioner's designee for the purpose of creating a school's turnaround plan under subsections (m) to (p), inclusive.

(s) An external receiver selected by the commissioner to operate a chronically underperforming school shall have full managerial and operational control over the school as provided in the turnaround plan. For all other purposes, the school district in which the school is located shall remain the employer of record.

(t) Each turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (v). The superintendent or external receiver, as applicable, may develop additional components of the plan and shall develop annual goals for each component of the plan in a manner consistent with subsection (n), all of which must be approved by the commissioner. The superintendent or external receiver, as applicable, shall be responsible for meeting the goals of the turnaround plan.

(u) The commissioner or external receiver, as applicable, shall provide a written report to the school committee on a quarterly basis to provide specific information about the progress being made on the implementation of the school's turnaround plan. One of the quarterly reports shall be the annual evaluation under subsection (v).

(v) The commissioner shall evaluate each chronically underperforming school at least annually. The purpose of the evaluation shall be to determine whether the school has met the annual goals in its turnaround plan and assess the implementation of the plan at the school. The review shall be in writing and shall be submitted to the superintendent and the school committee not later than July 1 for the preceding school year. The review shall be submitted in a format determined by the department of elementary and secondary education.

If the commissioner determines that the school has met the annual performance goals stated in the turnaround plan, the review shall be considered sufficient and the implementation of the turnaround plan shall continue. If the commissioner determines that the school has not met 1 or more goals in the plan, the commissioner may modify the plan in a manner consistent with subsection (n).

If the commissioner determines that the school has substantially failed to meet multiple goals in the plan, the commissioner may: (1)if the school is operated by a superintendent, appoint an external receiver, as defined in subsection (r), to operate the school; or (2) if the school is operated by an external receiver terminate the contract of the external receiver; provided, however, that the commissioner shall not terminate the receiver before the completion of the first full school year of the operation of the chronically underperforming school.

(w) Upon the expiration of a turnaround plan for a chronically underperforming school, the commissioner shall conduct a review of the school to determine whether the school has improved sufficiently, requires further improvement or has failed to improve. On the basis of such review, the commissioner may: (1) on the basis of a superintendent's or external receiver's success in meeting the terms of the plan, renew the plan with the superintendent or external receiver for an additional period of not more than 3 years; (2) if a school that is operated by a superintendent and remains chronically underperforming, appoint an external receiver, as defined in subsection (r), to operate the school; (3) if a chronically underperforming school that is operated by an external receiver and remains chronically underperforming, transfer the operation of the school from the receiver to the applicable superintendent or to another external receiver; or (4) determine that the school has improved sufficiently for the designation of chronically underperforming to be removed. The commissioner shall: (1) in the case of a renewal of an turnaround plan, jointly determine subsequent annual goals for each component of the plan with

the superintendent or external receiver, as applicable; or (2) create a new or modified turnaround plan as necessary, consistent with the requirements of this section.

(x) Notwithstanding any general or special law to the contrary, any underperforming or chronically underperforming school operating a limited-English proficient program or programs for limited English proficient students in any 1 language group shall establish a limited English proficient parent advisory council. The parent advisory council shall be comprised of parents or legal guardians of students who are enrolled in limited English proficient programs within the school. Each parent advisory council shall have at least 1 representative from every language group in which a program is conducted in a given school. Membership shall be restricted to parents or legal guardians of students enrolled in limited English proficient programs within the school. The duties of the parent advisory council shall include, but not be limited to, advising the school on matters that pertain to the education of students in limited English proficient programs, meeting regularly with school officials to participate in the planning and development of a plan to improve educational opportunities for limited English proficient students, and to participate in the review of school improvement plans established under section 59C of chapter 71 as they pertain to limited English proficient students. Any parent advisory council may, at its request, meet at least once annually with the school council. The parent advisory council shall establish by-laws regarding officers and operational procedures. In the course of its duties under this section, the parent advisory council shall receive assistance from the director of limited English proficient programs for the district or other appropriate school personnel as designated by the superintendent.

(y)The board of elementary and secondary education shall adopt regulations regarding: (1) the conditions under which an underperforming or chronically underperforming school shall no longer be designated as an underperforming or chronically underperforming school; and (2) the transfer of the operation of an underperforming or a chronically underperforming school from

a superintendent or an external receiver, as applicable, to the school committee. The regulations shall include provisions to allow a school to retain measures adopted in an turnaround plan for a transitional period if, in the judgment of the commissioner, the measures would contribute to the continued improvement of the school. Such regulations shall also include provisions that clearly identify the conditions under which such a transitional period shall end and the powers granted to the commissioner and board under this section shall cease to apply to a district previously designated as chronically underperforming.

(z) The commissioner shall report annually to the joint committee on education, the house and senate committees on ways and means, the speaker of the house of representatives and the senate president on the implementation and fiscal impact of this section and section 1K. The report shall include, but not be limited to, a list of all schools currently designated as underperforming or chronically underperforming, a list of all districts currently designated as chronically underperforming, the plans and timetable for returning the schools and districts to the local school committee and strategies used in each of the schools and districts to maximize the rapid academic achievement of students.

Section 1K. (a) A district shall be deemed eligible for designation as chronically underperforming upon a determination by the board of elementary and secondary education, pursuant to regulations adopted by the board, that a school district, other than a single school district, has scored in the lowest 10 per cent statewide when compared to other districts of the same grade levels based on a single measure developed by the department that takes into account student achievement data collected pursuant to 1I, and, beginning on July 1, 2011, improvement over time in student academic achievement. Following such determination, the commissioner shall appoint a district review team pursuant to section 55A of chapter 15 to assess and report on the reasons for the underperformance and the prospects for improvement, unless such an assessment has been completed by a district review team within the previous year that the

commissioner considers adequate. The district review team shall include at least 1 person with expertise in the academic achievement of limited English-proficient students. Upon review of the findings of the district review team, the board may declare the district chronically underperforming.

Following such a declaration, the board shall designate a receiver for the district with all the powers of the superintendent and school committee. The receiver shall be a non-profit entity or an individual with a demonstrated record of success in improving low-performing schools or districts or the academic performance of disadvantaged students who shall report directly to the commissioner. An external receiver designated by the board to operate a district under this subsection shall have full managerial and operational control over such district; provided, however, that the school district shall remain the employer of record for all other purposes. A receiver shall be subject to section 11A ½ of chapter 30A and chapter 66. A receiver who is an individual shall also be subject to chapter 268A.

Not more than 2.5 per cent of the total number of school districts may be designated as chronically underperforming at any given time.

In adopting regulations allowing the board to designate a district as chronically underperforming, the board must ensure that the regulations account for multiple indicators of district quality including student attendance, dismissal rates, exclusion rates, student promotion and graduation rates in the district, or the lack of demonstrated significant improvement for 2 or more consecutive years in core academic subjects, either in the aggregate or among subgroups of students, including designations based on special education classification, low-income, English language proficiency and racial classifications.

(b) The commissioner and the receiver shall jointly create an turnaround plan to promote the rapid improvement of the chronically underperforming district. The plan shall specifically

focus on the school or schools in the district that have been designated as chronically underperforming under section 1J and the district policies or practices that have contributed to chronic underperformance.

Before creating the turnaround plan required in this subsection, the commissioner and receiver shall convene a local stakeholder group of not more than 13 individuals for the purpose of soliciting recommendations on the content of such plan in order to maximize the rapid improvement of the academic achievement of students. The commissioner shall provide due consideration to the recommendations of the local stakeholder group. The group shall include: (1) the superintendent, or a designee; (2) the chair of the school committee, or a designee; (3) the president of the local teacher's union, or a designee; (4) a selection of administrators from the district, chosen by the commissioner from among volunteers from the district; (5) a selection of teachers from the district, chosen by the local teacher's union; (6) a selection of parents from the district chosen by the local parent organization; (7) representatives of applicable state and local social service, health, and child welfare agencies chosen by the commissioner; (8) as appropriate, representatives of state and local workforce development agencies chosen by the commissioner; (9) a representative of an early education and care provider chosen by the commissioner of the department of early education and care, or for middle or high schools, a representative of the higher education community selected by the secretary of education; and (10) a member of the community appointed by the chief executive of the city or town. If the district does not have a parent organization or if the organization does not select a parent, the commissioner shall select a volunteer parent of a student from the district. The commissioner and receiver shall convene the group within 30 days of the board designating a district as chronically underperforming and the group shall make its recommendations to the commissioner and receiver within 45 days of its initial meetings. Meetings of the local stakeholder group shall be open to the public and the

recommendations submitted to the commissioner and receiver shall be publicly available immediately upon their submission.

(c) In creating the turnaround plan, the commissioner and receiver shall include measures intended to maximize the rapid improvement of the academic achievement of students in the district and shall, to the extent practicable, base the plan on student outcome data, including, but not limited to: (1) data collected pursuant to section 1I, or information from a school or district review performed under section 55A of chapter 15; (2) student achievement on the Massachusetts Comprehensive Assessment System; (3) other measures of student achievement, approved by the commissioner,; (4) student promotion and graduation rates; (5) achievement data for different subgroups of students, including low-income students as defined in chapter 70, limited English-proficient students and students receiving special education; and (6) student attendance, dismissal rates and exclusion rates. In creating the turnaround plan required in subsection (b), the commissioner and receiver shall include, after considering the recommendations of the local stakeholder group, the following: (1) steps to address social service and health needs of students in the district and their families in order to help students arrive and remain at school ready to learn; provided, however, that this may include mental health and substance abuse screening; (2) steps to improve or expand child welfare services and, as appropriate, law enforcement services in the school district community, in order to promote a safe and secure learning environment; (3) as applicable, steps to improve workforce development services provided to students in the district and their families in order to provide students and families with meaningful employment skills and opportunities; (4) steps to address achievement gaps for limited English-proficient, special education and low-income students, as applicable; (5) alternative English language learning programs for limited-English proficient students, notwithstanding chapter 71A; and (6) a budget for the district including any additional funds to be provided by the commonwealth, federal government or other sources.

The secretaries of health and human services, public safety, labor and workforce development and other applicable state and local social service, health and child welfare officials shall coordinate with the secretary of education and the commissioner regarding the implementation of strategies pursuant to clauses (1) to (3), inclusive, of this subsection that are included in an turnaround plan and shall, subject to appropriation, reasonably support the implementation consistent with the requirements of state and federal law applicable to the relevant programs that each such official is responsible for administering.

In order to assess the district across multiple measures of district performance and student success, the turnaround plan shall include measurable annual goals including, but not limited to, the following: (1) student attendance , dismissal rates and exclusion rates; (2) student safety and discipline; (3) student promotion and graduation and dropout rates; (4) student achievement on the Massachusetts Comprehensive Assessment System; (5) progress in areas of academic underperformance; (6) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students; (8) student acquisition and mastery of 21st-century skills; (9) development of college readiness, including at the elementary and middle school levels; (10) parent and family engagement; (11) building a culture of academic success among students; (12) building a culture of student support and success among faculty and staff; and (13) developmentally appropriate child assessments from pre-kindergarten through third grade, if applicable.

(d) Notwithstanding any general or special law to the contrary, in creating the turnaround plan under subsection (b), the commissioner and the receiver may, after considering the recommendations of the group of stakeholders: (1) expand, alter or replace the curriculum and program offerings of the district or of a school in the district, including the implementation of research-based early literacy programs, early interventions for struggling readers and the teaching

of advanced placement courses or other rigorous nationally or internationally recognized courses, if the district or schools in the district do not already have such programs or courses; (2) reallocate the uses of the existing budget of the district; (3) provide funds, subject to appropriation, to increase the salary of an administrator, or teacher in the district working in an underperforming or chronically underperforming school, in order to attract or retain highly-qualified administrators, or teachers or to reward administrators or teachers who work in chronically underperforming districts that achieve the annual goals set forth in the turnaround plan; (4) expand the school day or school year or both of schools in the district; (5) limit, suspend or change 1 or more provisions of any contract or collective bargaining agreement in the district, including the adoption of model provisions identified by the commissioner from among existing contracts or collective bargaining agreements in the commonwealth; provided, however, that the commissioner shall not reduce the compensation of an administrator, teacher or staff member unless the hours of the person are proportionately reduced; (6) add pre-kindergarten and full-day kindergarten classes, if the district does not already have the classes; (7) following consultation with applicable local unions, require the principal and all administrators, teachers and staff to reapply for their positions in the district, with full discretion vested in the receiver regarding any such reapplications. turnaround plan; (8) limit, suspend or change 1 or more school district policies or practices, as such policies or practices relate to the underperforming schools in the district; (9) include a provision of job-embedded professional development for teachers in the district, with an emphasis on strategies that involve teacher input and feedback; (10) provide for increased opportunities for teacher planning time and collaboration focused on improving student instruction; (11) establish a plan for professional development for administrators in the district, with an emphasis on strategies that develop leadership skills and use the principles of distributive leadership; (12) establish steps to assure a continuum of high expertise teachers by aligning the following processes with the common core of professional knowledge and skill: hiring, induction, teacher evaluation, professional development, teacher advancement, school culture and

organizational structure; (13) develop a strategy to search for and study best practices in areas of demonstrated deficiency in the district; (14) establish strategies to address mobility and transiency among the student population of the district; and (15) include additional components, at the discretion of the commissioner and the receiver, based on the reasons the district was designated as chronically underperforming and based on the recommendations of the local stakeholder group in subsection (b).

If the commissioner does not approve a reapplication submitted by an employee pursuant to clause (7) for a position in a school or if an employee does not submit a reapplication for a position in a school, the employee shall retain such rights as may be provided under law or any applicable collective bargaining agreement in relation to the employee's ability to fill another position in the district; provided, however, that the employee shall not have the right to displace any teacher with professional teacher status in any other school during a school year.

A teacher with professional teacher status in a school declared underperforming or chronically underperforming may be dismissed for good cause; provided, however, that the teacher receives 5 days written notice of the decision to terminate which shall include without limitation an explanation of the reason why the commissioner/superintendent is not retaining the teacher in the school; provided, further, that the teacher may seek review of a termination decision within 5 days after receiving notice of the teacher's termination by filing a petition for expedited arbitration with the commissioner; provided, further, that except as otherwise provided herein section 42 of chapter 71 shall apply to a petition filed pursuant to this section; provided further, that the commissioner shall cause an arbitrator to be selected pursuant to the procedures in section 42 of chapter 71 within 3 days of receipt of petition and shall conduct and complete a hearing within 10 days of receipt of the petition; provided further, that in reviewing dismissal decisions, the arbitrator shall consider the components of the turnaround plan and shall also consider any personnel evaluations conducted that are consistent with the guidelines established

pursuant to section 1B; and provided, further, that the arbitrator's decision shall be issued within 10 days from the completion of the hearing.

For a district with limited English-proficient students, the professional development and planning time for teachers and administrators identified in clauses (9) to (11), inclusive, shall include specific strategies and content designed to maximize the rapid academic achievement of limited English-proficient students in the district.

(e) if, after considering the recommendations of the group of stakeholders, pursuant to subsection (d) the commissioner considers it necessary to maximize the rapid academic achievement of students at an underperforming or chronically underperforming school by altering the compensation, hours and working conditions of the administrators, teachers, principals and staff at the school or by altering other provisions of a contract or collective bargaining agreement applicable to the administrators, teachers, principals and staff, the commissioner may request that the school committee and any union bargain or reopen the bargaining of the relevant collective bargaining agreements to facilitate such achievement. The bargaining shall be conducted in good faith and completed not later than 30 days from the point at which the commissioner requested that the parties bargain. The agreement shall be subject to ratification within 10 business days by the bargaining unit members in the school. If the parties are unable to reach an agreement within 30 days or if the agreement is not ratified within 10 business days by the bargaining unit members of the school, the parties shall submit remaining unresolved issues to a joint resolution committee for dispute resolution process on the next business day following the end of the 30 day bargaining period or failure to ratify.

The joint resolution committee shall be comprised of 3 members, 1 of whom shall be appointed by the employee organization within 3 business days following the submission of unresolved issues to the joint resolution committee, 1 of whom shall be appointed by the school committee within 3 business days following the submission of unresolved issues to the joint

resolution committee and 1 who shall be selected through the American Arbitration Association who shall forthwith forward to the parties a list of three conciliators, each of whom shall have professional experience in elementary and secondary education, from which the parties may agree upon a single conciliator; provided, however, that if the parties cannot select a conciliator from among the 3 within 3 business days, the American Arbitration Association shall select a conciliator from the remaining names. The joint resolution committee shall conduct a dispute resolution process to be concluded within 10 business days of selection. This process shall be conducted in accordance with the rules of the American Arbitration Association and consistent with this section; provided however, that all members of the joint resolution committee must agree to any resolution. The fee for the process shall be shared equally between the 2 parties involved.

The joint resolution committee shall consider the positions of the parties, the designation of the school as underperforming or chronically underperforming, the designation of the district as chronically underperforming, and the needs of the students in the school. Notwithstanding any other provision of this chapter, the unanimous decision of the joint resolution committee shall be dispositive of all the issues in dispute and shall be submitted to the parties within 10 business days of the close of the hearing. Under no circumstance, shall a time extension be granted beyond 10 business days of the close of the hearing. In the event that a unanimous decision is not submitted to the parties within 10 business days, the commissioner will resolve all outstanding issues.

(f) The turnaround plan shall be authorized for a period of not more than 3 years, subject to subsection (g). The commissioner and receiver may jointly develop additional components of the plan and shall jointly develop annual goals for each component of the plan in a manner consistent with the provisions of subsection (d). The receiver shall be responsible for meeting the goals of the turnaround plan.

(g) The commissioner and receiver shall provide a written report to the school committee on a quarterly basis to provide specific information about the progress being made on the implementation of the district's turnaround plan. One of the quarterly reports shall be the annual evaluation required in subsection (g).

(h) The commissioner shall evaluate the performance of the receiver on not less than an annual basis. The purpose of such evaluation shall be to assess the implementation of the turnaround plan and determine whether the district has met the annual goals contained in the turnaround plan. The evaluation shall be in writing and submitted to the board and the local school committee no later than July 1 for the preceding school year.

If the commissioner determines that the district has met the annual performance goals stated in the turnaround plan, the evaluation shall be considered sufficient and the implementation of the turnaround plan shall continue.

If the commissioner determines that the receiver has not met 1 or more goals in the plan and the failure to meet the goals may be corrected through reasonable modification of the plan, the commissioner may amend the turnaround plan, as necessary. After assessing the implementation of the turnaround plan in the district, the commissioner may amend the plan if the commissioner determines that the amendment is necessary in view of subsequent changes in the district that affect 1 or more components of the plan, including, but not limited to, changes to contracts, collective bargaining agreements, or school district policies, in manner consistent with the provisions of subsection (d). If the commissioner determines that the receiver has substantially failed to meet multiple goals in the turnaround plan, the commissioner may terminate such receiver; provided, however, that the termination shall not occur before the completion of the first full school year of the receivership of the district.

(i) After the period of receivership, there shall be a reevaluation of a district's status under this section. The board of elementary and secondary education shall adopt regulations providing for: (1) the removal of a designation of a district as chronically underperforming; and (2) the transfer of the operation of a chronically underperforming district from an external receiver to the superintendent and school committee, based on the improvement of the district. The regulations shall include provisions to allow a district to retain measures adopted in a turnaround plan for a transitional period if, in the judgment of the commissioner, the measures would contribute to the continued improvement of the district. Such regulations shall also include provisions that clearly identify the conditions under which such a transitional period shall end and the powers granted to the commissioner and board under this section shall cease to apply to a district previously designated as chronically underperforming. At any time after a chronically underperforming district has been placed in receivership, the school committee of the district may petition the commissioner for a determination as to whether the turnaround plan adopted under subsection (b) should be modified or eliminated and whether the school district shall no longer be designated as chronically underperforming. The decision of the commissioner shall be based on regulations adopted by the board. A school committee may seek review by the board of elementary and secondary education of an adverse determination.

(j) If, on the basis of the regulations adopted by the board pursuant to subsection (h), a district has not improved sufficiently to remove the designation of the district as chronically underperforming, the commissioner may: (1) jointly determine subsequent annual goals for each component of the turnaround plan with the receiver and renew the turnaround plan for an additional period of not more than 3 years; or (2) create a new turnaround plan, consistent with the requirements of this section.

(k) If a municipality has failed to fulfill its fiscal responsibilities pursuant to chapter 70, the commissioner may declare the school district as chronically underperforming, subject to the

approval of the board. The municipality's mayor or chairman of the board of selectmen shall have the opportunity to present evidence to the board. A vote by the board that a school district is chronically underperforming for fiscal reasons shall authorize the commissioner to petition the commissioner of revenue to require an increase in funds for the school district, alleging that the amount necessary in the municipality for the support of public schools has not been included in the annual budget appropriations. The commissioner of revenue shall determine the amount of any deficiency pursuant to the sums required pursuant to chapter 70, if any, and issue an order compelling the municipality to provide a sum of money equal to such deficiency. If the municipality does not provide a sum of money equal to such deficiency, the commissioner of revenue, pursuant to section 23 of chapter 59, shall not approve the tax rate of the municipality for the fiscal year until the deficiency is alleviated. Nothing in this subsection shall be construed as creating a cause of action for educational malpractice by students or their parents, guardians or persons acting as parents.

If the district is designated as chronically underperforming pursuant to this subsection, the provisions of this subsection shall supersede those in subsections (a) to (j), inclusive.

MASSACHUSETTS BOARD OF ELEMENTARY AND SECONDARY EDUCATION

REGULATIONS ON UNDERPERFORMING SCHOOLS AND SCHOOL DISTRICTS – AS OF JANUARY 14, 2010

NOTE: The Board of Elementary and Secondary Education intends to amend these regulations to conform to the statutes on underperforming schools and school districts, Mass. Gen. Laws c. 69, ss. 1J and 1K, as amended by the Legislature on January 14, 2010, and expected to be signed into law by the Governor shortly.

603 CMR 2.00:

Underperforming Schools and School Districts

Section:

2.01: Authority, Scope, and Purpose

2.02: Definitions

2.03: School Accountability

2.04: Underperforming School Districts

2.05: Low-Performing Mathematics Programs

View All Sections

Adopted by the Board of Education: June 16, 1997
Most Recently Amended by the Board of Education: October 24, 2006

2.01: Authority, Scope and Purpose

(1) 603 CMR 2.00 is promulgated pursuant to the authority of the Board of Education under M.G.L. c.69, §§ 1B and 1J and c. 71, § 38G.

(2) 603 CMR 2.00 governs the Board's review of the adequacy of the educational opportunities and services provided by the Commonwealth's public schools, and identifies the circumstances under which the Board may declare a school or school district chronically underperforming and intervene in accordance with M.G.L. c. 69, §§ 1J and 1K. 603 CMR 2.00 also governs the Board's review of the mathematics programs provided by the Commonwealth's public school's and identifies circumstances under which the Board may declare a school's mathematics program low-performing and require mathematics teachers in that

program to take a diagnostic mathematics content assessment.

2.02: Definitions

Accountability Status shall mean the category to which a school is assigned, based on its AYP determinations over multiple years, to define the required course of school, district and/or state action that must be taken to improve student performance. Accountability status categories include *Identified for Improvement, Corrective Action and Restructuring.* Schools that make AYP in a subject for all student groups for two or more consecutive years are assigned to the *No Status* category. A district or school may be placed in an accountability status on the basis of the performance and improvement profile of students in the aggregate or of one or more student subgroups over two or more years in English language arts and/or mathematics.

Adequate Yearly Process or AYP shall mean a determination by the Department of the adequacy of district, grade level, school, and student subgroup performance and improvement relative to performance and improvement targets in English language arts and mathematics established by the Board in accordance with the No Child Left Behind Act.

Board shall mean the Board of Education, appointed in accordance with M.G.L. c. 15, § 1E.

Chronically Underperforming School shall mean a school deemed by the Commissioner to be an underperforming school, also known as a Commonwealth Priority School, that is found by the Board, in accordance with M.G.L. c. 69, § 1J, to have failed to demonstrate significant improvement consistent with its approved remedial plan within 24 months after Board approval of its plan.

Commissioner shall mean the Commissioner of Education, appointed in accordance with M.G.L. c. 15, § 1F, or his or her designee.

Commonwealth Priority School shall mean a school that the Commissioner has deemed to be underperforming within the meaning of M.G.L. c. 69, § 1J.

Core academic subjects shall mean the subjects specified in M.G.L. c. 69, § 1D (mathematics, science and technology, history and social science, English, foreign languages and the arts) and subjects covered in courses that are part of an approved vocational-technical education program under M.G.L. c. 74.

Corrective Action shall mean the Accountability Status of a school that has failed to meet AYP in English language arts, mathematics, or both subjects in the aggregate or for student subgroups for four consecutive years or for two or more non-consecutive years while in Identified for Improvement accountability status.

Department shall mean the Department of Elementary and Secondary Education acting through the Commissioner or his designee.

District or school district shall mean a municipal school department or regional school district, acting through its school committee or superintendent of schools; a county agricultural school, acting through its board of trustees or superintendent/director; a charter school, acting through its

board of trustees or school leader; or any other public school established by statute or charter, acting through its governing board or director.

District Review shall mean a review conducted by the office of Educational Quality and Accountability to determine whether a district is making adequate provision for the delivery of a high quality education to all students served by the district, and whether the district is making effective and efficient use of available resources to improve the educational outcomes attained by students attending the district's schools. District reviews shall be based on performance standards adopted by the EMAC. The Office of Educational Quality and Accountability shall publish and provide district officials with written guidelines for District reviews.

District Review Teams shall mean a group of individuals appointed by the Office of Educational Quality and Accountability to conduct desk based and/or on site school and district performance review activities.

Educational Management Audit Council or "EMAC" shall mean the entity, comprised of individuals appointed by the Governor pursuant to M.G.L. c. 15, § 55A that directs and oversees the conduct of school and district audits performed by the Office of Educational Quality and Accountability.

Fact-Finding Review shall mean a review conducted by one or more individuals appointed by the Commissioner in accordance with M.G. L. c. 69, §1J or 1K to assess the reasons for a school's or district's underperformance and prospects for its improvement.

Identified for Improvement shall mean the Accountability Status of a school that has failed to meet AYP in English language arts or math or both subjects in the aggregate or for student subgroups for two consecutive years.

Low-performing Mathematics Program: A mathematics program in a Massachusetts public middle or high school that has been identified as low-performing according to the criteria found in 603 CMR 2.05.

Mathematics Content Assessment: A diagnostic assessment of mathematics content knowledge designated by the Board and paid for by the Department.

Mathematics Teacher: Any educator who teaches any mathematics course in a Massachusetts public school.

NCLB shall mean the No Child Left Behind Act of 2001, 20 U.S.C. 6301, *et. seq.*

Office of Educational Quality and Accountability or "EQA" shall mean the agency established pursuant to M.G. L. c. 15, § 55A.

Restructuring shall mean the Accountability Status of a school that has failed to make AYP in English language arts, mathematics, or both subjects in the aggregate or for student subgroups for five or more consecutive years or for one or more additional years after being identified for Corrective Action.

School shall mean a single public school, consisting of one or more school buildings, which operates under the direct administration of a principal, director, or school leader appointed by the school district or charter school board responsible for its governance.

State Review Panel shall mean a group of highly qualified individuals appointed to serve, on request, as advisors to the Commissioner and Board on matters related to school and district performance review and improvement planning.

2.03: School Accountability

(1) The Department shall implement an accountability system approved by the Board to track the performance and improvement demonstrated by Massachusetts public schools on State assessments in designated core academic subjects and other measures of performance approved by the Board on recommendation of the Commissioner. The school accountability system implemented by the Department shall be designed to meet federal as well as state statutory requirements.

(a) The school accountability system shall measure performance referenced to Board-approved state targets for student performance on MCAS tests and alternative assessments in English language arts and mathematics, high school graduation rate, and student attendance.

(b) In addition to state targets for MCAS *performance* which in a given year are the same for all schools, the Department shall establish subject-specific MCAS *improvement* targets on an annual basis for each school, and for each student subgroup within a school.

(c) The Department shall compile and analyze the performance and improvement data for each school and district, together with data on MCAS participation, student attendance, and high school graduation rates on an annual basis to determine, for each school, whether students in the aggregate and student subgroups within the school have made *adequate yearly progress* (AYP) toward the achievement of state performance targets.

(d) The Department shall communicate AYP and accountability status determinations to school and district officials and the public on an annual basis as soon as practicable after annual MCAS results become available, and shall inform school and district officials of any state actions that may occur as a consequence of those determinations.

(2) The Commissioner shall recruit highly qualified individuals to serve as

members of a State Review Panel.

(a) The Commissioner shall select Review Panel members on the basis of their demonstrated expertise in one or more of the following fields:

1. district or school leadership

2. standards-based elementary or secondary curriculum, instruction, and assessment

3. instructional data management and analysis

4. district, school, or program evaluation

5. educational program management

6. teacher leadership

7. organizational management

8. district or school budget and finance

9. any other fields that the Commissioner deems to be relevant to the review and evaluation of school or district performance or school improvement planning.

(b) The Commissioner shall deploy Review Panel members, individually or as a group, to conduct or participate in the review of school improvement plans and the evaluation of district improvement activities. Review Panel members may be asked to provide advice and assistance to the Commissioner and Board regarding the appropriateness and sufficiency of actions being taken by district and school leaders and by the Department to improve student performance in Commonwealth Priority Schools and Chronically Underperforming Schools.

(c) Candidates for appointment to the State Review Panel shall be approved by the Board.

(d) State Review Panel members may be compensated by the Department for their service.

(3) **Designation as a Commonwealth Priority School**

When a school is identified for Corrective Action or Restructuring in English language arts and/or mathematics for students in the aggregate as a result of failing, for four or more years, to make AYP in the same subject(s), the Commissioner shall designate the school a Commonwealth Priority School

(4) **Notice of Designation and Opportunity for Reconsideration**

(a) When a school is found to meet the criteria for designation as a Commonwealth Priority School, the Department will provide written notice to the governing body of the school, the district superintendent, if any, the school's principal, and the collective bargaining agent for the school's faculty, if any, informing them that the school is so designated.

(b) The governing body of a school designated as a Commonwealth Priority School may seek reconsideration of that designation if it believes that the designation was based upon erroneous or misleading information or that the school should not be so designated due to special circumstances. A request for reconsideration of a Commonwealth Priority School designation shall be accompanied by documentary support of the claim of error, offer of explanation, or statement of special circumstances, and must be received by the Commissioner no later than thirty (30) calendar days after the date the school received notification of its designation.

(c) The Department will not initiate state intervention in a school designated as a Commonwealth Priority School while a timely request for reconsideration is pending.

(d) The Commissioner's determination on reconsideration of a Commonwealth Priority School designation shall be final.

(5) **Fact Finding to Assess Intervention Required**

(a) Within thirty (30) days after the Commissioner issues a Commonwealth Priority School designation, the school committee and superintendent of a district in which a school so designated is located, or the board of trustees and head of school of a charter school so designated, shall submit a written self-assessment to the Department setting forth:

1. a succinct assessment of the extent to which the essential structures, policies, administrative practices and operating conditions for improving student performance in the school are in place, and

2. the school's needs for improvement assistance and support.

(b) District officials shall confer with teacher representatives in preparing this assessment and statement of needs.

(c) The Department may rely in whole or in part on information contained in the district self-assessment report to determine initially the school's need for service and support.

(d) Within thirty (30) days following Department receipt of a Commonwealth Priority School's self-assessment and statement of needs, the Department will initiate an independent fact finding review to assess the current capacity and willingness of district, school, and community leaders to plan for, lead, and productively engage the school's faculty, administrators, students, parents and community institutions in appropriate school improvement efforts, with or without assistance from an external partner.

(e) The Commissioner may appoint one or more members of the State Review Panel to consider the results of the fact finding review, the district's self-assessment and statement of needs, and other relevant information provided by the Department or solicited by panel members. The panel member(s) may recommend appropriate action to the Commissioner and Board based on their professional judgments regarding:

1. the present adequacy of leadership for change to improve results;

2. the present adequacy of district infrastructure to support school improvement;

3. the readiness and apparent capacity of school and district personnel to plan effectively and lead the implementation of appropriate actions to improve student achievement at the school;

4. the readiness and apparent capacity of district, school and faculty leaders to engage productively with and benefit from the assistance provided by an external partner;

5. the likelihood of positive returns on state investments of assistance and support to improve the school's performance within current management structure and staffing; and

6. the necessity that the school in question remain in operation to serve district students.

(f) The Commissioner, upon consideration of the recommendations of the State Review Panel members assigned to the case, shall determine the services and supports for which a Commonwealth Priority School will have priority. The school may be given priority for receipt of state-funded or arranged assistance and supports including, but not limited to:

1. financial support from the Department to support the successful implementation of district planned and directed improvement initiatives;

2. direct assistance from Department staff and consultants to support data analysis, program design, evaluation of curriculum and instructional practice, or school management;

3. school improvement planning, personnel recruitment, selection or evaluation, and budget planning assistance;

4. participation in state-sponsored leadership training and teacher professional development opportunities;

5. guidance, assistance and/or services from an external organizational partner engaged by the Department to support district systemic changes and/or school-based improvement initiatives

(6) **Improvement Planning and Reporting Requirements**

(a) The governing body of a Commonwealth Priority School or Chronically Underperforming School shall adopt clear, rigorous performance expectations for raising the level of student achievement at the school. Such expectations shall include, but not be limited to, meeting school-wide Adequate Yearly Progress standards within two years after the adoption of a school improvement plan. The governing body shall adopt a written policy setting forth the manner in which the performance expectations it has established will be used in its personnel evaluation

system.

(b) The governing body and administrators responsible for management of a Commonwealth Priority School or Chronically Underperforming School shall ensure that essential infrastructure and conditions are in place to support the delivery of high quality, standards-based curriculum, instruction, assessment and student support services at the school.

(c) The governing body of a Commonwealth Priority School or Chronically Underperforming School shall revise existing policies, structures, agreements, processes, and practices as needed to remove existing barriers to achievement of the conditions for effective teaching, learning and instructional management.

(d) In accordance with M.G.L. c. 69, § 1J, no more than six months after the school is declared to be a Commonwealth Priority School or a Chronically Underperforming School, the superintendent of the district in which the school is located, or in the case of a charter school, its head of school, shall submit to the Board the district's plan to improve the performance of students at the school. The improvement plan shall specify:

1. the immediate corrective actions that the district has taken and proposes to take to ensure that essential infrastructure and conditions for improved teaching, learning, and instructional management at the school are in place, and

2. the steps that will be followed by school administrators and faculty to develop and implement a coherent, intentional design for the delivery of effective teaching, learning, instructional management and student services at the school.

(e) The district's immediate term plan of corrective action to improve student performance in a Commonwealth Priority School or Chronically Underperforming School shall describe the changes in the district's or school's existing policies, structures, agreements, processes, and practices necessary to ensure significant achievement gains for all students enrolled in such schools. All such plans must include the following elements, or a compelling rationale for alternative approaches designed to achieve comparable or superior results:

1. The school's principal has authority to select and assign staff to

positions in the school without regard to seniority;

2. The school's principal has control over financial resources necessary to successfully implement the school improvement plan;

3. The school is implementing curricula that are aligned to state frameworks in core academic subjects;

4. The school implements systematically a program of interim assessments (4-6 times per year) in English language arts and mathematics that are aligned to school curriculum and state frameworks;

5. The school has a system to provide detailed tracking and analysis of assessment results and uses those results to inform curriculum, instruction and individual interventions;

6. The school schedule for student learning provides adequate time on a daily and weekly basis for the delivery of instruction and provision of individualized support as needed in English language arts and math, which for students not yet proficient is presumed to be at least 90 minutes per day in each subject;

7. The school provides daily after-school tutoring and homework help for students who need supplemental instruction and focused work on skill development;

8. The school has a least two full-time subject-area coaches, one each for English language arts/reading and for mathematics, who are responsible to provide faculty at the school with consistent classroom observation and feedback on the quality and effectiveness of curriculum delivery, instructional practice, and data use;

9. School administrators periodically evaluate faculty, including direct evaluation of applicable content knowledge and annual evaluation of overall performance tied in part to solid growth in student learning and commitment to the school's culture, educational model, and improvement strategy;

10. The weekly and annual work schedule for teachers provides adequate time for regular, frequent, department and/or grade-level

faculty meetings to discuss individual student progress, curriculum issues, instructional practice, and school-wide improvement efforts. As a general rule no less than one hour per week shall be dedicated to leadership-directed, collaborative work, and no fewer than 5 days per year, or hours equivalent thereto, when teachers are not responsible for supervising or teaching students, shall be dedicated to professional development and planning activities directed by school leaders.

(f) District officials, in developing a plan to improve the performance of a Commonwealth Priority School or Chronically Underperforming School, shall consider the merits of contracting for third party management services or requesting Board approval of a Horace Mann charter to restructure governance of the school. The district's written submission to the Board, containing district leaders' improvement plan proposal, shall include a discussion of these options.

(g) The Commissioner will publish guidance to assist district administrators, school leaders, faculty, and staff of a Commonwealth Priority School or Chronically Underperforming School with the organizational redesign aspect of the school improvement planning process referenced at 603 C.M.R. 2.03(6)(d) 2. The Department's guidance on school system design will identify elements of effective practice and conditions of organizational operation that have been demonstrated to be effective contributors to improved student performance in low performing schools.

(h) The Commissioner's published guidance on instructional and administrative policies, practices and conditions found to have positive effects on student performance shall serve as a basis for the Department's assessment of the adequacy of the policies, practices, and conditions in a school failing to meet performance expectations, and shall be the foundation for the school improvement planning and support provided by the Department.

(i) The Department will form a stakeholder working group to assist in the development and participate in periodic review and amendment of Department guidelines for the conduct of fact-finding reviews to determine the capacity and service needs of districts with schools designated as Commonwealth Priority Schools. The stakeholder working group shall include, but not be limited to, representatives from the professional associations of Massachusetts school committees,

superintendents, principals, program administrators, teachers and parents. The Department will publish these guidelines in draft form for public review and comment prior to adoption and final publication.

(j) When the governing body of a Commonwealth Priority School or Chronically Underperforming School submits, for Board approval, its plan for improving student performance, the Commissioner may appoint one or more members from the State Review Panel to review the proposed plan and recommend appropriate action to the Commissioner and Board.

(k) The Commissioner shall recommend to the Board, and the Board shall exercise its discretion to decide whether to accept, reject or direct that specific amendments be made to the plan submitted by a district to improve student performance at a Commonwealth Priority School or Chronically Underperforming School. The Board's exercise of its plan approval authority shall be guided by the recommendations, if any, of any State Review Panel members designated by the Commissioner to review and advise on approval of proposed plans. In cases of Chronically Underperforming schools, the Board shall consider amending school improvement plans to require management of the school by a qualified third party, under a performance-based contract or Horace Mann charter.

(l) In January and July of each year, the governing body of a Commonwealth Priority School and a Chronically Underperforming School shall provide the Commissioner with a written report of the school's progress toward its improvement objectives. These progress reports shall be prepared and submitted by the school's leader and superintendent in conjunction with the school's external partner, if any.

(m) The Commissioner, with approval of the Board and to the extent permitted by federal and state statutes, may withhold funds when, after reasonable notice and opportunity to comply, the district fails to comply with directives of the Board to take specified actions designed to improve student performance in a Commonwealth Priority School or Chronically Underperforming School.

(n) Failure by local school or municipal officials to comply with directives of the Board issued pursuant to its authority under M.G.L. c. 69, s 1J to address performance deficiencies in a Commonwealth Priority School or Chronically Underperforming School may result in Board action to declare the district to be chronically underperforming and place the

district in receivership, as provided for by M.G.L. c. 69, s 1K and 603 CMR 2.04(5).

(7) **Training and Support for School Leaders**

(a) Subject to funding, the Department will make training and support available to the principals and members of the school leadership teams of all schools designated as Commonwealth Priority Schools or Chronically Underperforming Schools. The nature and extent of training provided in a particular case will depend on the leadership education and training history, past professional development experiences, and demonstrated knowledge and skills of the principal and leadership team. Subject to funding, the Department will make available coaches or mentors to principals and leaders of schools designated as Commonwealth Priority Schools or Chronically Underperforming Schools to advise, assist, and support them in fulfilling their leadership responsibilities.

(b) The principal or leader appointed to lead a Commonwealth Priority School or Chronically Underperforming School shall participate in the school leadership training and support program approved for him or her by the Commissioner.

(c) The Department may fund recruitment and performance-based pay incentives to attract highly qualified individuals to serve as principals or leaders of Commonwealth Priority Schools and Chronically Underperforming Schools.

(8) **Termination of Designation as a Commonwealth Priority School**

(a) If a Commonwealth Priority School makes AYP in both English language arts and mathematics for students in the aggregate for two consecutive years following its designation as a Commonwealth Priority School, the school's governing body may request termination of the school's designation. The Commissioner may grant the request unless the school is in Restructuring.

(b) If a Commonwealth Priority School has significantly improved student performance and has met many but not all of its AYP targets for students in the aggregate for four or more years, the school's governing body may request termination of the school's designation. The Commissioner may grant the request unless the school is in Restructuring.

(9) If a Commonwealth Priority School fails to demonstrate significant improvement in student performance within 24 months after acceptance of a remedial plan by the Board, the Board may declare the school to be chronically underperforming. School officials of the district in which the school is located and members of the public shall have an opportunity to be heard by the Board prior to final action by the Board declaring a school chronically underperforming.

(10) Upon declaration by the Board that a school is chronically underperforming, the Board shall intervene in accordance with M.G.L. c. 69, § 1J, and shall issue a written order specifying actions that the district shall take to improve the academic performance of students at the school. The principal or leader appointed to lead a chronically school shall have the extraordinary powers specified in M.G.L. c. 69, § 1J. The superintendent and school committee of the district, or the school leader and board of trustees of a charter school, in which a chronically underperforming school is located shall ensure that all corrective actions ordered by the Board are implemented without delay.

underperforming

2.04: Underperforming School Districts

(1) Every district shall develop and implement an annual self-evaluation and district improvement planning process, led by the district superintendent and school committee with active participation by teachers, parents, business and community leaders.

(a) The district's evaluation and planning process shall result, at least once in every three years, in the development of a written long-range plan to improve the educational programs and services and ensure the adequacy of educational facilities and equipment for students attending the district's schools.

(b) Annually, the district shall develop and implement a written plan stating specific goals for improved student performance and detailing the actions to be taken by the district to meet those goals.

(c) A district's long-range and annual improvement plans shall be premised on an analysis of data on performance by the district's students and an assessment of actions the district and its schools must take to improve that performance toward meeting State targets.

(d) Annual district improvement plans shall, in form and content, conform to requirements set forth in M.G.L. c. 69, § 1I and guidelines published by the Department.

(2) A district's plan(s) to support the improvement of any school within the district that has been designated a Commonwealth Priority School or a Chronically Underperforming School shall be incorporated into, and given high priority, in the district's annual improvement plan.

(3) The Office of Educational Quality and Accountability shall, on an annual basis, analyze data evidencing the performance of all school districts, and based on that analysis shall select districts to undergo district review.

(a) District reviews shall be conducted according to standards, policies and procedures adopted by the EMAC.

(b) The district review shall consist of an analysis of data, reports and documents and a focused interview of the district's leadership team, and shall address five areas of inquiry: assessment and evaluation, curriculum and instruction, student academic support services, leadership and governance, and business and financial management. Beginning November 1, 2004, for any district whose level of student performance and improvement is below the threshold established by the Board of Education in consultation with EMAC, the district review shall also include an in-depth review of the deficiencies the EQA has identified.

(c) In addition to the in-depth reviews that EQA shall conduct under 603 CMR 2.04 (3) (b), the EMAC may direct the EQA to conduct an in-depth review in any district based on identified deficiencies relating to any of the five areas of inquiry in 603 CMR 2.04 (3)(b).

(d) The EQA shall provide a written report of the findings and conclusions of each district review team to the district, the EMAC and the Commissioner of Education, and shall make such reports available to the public.

(e) The EQA shall provide the EMAC and the Commissioner and Board with an annual report of the results of the reviews it performs.

(4) The EMAC shall advise the Commissioner of any case in which a district review conducted by the EQA uncovered serious or widespread deficiencies in the quality of curriculum or instruction or in the adequacy of programs, services,

operational management or facilities that, in the EMAC's judgment, are likely to have a substantial negative effect on the educational achievement of students attending the district's schools. The Commissioner shall provide Board members with copies of the written district review report for each district in which such deficiencies are identified.

(a) The Board, after receipt and review of such a report and any additional information it may request, shall provide an opportunity for district officials to appear before the Board or a subcommittee thereof to explain the reasons for the district's performance deficiencies and offer a plan for their remediation, and after consideration of the findings of the district review team and any contrary or explanatory information provided to the Board by district officials, shall determine whether the district's performance warrants a declaration of underperformance.

(b) If the Board determines a district to be underperforming, the Commissioner shall appoint an independent fact-finding team. Using the reports from EQA as a basis, the fact-finding team will assess the reasons for the underperformance. The fact-finding process shall include an evaluation of the capacity and willingness of the district's leadership to implement effectively an improvement plan in partnership with the Department. At the Commissioner's direction, the team shall do additional fact-finding as needed to assess the reasons for the underperformance and the prospects for improvement. When the Commissioner is satisfied with the adequacy of the fact-finding, he may take action as follows.

1. If the Commissioner concludes, based on the fact-finding, that the district leadership does have the requisite capacity and willingness to implement an improvement plan, the Commissioner shall direct the district to prepare a plan to remedy its performance deficiencies and to propose a timeframe within which identified deficiencies shall be corrected. The Board, upon the recommendation of the Commissioner, may accept, reject or require modification of the district's plan.

2. The Commissioner shall, to the extent practicable, enter into a memorandum of agreement with the district and a turnaround partner approved by the Department who will work with district leaders to support strategic planning, training and management assistance for necessary reforms. As long as the district is classified as underperforming, the district may not dismiss the turnaround partner without the agreement of the Commissioner. The district and its turnaround partner, if any, shall make regular progress reports to the

Commissioner, at least twice each year.

3. If the Commissioner concludes, based on the fact-finding, that the district leadership does not have the requisite capacity and willingness to implement an improvement plan, he may either propose specific personnel changes to the district or recommend to the Board that it declare the district to be chronically underperforming.

(5) A determination by the Board, on recommendation of the Commissioner, that one or more of the conditions or occurrences set forth at 603 CMR 2.04(5)(a) through (h) exists within a particular school district shall constitute evidence that inadequate or unsound educational or fiscal practices by a school district are negatively affecting the academic performance of students within the district's schools. Such evidence shall be sufficient grounds for the Board to declare a district to be chronically underperforming and shall trigger the appointment by the Board of a receiver for the district. The receiver shall report to and take direction from the Commissioner, and shall have all of the powers normally vested in the superintendent and school committee, as provided by M.G.L. c. 69, § 1K.

(a) Failure by the district's superintendent and school committee to agree to, or failure by the district to faithfully and diligently implement, within the established timeframe, a plan approved by the Commissioner and Board pursuant to 603 CMR 2.04(4)(b) 1. or 2.

(b) Determination by the Commissioner, pursuant to 603 CMR 2.04 (4) (b) 3, that the district leadership does not have the requisite capacity and willingness to implement an improvement plan, and that the district has failed to make personnel changes recommended by the Commissioner, if any, to ensure adequate leadership.

(c) Failure by a district to submit an acceptable plan, or to faithfully and diligently implement, within the established timeframe, the plan approved by the Commissioner and Board, for the improvement of one or more schools declared, pursuant to M.G.L c. 69, § 1J, and 603 CMR 2.03, to be a Commonwealth Priority School(s) or Chronically Underperforming School(s).

(d) Failure by a district to remedy, within the time period specified by the Department or permitted by statute or agency rule, a serious violation of state or federal law regarding the provision or operation of required public

education programs or services.

(e) Failure by a district to correct, within the time period specified by the Department, any school facility deficiency that seriously impedes the delivery of education services or poses a serious health or safety risk to district students.

(f) Failure by a school district or its governing city or town(s), after notice and opportunity to take corrective action(s), to comply substantially with the appropriation and spending requirements set forth at M.G. L. c. 70, 603 CMR 10.00, and any special legislative enactment related to the financing of public education.

(g) Failure by a school district, after notice and opportunity to take corrective action(s), to properly manage, lawfully expend, or truthfully report the district's use of funds appropriated or awarded for the support of public education.

(h) Failure by a school district to meet student performance and improvement objectives specified in the district improvement plan, after the period of time specified in the plan.

(6) School district and municipal officials and members of the public shall have an opportunity to be heard by the Board prior to final action by the Board to declare the district to be chronically underperforming.

(7) The Board shall proceed in accordance with M.G.L. c. 69, § 1K when requested to modify or terminate a school district receivership order.

2.05: Low-Performing Mathematics Programs

(1) Any middle or high school in which 30 percent or more of the students fail the MCAS mathematics test, excluding those students who are enrolled in special education, who are classified as having limited English proficiency, or who have not been enrolled in the school for at least two school years, and which failed to make AYP in mathematics for students in the aggregate or any student subgroup during the most recent accountability cycle, shall be considered to have a Low-Performing Mathematics Program.

(2) Mathematics teachers at schools with low-performing mathematics programs shall take the next administration of the Mathematics Content Assessment

offered after the mathematics program is classified as low-performing. In addition, any mathematics teacher in a middle or high school that has been designated a Commonwealth Priority School or a Chronically Underperforming School, and any mathematics teacher who is not certified in mathematics and is teaching in a middle or high school with 30% or greater failure rate on the MCAS mathematics test, excluding those students who are enrolled in special education, who are classified as having limited English proficiency, or who have not been enrolled in the school for at least two school years, shall be considered a mathematics teacher in a Low-Performing Mathematics Program and shall take the Mathematics Content Assessment when it is next offered. A mathematics teacher shall be required to take the Mathematics Content Assessment only once.

(3) Individual results on the Mathematics Content Assessment shall be forwarded to the applicable mathematics teachers and their school principals for use in developing or revising professional development plans, as provided in the Recertification Regulations, 603 CMR 44.04 (4). These individual results are to be used for diagnostic purposes only, and individual mathematics teachers' results shall not be considered public records. The Department shall analyze and publish aggregate, statewide, district-level and school-level results, except to the extent such publication would have the effect of revealing the performance of any individual teacher.

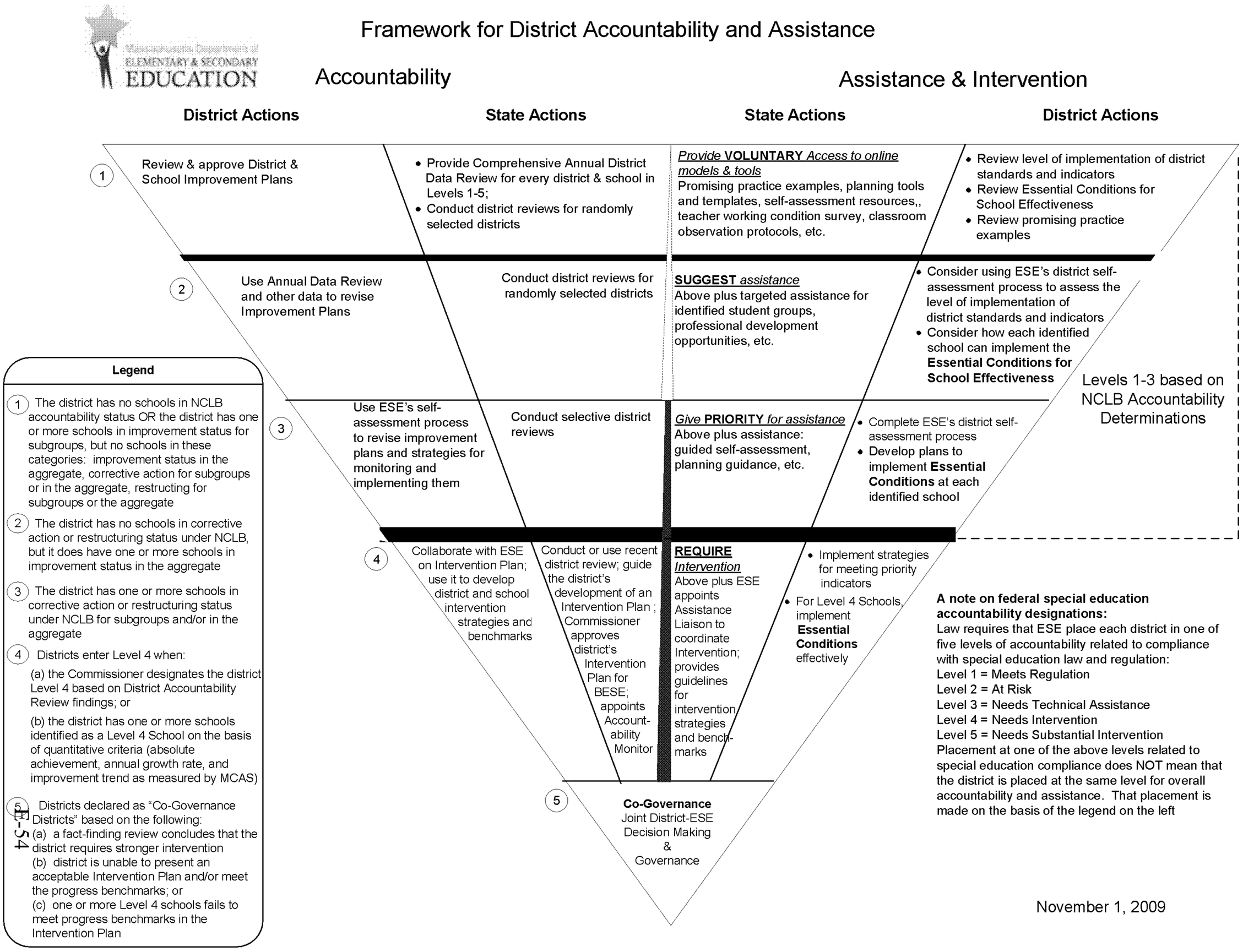
(4) In addition to the procedures contained in 603 CMR 2.03(1)-(3), the Commissioner shall determine whether any school with a low-performing mathematics program should be designated a Commonwealth Priority School. In making this determination, the Commissioner shall consider the participation rates and performance of the school's mathematics teachers on the Mathematics Content Assessment, among other factors.

(5) The Commissioner may waive the Mathematics Content Assessment requirement for individual mathematics teachers based on a finding that such teachers have demonstrated mastery of mathematics or that special circumstances exist that make said assessment requirement inappropriate or immaterial.

Regulatory Authority:
M.G.L. c. 69, §§ 1J and 1K, c. 71, § 38G.

last updated: November 14, 2006

Appendix E2: Framework for District Accountability and Assistance



Appendix E3: Stakeholder Group Membership Lists

School and District Accountability and Assistance Advisory Council Membership List (9 meetings on Framework)

Mr. Andrew Churchill, Assistant Director, Center for Education Policy, UMass Amherst

Dr. Robert Consalvo, Founder/Trustee, Academy of the Pacific Rim Charter School

Dr. Deborah Dancy, Principal, Channing School, Boston

Dr. Judy DeLucia, Superintendent, Greater Lawrence Technical School

Mr. Joseph Esposito, CFO (retired) Solid Works and Former EMAC Board Member

Dr. Anders Lewis, Teacher, Advanced Math and Science Academy Charter School

Mr. Sam Liao, School Committee Member, Sharon

Ms. Anne McKenzie, Executive Director, Lower Pioneer Valley Educational Collaborative

Ms. Beverly Miyares. Professional Development Specialist, MTA

Ms. Linda Noonan, Executive Director, Lower Pioneer Valley Educational Collaborative

Ms. Laura Perille, Executive Director, EdVestors, BPS Parent

Dr. John Portz, Chair, Political Science Department, Northeastern University

Dr. Pat Schettini, Superintendent, Reading Public Schools; attorney

Mr. Steven Sharek, Coordinator, Greater New Bedford Regional Vocational School

Dr. Susan Therriault, Research Analyst, American Institutes for Research

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Dr. Karla Baehr, Deputy Commissioner

Stakeholder Working Group Membership List

(5 meetings on Framework)

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Baehr, Karla	Massachusetts Association of School Superintendents
Baracchini, Susan	Massachusetts Parent Teacher Association
Binkley, Nadine	Urban Superintendents Network
Blumer, Irwin	Mass Partners for Public Schools
Brandt, Christine	Massachusetts Elementary School Principals Association
Calkins, Andrew	Mass Insight Education and Research Institute
Carr-Reardon, Anne Marie	Council of Administrators of Compensatory Education
Clem, Patricia	Commonwealth of Massachusetts Middle Level Educators
Connolly, Joan	Massachusetts Association of School Superintendents
Dancy, Deborah	Massachusetts Elementary School Principals Association
Davies, Peter	Class Measures
Doherty, Edward	American Federation of Teachers - Massachusetts
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Fraser, Alison	Mass Insight Education and Research Institute
Herring, Rochelle	America's Choice
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Jentz, Carla	Massachusetts Administrators of Special Education
Koocher, Glen	Massachusetts Association of School Committees
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Naughton, Dennis	Massachusetts Teachers Association
Norton, Jill	Rennie Center for Education Research and Policy
Pixley, Noel	Massachusetts Secondary School Administrators Association
Rainey, Sharyn	Commonwealth of Massachusetts Middle Level Educators
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Massachusetts Department of Elementary and Secondary Education

District Standards and Indicators

Leadership and Governance

1. Focused School Committee Governance
2. Effective District and School Leadership
3. District and School Improvement Planning
4. Educationally Sound Budget Development
5. District Systems for School Support and Intervention

Curriculum and Instruction

1. Aligned, Consistently Delivered, and Continuously Improving Curriculum
2. Strong Instructional Leadership and Practices
3. Sufficient Instructional Time

Assessment

1. Data Collection and Dissemination
2. Data-Based Decision-Making
3. Student Assessment

Human Resources and Professional Development

1. Staff Recruitment, Selection, Assignment
2. Supervision and Evaluation
3. Professional Development

Student Support

1. Academic Support
2. Access and Equity
3. Educational Continuity and Student Participation
4. Services and Partnerships to Support Learning
5. Safety

Financial and Asset Management

1. Comprehensive and Transparent Budget Process
2. Adequate Budget
3. Financial Tracking, Forecasting, Controls, and Audits
4. Cost-Effective Resource Management
5. Capital Planning and Facility Maintenance

Leadership and Governance: School committee and district and school leaders establish, implement, and continuously evaluate the effectiveness of policies and procedures that are standards-based, driven by student achievement data, and designed to promote continuous improvement of instructional practice and high achievement for all students. Leadership decisions and actions related to the attainment of district and school goals are routinely communicated to the community and promote the public confidence, community support, and financial commitment needed to achieve high performance by students and staff.

1. **Focused School Committee Governance:** School committee members are informed and knowledgeable about their responsibilities under the Education Reform Act. In their policy-making and decision-making they are guided by improvement plan goals and informed by student achievement data and other educationally relevant data. The performance of the superintendent is annually evaluated based on the attainment of the goals in the district improvement plan, MCAS results, and other student achievement data. Together with the superintendent, the school committee creates a culture of collaboration and develops contracts and agreements which encourage all stakeholders to work together.

2. **Effective District and School Leadership**: The superintendent promotes a culture of transparency, accountability, public confidence, collaboration, and joint responsibility for student learning within the district and broader community. The superintendent effectively delegates educational and operational leadership to principals, program leaders, and administrators, and annually evaluates their performance in their roles based on the goals in the district and school improvement plans, MCAS results, and other relevant data. *The district and each school take action to attract, develop, and retain an effective school leadership team that implements a well-designed strategy for accomplishing a clearly defined mission and set of goals, in part by leveraging resources and obtaining staff commitment to improving student learning. Each school leadership team a) ensures staff understanding of and commitment to the school's mission and strategies, b) supports teacher leadership and a collaborative learning culture, c) uses supervision and evaluation practices that assist teacher development, and d) focuses staff time and resources on instructional improvement and student learning through effective management of operations and use of data for improvement planning and management (CSE #1).*

3. **District and School Improvement Planning:** The district and school leaders have a well-understood vision or mission, goals, and priorities for action that are outlined in a District Improvement Plan. The plan's performance goals for students and its analysis of student achievement data drive the development, implementation, and modification of educational programs. Each school uses an approved School Improvement Plan that is aligned with the district's plan and based on an analysis of student achievement data. District and school plans are developed and refined through an iterative process that includes input from staff, families, and partners on district goals, initiatives, policies, and programs. District and school leaders periodically report to the school committee, staff, families, and community on the extent of the attainment of the goals in the plans, particularly regarding student achievement.

4. **Educationally Sound Budget Development:** The superintendent annually recommends to the school committee educationally sound budgets based primarily on its improvement planning and analysis of data The budget is developed and resources are allocated based on the ongoing analysis of aggregated and disaggregated student assessment data to assure the budget's effectiveness in supporting improved achievement for all student populations. District leaders promote equity by distinguishing among the needs of individual schools' populations and allocating adequate resources to the schools and students with greater needs. Each school's administrators are actively involved in the development of its budget.

5. **District Systems for School Support and Intervention***: The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways. Using these, it monitors the performance of students and conditions in each school. The district also identifies any persistently low-achieving and/or struggling schools; makes any needed changes in staffing, schedule and/or governance; and supports an ambitious, yet realistic plan for school improvement, including goals, timelines, and benchmarks, with explicit consequences for not meeting benchmarks. The district provides its lowest achieving and struggling schools with additional monitoring and effective support for improvement. (CSE #2)*

Note: Conditions for School Effectiveness (CSE) are in italics.

Curriculum and Instruction: The curricula and instructional practices in the district are developed and implemented to attain high levels of achievement for all students. They are aligned with components of the state curriculum frameworks and revised to promote higher levels of student achievement.

1. **Aligned, Consistently Delivered, and Continuously Improving Curriculum**: The district and each of its schools have curriculum leadership that ensures consistent use, alignment, and effective delivery of the district's curricula. Teachers and other staff make effective use of curriculum guides for all content areas that include objectives, resources, instructional strategies, timelines, and assessments. The district has an established, documented process for the regular and timely review and revision of curricula based on valid research, the analysis of MCAS results and other assessments, and input from professional staff. *The district ensures that each school's taught curricula a) are aligned to state curriculum frameworks and to the MCAS performance level descriptions, and b) are also aligned vertically (between grades) and horizontally (across classrooms at the same grade level and across sections of the same course). At Levels 4 and 5, priority for alignment is given to mathematics and English language arts. (CSE #3).*

2. **Strong Instructional Leadership and Practices:** The district and each of its schools have leadership and support for effective instruction. District and school leaders address instructional needs and strengths that are identified through active monitoring of instruction and ongoing use of formative and summative student assessment data. *The district ensures that instruction reflects effective practice and high expectations for all students, focuses on clear objectives, uses appropriate educational materials, and includes a) a range of strategies, technologies, and supplemental materials aligned with students' developmental levels and learning needs; b) instructional practices and activities that build a respectful climate and enable students to assume increasing responsibility for their own learning; and c) use of class time that maximizes student learning. Each school has a common understanding of the features of high-quality standards-based instruction and a system for monitoring instructional practice. (CSE #4).*

3. **Sufficient Instructional Time:** The district allocates sufficient instructional time for all students in core content areas. The allocation of time is based on analyses of student achievement data and focused on improving proficiency.

Assessment: District and school leadership use student assessment results, local benchmarks, and other pertinent data to improve student achievement and inform all aspects of its decision-making including: policy development and implementation, instructional programs, assessment practices, procedures, and supervision.

1. **Data Collection and Dissemination:** District assessment policies and practices are characterized by the continuous collection and timely dissemination of data. District and school staff members have access to user-friendly, district-wide and school-based reports on student achievement and other relevant data. All appropriate staff and community members are made aware of internal reports and external review findings.

2. **Data-Based Decision-Making**: The district is highly effective at analyzing and using data to drive decision-making. District and school leadership annually review student assessment results, external and internal reviews, and other pertinent data to prioritize goals, maximize effectiveness in allocating human and financial resources, and to initiate, modify, or discontinue programs and services. District and school leaders monitor student achievement data throughout the year in order to ascertain progress towards goals identified in the district and school plans, and to make needed adjustments programs, policies, services, or supervision practices. All professional staff members are supported and expected to use aggregated and disaggregated student achievement data regularly to improve performance.

3. **Student Assessment** *The district ensures that each school uses a balanced system of formative and benchmark assessments to guide instruction and determine individual remedial and enrichment requirements. Benchmark assessments are given 4 – 8 times per year. At Levels 4 and 5, the district ensures that assessments in English language arts and mathematics are prioritized. (CSE #5)*

Human Resources and Professional Development: The district identifies, attracts, and recruits effective personnel, and structures its environment to support, develop, improve, promote, and retain qualified and effective professional staff who are successful in advancing achievement for all students.

1. **Staff Recruitment, Selection, and Assignment:** The district's policies and practices to identify, recruit and select staff result in the employment of effective individuals who are committed and qualified to meet student needs, contribute to a professional learning community, and, in the case of teachers, provide high quality instruction in their content areas. All members of the professional staff have appropriate Massachusetts licensure. In the event of unfilled professional positions, individuals are hired on waivers and provided mentoring and support to attain the standard of substantial annual progress toward appropriate licensure. The district places a high priority on retaining and maximizing the impact of effective professional staff by creating new roles and career opportunities for exemplary teachers to have responsibility for instructional leadership and to enhance student learning. *The district ensures that each principal has the authority, guidance, and assistance needed to make staffing decisions based on the school's improvement plan and student needs. At Levels 4 and 5, principal authority includes the ability to select, hire, transfer, and assign staff to positions in the school without regard to seniority, and to evaluate and choose to retain faculty based on content knowledge, performance in promoting student learning, overall performance, and commitment to the school's mission and strategies. (CSE #6)*

2. **Supervision and Evaluation:** The district's evaluation procedure for administrators' performance fulfills the requirements of the Education Reform Act and is informative, instructive, and used to promote individual growth and overall effectiveness. Compensation and continued employment for administrators are linked to evidence of effectiveness, as assesses by improvement in student performance and other relevant school data. The district ensures that school leaders regularly use research-based supervision processes to monitor and support teachers to meet instructional and program expectations focused on improved student learning. Through effective supervision practices, administrators identify the strengths and needs of assigned staff in order to plan effective implementation of district and school initiatives , assess the application of skills and practices learned from professional development, provide guidance for improving performance, and provide struggling teachers with opportunities for additional professional development and support. The district's evaluation procedure for teachers' performance is research-based, effectively implemented, and fulfills the requirements of the Education Reform Act. After following due process, the district and schools take action to remove persistently low-performing staff.

3. **Professional Development:** The district and schools use student achievement data, program and instructional practice assessments, and information about staff needs to create a professional development program that supports teachers to develop and maintain content-area expertise as well as research-based and content-specific instructional practice. The district maintains a strong commitment to providing sustained learning opportunities aligned with a common core of professional knowledge for educators at all stages in their careers. Teachers and administrators new to the district or to their assignments are provided with an orientation, coaching and/or mentoring, and support throughout their first years. The district provides systematic supports to make the transition from novice to accomplished educator more effective and professionally rewarding by encouraging professional growth and providing recognition. *Professional development includes a) both job-embedded and individually pursued learning, including content-based learning, that enhances a teacher's knowledge and skills and b) structures for collaboration that enable teachers to have regular, frequent department and/or grade-level common planning and meeting time that is used to improve implementation of the curriculum and instructional practice. At Levels 4 and 5, the district provides a) effective English language arts and mathematics coaching with a ratio of 1 coach to 25 teachers for each subject and b) time dedicated to leadership-directed, collaborative work, during which teachers are not responsible for supervising or teaching students, consisting of no less than one hour per week and, in addition, no fewer than five days (or their equivalent) per year. (CSE #7)*

Student Support: The district provides quality programs for all students that are comprehensive, accessible and rigorous. Student academic support services and district discipline and behavior practices address the needs of all students. The district is effective in maintaining high rates of attendance for students and staff and retains the participation of students through graduation.

1. **Academic Support:** The district has policies, procedures, and practices that promote student high achievement, support course completion, reduce grade retention, and encourage on-time graduation. *The district has an effective system for identifying all students who are not performing at grade level. Each school schedule is designed to provide adequate learning time for all students in core subjects; for students not yet achieving at grade level in English language arts and mathematics, the district ensures that each school provides a) at least 90 minutes per academic day of instruction in English language arts and in mathematics and a tiered model of instruction and individualized support in those subject areas; and b) appropriate supplemental instruction (for example: homework assistance, tutoring, Saturday school, summer school). At Levels 4 and 5, the district ensures that the school a) provides all students needing support access to supplemental academic programming in two or more of the following ways: before, during, or after school, on Saturday, or during vacation time; and b) if it is an elementary school, offers full-day kindergarten and provides preschool services. (CSE #8)*

2. **Access and Equity:** District and school staff members work to close achievement gaps by using aggregated and disaggregated data on student participation and achievement to adjust policies and practices and to provide additional programs or supports. Inclusive classrooms and programs that use an integrated services model minimize separation of special populations from the mainstream of school activity. The district and schools work to promote equity through such means as increasing the proportion of underrepresented subgroups in advanced and accelerated programs. Beginning at the middle school level, leaders actively create pathways to ensure that all students are prepared for post-secondary education and career opportunities upon graduation.

3. **Educational Continuity and Student Participation:** District and school policies and practices promote student attendance, which is continuously monitored, reported, and acted upon. They also promote and track staff attendance and participation, and appropriate provisions are made to ensure continuity for students. District and school policies and practices also help all students make effective transitions from one school, grade level, or program. Entering and mobile students are promptly placed in educationally appropriate settings using information from skill and other assessments when prior school records are not accessible. Transient and homeless students have timely and equitable access to quality programs supported by district oversight, policies and practices to address their needs. Fair and equitable policies, procedures, and practices are implemented to reduce suspensions, exclusions, and other discipline referrals. Policies and practices are implemented to reduce or minimize dropping out, and the district has practices to recover dropouts and return them to an educationally appropriate placement.

4. **Partnerships and Services to Support Learning:** *Each school addresses the social, emotional, and health needs of its students by creating a safe school environment in which student needs are met in systemic and systematic ways, including through a) the provision of coordinated student support services and universal breakfast (if eligible); b) the implementation of a systems approach to establishing a productive social culture that minimizes problem behavior for all students (e.g. Positive Behavior Intervention and Supports); and c) the use of consistent schoolwide attendance and discipline practices and effective classroom management techniques that enable students to assume increasing responsibility for their own behavior and learning. (CSE #9) The district ensures that each school develops strong working relationships with families and appropriate community partners and providers in order to support students' academic progress and social and emotional well-being (CSE #10);* such community partners and providers as human service agencies, corporate and civic sponsors, and higher education give students and families access to health, social, recreational, and supplemental educational services.

5. **Safety:** The district supports schools to maintain safe environments for students. The district has a comprehensive safety plan that is reviewed annually with local police and fire departments and is used to create aligned school plans. The district provides ongoing training for appropriate staff in dealing with crises and emergencies, as well as opportunities for all staff and students to practice safety procedures.

Note: Conditions for School Effectiveness (CSE) are in italics.

Financial and Asset Management: The district engages in a participative, well-documented, and transparent budget process that uses student achievement as a factor in the overall budget. The district acquires and uses financial, physical, and competitive capital resources to provide for and sustain the advancement of achievement for all students enrolled in the district. The district regularly assesses the effectiveness and efficiency of its financial and capital assets and has the ability to meet reasonable changes and unanticipated events.

1. **Comprehensive and Transparent Budget Process:** The district's budget is developed through an open, participatory process, and the resulting document is clear, comprehensive, complete, current, and understandable. The budget provides accurate information on all fund sources, as well as budgetary history and trends. The district and community have appropriate written agreements and memoranda related to 603 CMR 10.0 that detail the manner for calculating and the amounts to be used in calculating indirect charges levied on the school district budget by the community. Regular, timely, accurate, and complete financial reports are made to the school committee, appropriate administrators and staff, and the public. Required local, state, and federal financial reports and statements are accurate and filed on time.

2. **Adequate Budget:** The community annually provides sufficient financial resources to ensure educationally sound programs and quality facilities, with a sufficient district revenue levy and level of local spending for education. The combination of Chapter 70 Aid and local revenues, considering justified indirect charges, meets or exceeds Net School Spending (NSS) requirements of the education reform formula. The district's budget and supplemental funding are adequate to provide for effective instructional practices and adequate operational resources.

3. **Cost-Effective Resource Management:** As part of its budget development, the district implements a review process to determine the cost-effectiveness of its programs, initiatives, and activities. This process is based, in part, on student performance data and needs. *District and school plans are coordinated to provide integrated use of internal and external resources (human, financial, community and other) to achieve each school's mission. At Levels 4 and 5, the district provides the school with a weighted per-pupil budget for staffing and instructional resources, and gives the principal the authority and assistance needed to make appropriate decisions about its expenditure consistent with the turnaround plan. (CSE #11)* The district has a system in place to pursue, acquire, monitor, and coordinate all local, state, federal, and private competitive grants. The district implements an effective system to monitor special revenue funds, revolving accounts, and the fees related to them to ensure that they are managed efficiently and used effectively for the purposes intended and to advance the district's improvement plan. The district actively seeks ways to leverage resources and expand capacity through collaboration with such external partners as educational collaboratives and institutions of higher education.

4. **Financial Tracking, Forecasting, Controls, and Audits:** District administrators are able to regularly and accurately track spending and other financial transactions. The district uses forecast mechanisms and control procedures to ensure that spending is within budget limits. It uses efficient accounting technology to facilitate tracking, forecasting, and control procedures, and to integrate the district-level financial information of each school and program. All procurement, tracking, and monitoring systems and external audits are accurate, current, and timely. The district has a system in place to ensure that state procurement laws are followed, that staff are qualified to manage their fiscal responsibilities, and that all assets and expenditures are monitored and tracked to attain the most efficient and effective utilization. The district competitively procures independent financial auditing services at least every five years, shares the results of these audits, and consistently implements their recommendations.

5. **Capital Planning and Facility Maintenance:** The district has a formal preventive maintenance program to maximize and prolong the effective use of the district's capital and major facility assets, as well as to ensure that educational and program facilities are clean, safe, secure, well-lit, well-maintained, and conducive to student learning. The district has a long-term capital plan that clearly and accurately reflects future capital development and improvement needs, including the need for educational and program facilities of adequate size. The plan is reviewed and revised as needed with input from all appropriate stakeholders.

Appendix E5: Conditions for School Effectiveness

The following conditions for school effectiveness, including conditions for schools in all levels of the framework with additional measures to be implemented by schools in Levels 4 or 5, shall be integrated into the district indicators established under 603 CMR 2.04(2)(a):

(a) *Effective school leadership:* The district and school take action to attract, develop, and retain an effective school leadership team.

(b) *Principal's staffing authority:* The principal has the authority to make staffing decisions based on the school's improvement plan and student needs. At Levels 4 and 5, principal authority includes the ability to select, hire, transfer and assign staff to positions in the school without regard to seniority, and to evaluate and choose to retain faculty based on content knowledge, performance in promoting student learning, overall performance, and commitment to the school's mission and strategies.

(c) *Effective district systems of support:* The district has systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways.

(d) *Coordinated use of resources and adequate budget authority:* District and school plans are coordinated to provide integrated use of internal and external resources. At Levels 4 and 5, the district provides the school with a weighted per-pupil budget for staffing and instructional resources, and gives the principal the authority and assistance needed to make decisions about its expenditure.

(e) *Family-school relationships:* The school develops strong working relationships with families and appropriate community partners and providers in order to support students' academic progress and social and emotional well-being.

(f) *Students' social, emotional, and health needs:* The school addresses the social, emotional, and health needs of its students by creating a safe school environment in which student needs are met in systemic and systematic ways.

(g) *Professional development and structures for collaboration:* Professional development for school staff includes job-embedded and individually pursued learning and structures for regular, frequent collaboration to improve implementation of the curriculum and instructional practice. At Levels 4 and 5, additional components are in place: a) English language arts and mathematics coaching with a 1-coach-to-25-teacher ratio and b) time dedicated to leadership-directed, collaborative work, during which teachers are not responsible for supervising or teaching students, consisting of no less than one hour per week and, in addition, no fewer than five days (or their equivalent) per year.

(h) *Aligned curriculum:* The school's taught curricula are aligned to state curriculum frameworks and the MCAS performance level descriptions, and are also aligned vertically between grades and horizontally across classrooms at the same grade level

and across sections of the same course. At Levels 4 and 5, priority for alignment is given to mathematics and English language arts.

(i) *Effective instruction:* Instruction reflects effective practice and high expectations for all students; the school has a common understanding of the features of high-quality standards-based instruction and a system for monitoring instructional practice.

(j) *Tiered instruction models, adequate learning time, and additional academic support:* The school schedule is designed to provide adequate learning time for all students in core subjects; for students not yet achieving at grade level in English language arts and mathematics, the school provides at least 90 minutes per day of instruction and a tiered model of instruction and individualized support in those subject areas, and appropriate supplemental instruction. At Levels 4 and 5, the district ensures that the school provides all students needing support access to supplemental academic programming in two or more of the following ways: before, during, or after school, on Saturday, or during vacation time.

(k) *Assessment:* The school uses a balanced system of formative and benchmark assessment. At Levels 4 and 5, the district ensures that assessments in English language arts and mathematics are prioritized.

Appendix E6: Summary of Academic Research on Conditions

RESOURCES AND PROMISING PRACTICES FOR DISTRICT IMPROVEMENT PLANNING*

Leadership, Governance, and Communication

School committee and district and school leaders establish, implement, and continuously evaluate the cost-effectiveness and efficacy of policies and procedures that are standards-based, driven by student achievement data, and designed to promote continuous improvement of instructional practice and high achievement for all students. Leadership decisions and actions related to the attainment of district and school goals are routinely communicated to the community and promote the public confidence, community support, and financial commitment needed to achieve high performance by students and staff.

1. *Focused School Committee Leadership: School committee members are informed and knowledgeable about their responsibilities under the Education Reform Act; in their policy-making and decision-making they are guided by improvement plan goals and informed by student achievement data and other educationally relevant data. The performance of the superintendent is annually evaluated based on the attainment of the goals in the DIP, MCAS results, and other student achievement data. Together with the superintendent, the school committee creates a culture of collaboration and develops contracts and agreements which encourage all stakeholders to work together for improved student achievement.

The district has effective processes in place to:

LGC.1.1 Develop, maintain and enforce policies

Promising Practice: Clarify the roles and responsibilities of the School Committee relative to district operations (Hanson, Mark 1991)

- Policy and decision making are guided by improvement plan goals and student achievement and other data.
- School Committee agenda items are focused on teachers teaching and students learning
- School Committee policies are relevant and up-to-date
- Protocols ensure productive School Committee meetings
- The superintendent is evaluated annually based on goals in the DIP, MCAS results, and other data.
- District strategic plan is fully funded
- The School Committee works with the superintendent to establish contracts and agreements that encourage stakeholder cooperation in improving achievement
- A written policy on parent and community member involvement is evident

LGC.1.2 Provide legal services and policy review

Promising Practice: School Committee policies are adopted after federal, state, and local input (Hanson, Mark, 1991. Worthen and Sanders, 1987)

- Published policies are relevant and current
- Public School Committee hearings are conducted on policies and procedures
- The School Committee adopts new School Committee policies and procedures after input from those whom it effects
- The School Committee seeks proactive legal consultation
- Standard Operating Procedures (SOP) are distributed to all district office staff, School Committee members, local school administrators and others involved in district policies
- Written, ethical standards are available
- The School Committee demonstrates knowledge of laws regarding Massachusetts Education Reform

Promising Practice: Policies are clearly communicated, enforced and readily available

- Copy of policy manual at each school
- School Committee policies available on the district website
- Evidence of faculty education concerning policies and revisions in policies at the school level
- Evidence of district workshops, meetings, etc. on policies and revisions in policies

2. *District and School Improvement Planning: The district and school leaders have a well-understood vision or mission, goals, and priorities; these are included in a District Improvement Plan (DIP). The plan's performance goals for students and its analysis of student achievement data drive the development, implementation, and modification of educational programs. Each school uses an approved School Improvement Plan (SIP) that is aligned with the DIP and based on the analysis of student achievement data.

The district has effective processes in place to:

LGC.2.1 Develop a strategic plan

Promising Practice: Data-driven strategic planning (Keefe and Kelly, 1990; Johnson, 1997)

- Results of assessment for readiness
- Creation of a data-driven Strategic Planning Committee
- Organizational profile developed
- Identification of data to be collected
- The strategic plan's objectives have clearly defined performance targets (annual targets and quarterly targets) which can be objectively assessed (i.e., measured) with data
- The district collects and reviews data throughout the year to determine if they are on target with their strategic objectives – in order to take mid-year corrective actions
- Scoping, date collecting, planning, implementation and evaluation is ensured

Promising Practice: Promote dynamic and distributed leadership

- The school/district has a shared philosophy of commitment, ownership, vision, mission and goals that promote a culture of excellence
- Leadership is united in purpose, visible in the school and classrooms, and focused on instruction

LGC.2.2 Document district processes

Promising Practice: Identify process owners for key district processes, establish and monitor indicators for process performance, require continuous improvement (Source: Baldrige) (Beswick, 1990)

- District and School Improvement Plans identify process owners
- District and School Improvement Plans indicate accomplished strategies
- Continuous improvement plan in place
- A plan exists for regular review of indicators
- The district plan identifies process owners
- A system for recording activities and collecting qualitative and quantitative data is in place

3. Use of Data to Drive Decisions: The district is highly effective at collecting, analyzing, sharing and using data to drive decision-making. District and school leaders monitor student achievement data throughout the year, consider the goals identified in the DIP and the SIPs, and implement or modify programs, policies, and services as required. They also implement practices that require all staff to regularly use aggregated and disaggregated student achievement data to improve instructional programs and services for all student populations.

The district has effective processes in place to:

LGC.3.1 Monitor and report indicators (i.e., District performance)

Promising Practice: Collect and analyze and report data (Creighton, Theodore B., School and Data: Educators Guide for Using Data to Improve Decision-Making, 2006) (Elmore and Abelmann, 1999 and Fullan, 2001)

- Reports are prepared containing longitudinal student performance data and made available to the school, district, superintendent, and community
- Results and analysis of all surveys are made available to the school, district, superintendent, and community
- The district collects and reviews data to determine if they are on target with strategic objectives
- District uses data to take mid-year corrective action
- Results and analysis of all subgroup data are gathered and reported
- District schedules review of measurement data
- District establishes the timeframe between formative assessment and action taken at the district level
- Reports are collected and analysis made of other measures beyond student achievement (e.g. balanced scorecard: human resources/professional development, customer stakeholder, process and financial/budget)

Promising Practice: Use leading and lagging indicators in the strategic planning process (Balanced Scorecard by Kaplan and Norton, 1996)

- Evidence of collection of leading indicators, such as bond yields, real estate data, population growth, percent of aging population, formative assessment data
- Evidence of collection of lagging indicators, such as unemployment, housing starts, retail sales data, summative assessment data
- The district's strategic plan objectives for which there are leading indicators allows the district to assess and modify mid year performance
- Community Report Cards

Promising Practice: Link School Improvement Plans (SIPs) to District Plans (UVA School Turnaround Program)

- School Improvement Plans (SIPs) mission and vision statements correlate to the district's mission and vision statement
- School Improvement Plans (SIPs) with goals and objectives supports the District's goals and objectives

Promising Practice: Link district plans to State plans (UVA Darden/Curry Partnership for Leadership in Education)

- Evidence that the district plan is linked to the state's master plan
- Submission of all School Improvement Plans (SIPs) to the district office by the prescribed deadline
- District administrators and school staff are involved in on-going training to complete School Improvement Plans (SIPs)

4. *Effective School Leadership: The district and schools take action to attract, develop, and retain effective school leadership teams. In each school, the school leadership team a) ensures staff understanding of and commitment to the school's mission and strategies, b) supports teacher leadership and a collaborative learning culture, c) uses supervision and evaluation practices that assist teacher development, and d) focuses staff time and resources on instructional improvement and student learning through effective management of operations and use of data for improvement planning and management. (Essential Condition #1)

The district has effective processes in place to:

LGC.4.1 Provide leadership development and succession planning

Promising Practice: Provides activities that develop current and future leaders and eases the system into transition for succession

- Leadership positions are filled from Leadership development candidates
- Ongoing professional development training is provided for current system leaders
- Plans are in place for leadership training and development for prospective administrators/supervisors
- Overlap time is defined for ease of transition (principals, supervisors, supervisors)

Promising Practice: Modeling decision making skills and strategies (Covey, 4 Roles of Leadership; Kaufman and Herman, 1991)

- Administrators are trained/evaluated in active listening and other facets of decision making
- Administrators are trained/evaluated in terms of solutions rather than problems
- Administrators manage hard and soft data

Promising Practice: Utilize effective daily and weekly planning

- Time is focused on critical priorities
- Administrators are using time management devices; such as palm pilots, online scheduling, planning notebooks, etc.

Promising Practice: Leaders/Administrators model traits of successful leadership every day (Tracey, Brian. Covey 4 Roles of Leadership. MacKenzie, Kenneth: Bennis and Nanus, 1985. Sergiovanni and Starratt, 1988. Bennett, William, 1987. District Audit Tool, 2005)

- Administrators are committed to learning by reading at least once a day for a specified period of time
- Administrators are trained/evaluated regarding positive focus by being able to verbalize the end result of situations
- Organizational rewards are linked to performance
- Leaders are visible in the field
- Leaders promote institution building
- Leaders are knowledgeable about the teaching and learning process
- There is a professional development plan present for leaders
- Leaders participate in active coaching, mentoring and collaboration
- There is a systematic process of decision making

Promising Practice: Model and support technology standards for leaders (International Standards for Technology in Education-ISTE)

- Administrators and faculty are provided with a copy of the International Standards for Technology in Education
- Schools use technology to communicate with parents, staff, students, and the larger community
- Administrators demonstrate job-related professional learning using technology resources

Promising Practices: Focus leadership on student learning (NMPED)

5. ***Effective District Systems of Support:** The district has and schools access systems and processes for anticipating and addressing school staffing, instructional, and operational needs in timely, efficient, and effective ways (for example: timely delivery of school supplies and an adequate pool of licensed teacher candidates). (Essential Condition #3)

The district has effective processes in place to:

LGC.5.1 Prepare schools for new school year

Promising Practice: District stakeholders have an opportunity for input into the academic school year calendar. Proposed calendar is published and communicated to stakeholders through a variety of media

- Stakeholders (parents, community members) have input into the calendar development process prior to approval
- Date and locations of calendar publication is communicated to stakeholders

Promising Practice: Begin efforts well prior to start of new school year to prepare schools to open with all of the teachers, textbooks, students' schedules, and materials/supplies necessary for teaching and learning

- Schools open on schedule with 100% of the teachers, textbooks, students' schedules, and materials/supplies required

LGC.5.2 Manage internal communication

Promising Practice: Publish and communicate district goals, performance reports, and School Committee policies (Bauch, 1994: Davies, 1991)

- District plan, goals, performance and policies are on the district website
- Information concerning district goals, policies, and performance is sent out in a variety of forms that might include newspaper articles, letters, brochures, etc.
- Link on the district website leads to the State website which provides information regarding test data listed by school, grade, content area, sub-groups, teacher effect, etc.

LGC.5.3 Manage external communications (Marketing/outreach/promotion)

Promising Practice: Have a defined process for managing media relations and information release (Resnick, 2000)

- There is defined process at the district level for managing media relations and information release
- There is a defined process at the school level for managing media relations and information release
- The process for managing media relations and information release is communicated to stakeholders
- There is a written plan with diverse and cost-effective mechanisms for communicating information to target audiences

Promising Practice: Designation of a public relations officer to disseminate all external communications

- The public relations officer monitors/publishes quarterly newsletters
- Newspaper entries are designed to up-date stakeholders with information relative to the school district
- There is a designated media contact person
- Updated media releases are disseminated regarding current information

LGC.5.4 Manage major projects

Promising Practice: There is a Project Management Office that reports directly to the district director/ superintendent, and each major project has an assigned project manager and project team (source: UVA Darden/Curry Partnership for Leadership in Education)

- A project manager is designated for all key district projects
- Project Management Office is in place

Promising Practice: Projects have plans and timelines and defined budgets

- Major projects that have defined plans, schedules and budgets
- Major district projects are completed on schedule and on budget

LGC.5.5 Manage change (Change management process)

Promising Practice: Provide opportunities for School Committee members, central office staff, administrators, certificated/non-certificated employees to receive training in

the "Process of Change"

- A timetable is developed which will allow for designated personnel to receive training on the change process to build staff relationships, student performance, and relevance of the curriculum
- Trained individuals are evaluated to determine the level of implementation
- Comparisons of trained/non-trained employees are made to determine effect on student performance

LGC.5.6 Monitor and measure customer satisfaction

Promising Practice: Surveys and other instruments will be distributed to stakeholders to determine level of satisfaction. (NSSE; Baldrige)

- A process is in place to measure the organizational effectiveness of the local district/schools and what they are doing to meet educational standards
- Survey results comparing data from different stakeholders (parent, student, educators, community members, Chamber of Commerce, Civitan, Rotary, etc.) is provided to the School Committee with the level of satisfaction according to identified groups
- Results of surveys are shared at town meetings, School Committee meetings, web-site and other focused means of communication

LGC.5.7 Close/merge/open schools (Boundary changes)

Promising Practice: Establish pre-defined "triggers" to objectively identify schools to merge/close

- Number of schools that are over or under capacity by an identified percent
- A long-term facilities plan is available
- Current population growth trends are studied
- Community awareness meetings and programs are conducted to ensure effective and early communication

Promising Practice: Establish a clear process for opening/ closing or merging schools

- All teachers have been hired and are oriented and ready for instruction
- All textbooks have been received and distributed to classrooms
- Students' schedules are fully prepared and provided to students prior to the beginning of school
- Student records have been transferred
- Transportation is in place for all students
- Materials/supplies have been ordered, received, and distributed to classrooms
- Notifications are conducted through the use of media, direct parent contact, and automated call system
- Open houses are conducted to meet staff, administrators, community members and other groups related to the school

6. *Coordinated Use of Resources and Adequate Budget Authority: District and school plans are coordinated to provide integrated use of internal and external resources (human, financial, community and other) to achieve the school's mission. For schools at Levels 4 and 5, the district provides weighted per-pupil budgets for staffing and instructional resources, and gives principals the authority and assistance needed to make decisions about expenditures. (Essential Condition #4)

The district has effective processes in place to:

LGC. 6.1 Supervise school level financial processes

Promising Practice: Standardized periodic reports are utilized to determine progress toward system goals

- Expenditures reflect system-wide and school level planning priorities (improvement plan)
- Information in period reports is used to make changes during the fiscal year

Promising Practice: Standardized financial procedures between all schools in the system

- There are written procedures, clearly communicated for school level financial operations
- Level 4 and 5 schools have a weighted per-pupil budget for staffing and instructional resources
- Level 4 and 5 school principals have the authority and assistance from the Project Management office to make decisions about school expenditures.

7. *Educationally Sound Budget Development: The budget is developed and resources are allocated based on the ongoing analysis of aggregated and disaggregated student assessment data to assure the budget's effectiveness in supporting improved achievement for all student populations. The superintendent annually recommends to the school committee educationally sound budgets based primarily on improvement planning and the analysis of data, including disaggregated student achievement data. District leaders promote equity by distinguishing among the needs of individual schools' populations and allocating more and better resources to the schools and students with greater needs. Each school's administrators are actively involved in the development of its budget.

The district has effective processes in place to:

LGC. 7.1 Develop a budget based on student needs

- Each school's administrators are actively involved in the development of its budget.
- The budget is developed based on aggregated and disaggregated student assessment data.
- The superintendent annually recommends to the school committee educationally sound budgets based primarily on improvement planning and the analysis of data.
- More and better resources are allocated to the schools and students with greater needs.

8. Shared Accountability: District and school leaders periodically report to the school committee, staff, families, and community on the extent of the attainment of the goals in the DIP and the SIPs, particularly regarding student achievement. The superintendent effectively delegates educational and operational leadership to principals, program directions, and administrators, and annually evaluates their performance in their roles based on the attainment of the goals in the DIP and the SIPs, MCAS results, and other student achievement data.

The district has effective processes in place to:

LGC. 8.1 Secure support and accountability throughout the system

Promising Practice: The District proactively secures School Committee support for the plan and its required major initiatives, policies and directions rather than reactively pursuing support (Building Relationship Versatility: Social Styles at Work, Wilson Learning, 2007)

- School Committee is involved from the beginning of the strategic plan
- School Committee is educated as to the need, timeline, etc. of a strategic plan
- Strategic plan updates are included in each School Committee meeting
- School Committee decisions are monitored throughout the year to assess the % that favorably align with and support the district plan
- School Committee agenda items are aligned to the strategic plan

Promising Practice: Balanced strategic plan – the School Committee supports a plan that considers all of the essential components for the district's success (i.e. considers people, processes, etc.) (Balanced Scorecard by Kaplan and Norton, 1996.)

- The Mission and Vision statements are shared with employee groups
- Projected resources necessary to implement the plan are documented
- Situation Assessment (current information about strengths, concerns and performance, i.e. funding issues, new program opportunities, changing regulations, or changing needs in the client population) is part of the strategic plan
- Database contains data of key measures
- Teachers are trained in strategic planning

Promising Practice: Balance the resources (e.g., teachers, technology, supplies, textbooks, extra-curricular activities, etc.) between schools to ensure all students have an opportunity to succeed

- Schools are at "standard" for base. Evidence of a written plan/policy to balance resources
- Allocations are based on school needs and resources to ensure all students have an opportunity to succeed
- In-process adjustments are made to balance resources

Promising Practice: Publish and communicate district goals and performance and policies

- The district plan, goals, performance and policies are available on the district website
- Information concerning district goals, policies, and performance are shared with stakeholders via newspaper articles, letters, brochures, etc.
- The plan has been shared with key stakeholder groups and employee groups

9. District Intervention in Struggling Schools: The district has systems and procedures for intervening in struggling schools. Using these, it monitors the performance of the students in its individual schools; identifies its lowest-performing and/or struggling schools; makes any needed changes to the school's staffing, schedule and/or governance; and develops a plan for school improvement, including goals, timelines, and benchmarks, with explicit consequences for not meeting benchmarks. The district provides these schools with additional support and monitoring beyond that provided to other schools in the district.

The district has effective processes in place to:

LGC. 9.1 Establish the 11 essential conditions at each school as needed

Promising Practice: Develop a system for identifying and differentiating supports provided to the most struggling schools

- Monitor the performance of the students in individual schools
- Identify the lowest-performing and/or struggling schools
- Make any needed changes to the school's staffing, schedule and/or governance
- Develop a plan for school improvement, including goals, timelines, and benchmarks, with explicit consequences for not meeting benchmarks, in order to ensure implementation of the 11 essential conditions in the most struggling schools.

Promising Practice: Review, consider, and develop plans to establish the essential conditions at all schools

- Provide struggling schools with additional support and monitoring beyond that provided to other schools in the district.
- Use the 11 Essential Conditions rubric to determine priorities for school improvement

10. Economies of Scale and Regional Collaboration: The district actively seeks ways to leverage resources and expand capacity through collaboration with such external partners as educational collaboratives and institutions of higher education.

The district has effective processes in place to:

LGC. 10.1 Secure financial support for and develop the capacity to implement the strategic plan

Promising Practice: Research funding sources beyond state and federal funds (Viadero, 2002) sources of funds applied for:

- Grants received are aligned with the strategic plan

Promising Practice: Build rapport with local power structure (i.e., commission) (Building Relationship Versatility: Social Styles at Work, Wilson Learning, 2007)

- Strategic plan is funded, at least partially, with the help of local agencies
- Formal communications with commission, legislature, mayor, or chamber of commerce
- Develop contracts and written agreements establishing partnerships and collaborative initiatives to expand the district's capacity to implement the strategic plan.

* Self-assessment indicators are based on The Council of Chief State School Officers' *Decision Support Architecture Consortium (DSAC) Phase II: Processes, Sub-processes, Promising Practices, and Evidence* (October 2008). Further development of the self-assessment will be based on research conducted by the Regional Education Laboratory of New England's to align with the Massachusetts District Standards and Indicators.

Appendix E7: Detail on Priority School Supports

Social-Emotional Support: Students at the persistently lowest-achieving schools face challenges that cannot be solved alone through traditional classroom instruction (Walker and Smithgall 2009. As included in Governor Patrick's Reform Agenda and the state's proposal to place Readiness Counselors in schools, addressing students' social, emotional, and health needs is critical to fostering a functional instructional environment, and is particularly relevant to students in alternative education programs. Evidence ties this condition directly to student achievement – 12 Boston schools with full-time Site Coordinators who connect students and families to behavioral health and community supports have seen statistically significant improvement in Math and ELA scores as compared to other schools, with the strongest results for ELL students. The state will invest its funds to scale up Readiness Counselors or the equivalent to provide social-emotional supports, while districts will use Title IG funds for per-school costs.

Expanded Learning Opportunities: A wealth of research has shown that "children in all socioeconomic groups are learning at the same rate… during the school year, and that nearly all the differences in achievement between poor and middle-class children are rooted in the inequities… outside the schoolhouse door… during out-of-school time." (Miller 2007) MA has already invested in a highly effective Expanded Learning Time initiative, increasing the school year by 300 hours for 12,000 students in 22 public schools. But simply extending the school day and/or year is not sufficient; effective data use and tailored instruction are essential (Terzian 2009). Evidence shows that effective use of summer learning, after-school opportunities, and full-fledged ELT initiatives can make a critical difference in closing the achievement gap. See the attachment to this Appendix for the Year 2 Summary Report on ELT initiatives in Massachusetts.

Effective Data Usage: As described in (B)(3) and (C)(3), the effective use of student data to improve instruction and set strategic goals is critical to any school's success. Low-performing schools have achieved improved student achievement in Boston, Springfield, and Worcester with the support of partners who focus on effective data usage through assessment administration, strategic planning, and ongoing coaching support, eventually building the capacity of teachers and leaders to sustain the work on their own. The state's Race to the Top funds will help bring these services to every Level 4 school as early as the 2011-2012 school year.

Year Two Report: 2007–2008 Executive Summary

Evaluation of the Expanded Learning Time Initiative

March 26, 2009

Prepared for
The Massachusetts Department of Elementary and Secondary Education

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Executive Summary

The Massachusetts Expanded Learning Time (ELT) Initiative was established in 2005 through the funding of planning grants, which allowed schools to explore a redesign of their schedule and add time to their day or year. The first cohort of ELT schools (Cohort 1) received implementation grants to begin operating their expanded programs in the 2006–07 school year. In fall 2007, a second cohort of 9 schools (Cohort 2) implemented ELT, growing the total number of ELT schools in the Commonwealth to 18.

The Evaluation of Expanded Learning Time

The evaluation of ELT is a multi-year study that is being conducted as two interrelated parts: a planning and implementation component that explores the early decision-making phases and subsequent execution of ELT programs in the funded districts and schools, and an outcomes component that examines the outcomes of ELT for districts, schools, teachers, and students. The implementation and outcomes components will be linked to determine if the approaches to implementation are related to the outcomes achieved.

Major Findings

In the second year of ELT implementation there was continued support for the goals of the initiative among district and school personnel, parents, and community partners. With the inaugural year behind them, schools—especially the first cohort—were able to progress beyond the logistical challenges that took center stage in year one. Of particular significance was the schools' ability to incorporate additional common planning time for teachers into their schedules, an element of ELT that had received insufficient attention in 2006–07.

Our analysis of the implementation and outcomes data for year two of the initiative rendered the following notable findings:

- In 2006–07, a number of schools had implemented what we named a "divided schedule," in which the expanded programming was tacked onto the end of a traditional school day. In 2007–08, the divided schedule was much less prevalent and many schools made great strides towards creating a seamless expanded day.
- Our interview and focus group findings indicate that another of schools' early successes was the pace of instruction and learning that became possible with a longer day. Across cohorts, respondents reported that the pace of instruction was vastly improved with the additional time afforded by ELT, and that teachers were able to go more in depth with their lessons and provide more individualized learning opportunities to students. While it may be too early to determine if the pace of the day has an observable effect on student achievement, obtaining more detail about how teachers use the additional instructional time will be a focus of future data collection activities.

- Several schools have yet to identify effective strategies for enrichment and working with external partners that would enhance their expanded programs. While this aspect of ELT (i.e., enrichment) is functioning very well in some schools, others are struggling to acclimate partners to the school environment.
- The level of funding for the initiative and its sustainability were prevalent topics in 2007–08. Interview and focus group respondents in all stakeholder groups raised these issues, and many noted that without the state's funding, schools would be unable to continue their expanded programs. While the Massachusetts Department of Elementary and Secondary Education (ESE) has no expectation that schools would continue to offer expanded programs without the grant, many district and school leaders noted that it would be difficult to revert to a standard schedule after having ELT. Further, most district and school leaders reported that per pupil funding was not keeping up with increased costs associated with teacher salary adjustments. That is, while the overall funding for the initiative has grown from year to year, the per pupil grant to schools has remained level.
- According to survey findings, teachers in ELT schools, as compared with teachers in comparison schools, were significantly more positive about the teaching environment within their schools in terms of being involved in school decision making, collaborating with fellow teachers, feeling supported in teaching special needs students, and spending more time on instruction.
- As is common in the early stages of new school-level initiatives, analyses revealed few effects of ELT on student outcomes for the first cohort of ELT schools. For six of the eight Massachusetts Comprehensive Assessment System (MCAS) outcomes, there was no statistically significant effect of ELT on student MCAS performance in the first or second year of ELT implementation, controlling for student demographics, prior performance, and matched comparison schools' performance. The effects that were detected were inconsistent across grade levels. More specifically, there was a statistically significant positive effect on grade 6 MCAS math performance and a statistically significant negative effect on grade 8 MCAS math performance. Additional years of post-ELT data will help to articulate performance trends.

Future Analyses

An important next step is to develop an implementation index in order to explore the links between program elements and outcomes. This index and associated analyses will be included in the year three report, which will also present outcomes data for the second cohort of ELT schools. Implementation data are being collected for all three cohorts of ELT schools during the 2008–09 school year, and new instruments are being piloted to gather additional information about the specific ways time is being used in ELT and matched comparison schools. An MCAS growth model being piloted by ESE this spring will also be examined for its analytic applicability to the evaluation.

Appendix E8: Detail on Turnaround Intermediary

Concept/mission

An intermediary organization whose mission is to build significant additional high quality capacity to conduct school turnaround within Massachusetts.

The organization will be a 501(c)(3) to eliminate the profit motive and to ensure mission focus. The intermediary will serve four primary functions:

- Incubate high quality school turnaround operator capacity based on best practices in the field of school turnaround today;
- Identify high quality school turnaround operators and recruit them to come work in Massachusetts;
- Contract with school turnaround providers that are the best fit for each school and hold the operator accountable for meeting aggressive but achievable improvements in student outcomes; and
- Support school turnaround operators and assist with overcoming obstacles.

In the beginning, it is not within the scope of this organization's activities to improve district capacity to do school turnaround. There are multiple existing organizations whose missions are to do this work. However, longer term our intention is that there will be substantial learnings that will be of interest to districts, and this function could be added to enhance the impact of the organization several years into its lifecycle.

To serve this purpose, ESE will identify an existing organization that is well positioned to build this capacity, or it will create this organization in partnership with private philanthropists. Initial research suggests that few organizations will be positioned well to take on this work and that incubation of a new organization may be necessary.

Governance

Authority over schools

When schools are determined to be Level 5 schools due to the lack of progress in raising student achievement, ESE will have receivership authority over the schools. ESE will identify an appropriate receiver at that point. In some cases it may be a school turnaround organization that is an obvious fit for the school, and in some cases it will be this intermediary organization. The intermediary organization will then be authorized to sub-contract with a school turnaround provider.

Governance of the Intermediary organization

The intermediary organization will be an independent nonprofit organization with a board of trustees. The board of trustees will be comprised of leaders in the field of school turnaround and individuals with experience growing entrepreneurial ventures.

Key activities

ESE anticipates moving the first struggling schools into level five in 2012. This will mean that ESE has the authority to require school restart and/or outsourcing the turnaround effort to an outside organization. This is when the intermediary organization must have capacity available to

contract with the state to take on these schools, and have school turnaround operators that have capacity to do the work with the schools.

From spring of 2010 through summer of 2012 the focus of the intermediary will be building the capacity of school turnaround operators in Massachusetts. This window of time is our opportunity to invest in the capacity ahead of when significant demand is likely to hit.

This effort will involve the incubation of local efforts that are based off of national best practice models and the start-up replication support for expansion by current high quality operators into Massachusetts. During this incubation phase, the intermediary would identify promising entrepreneurs and promising ideas, and would support their development.

Once demand begins to grow from ESE for the intermediary to act as a receiver for Level 5 schools, the intermediary will carefully assess the situation at each school and contract with the school turnaround operator that is the best fit for that school. The primary activities involved in this work will be identification of the best school operator, contracting, monitoring the contracts to carefully constructed performance targets.

Business model

There are two distinct elements of the business model: incubation and contracting/performance management.

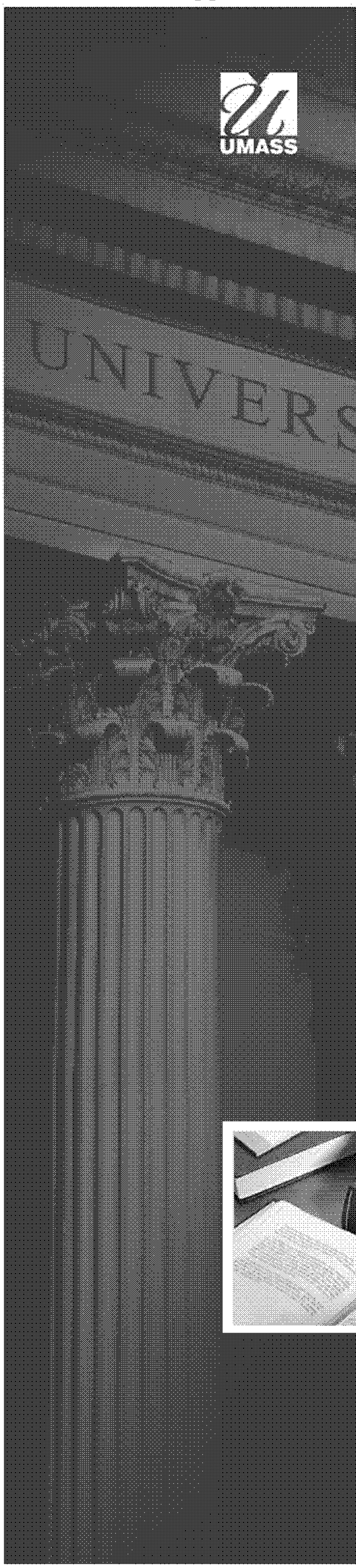
Within incubation, the intermediary will raise funds through appropriate federal and state grant programs and through private philanthropic organizations. These funds will be used to cover the staff time that is required to support an incubation, and a portion of these funds will be re-granted to the start-up organization that has been incubated.

The contracting and performance management component of the work will involve staff members with a very wide variety of skills: staff with sophistication around assessing the unique needs of a school, assessing the unique qualities of a turnaround provider, understanding complex community dynamics, and driving to clear and powerful contracts.

Revenue coming in to turnaround schools will be primarily in the form of per student revenues associated with each school and any state or federal school improvement grant funds that come along with each school. The intermediary will take a small contract management fee to cover the cost of its staff that oversee the contracting process. This fee is still to be determined, but must be a low percentage of the overall dollars to ensure that the vast majority of the funds are passed along to the school operators and the students.

Intermediary development and milestones – next 12 months

Key activities	*Timing*
• Push initial design with expert input	Winter/spring 2010
• RTTT funds secured	April 2010
• Local and national foundation funding secured	June 2010
• Launch national search for intermediary leader	Summer 2010
• Complete business plan	Fall 2010
• Hire small core incubation staff	Fall 2010
• Launch process for initial incubations	Fall 2010
• Begin working with 1-3 school turnaround entrepreneurs to incubate their efforts	Winter 2011



UMASS DONAHUE INSTITUTE • RESEARCH & EVALUATION GROUP

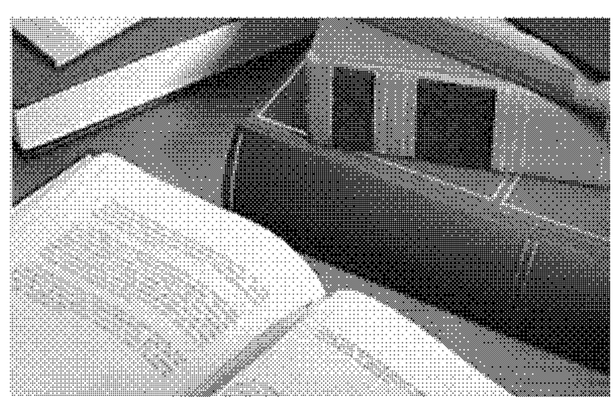
An Evaluation of the Commonwealth Pilot Schools Initiative

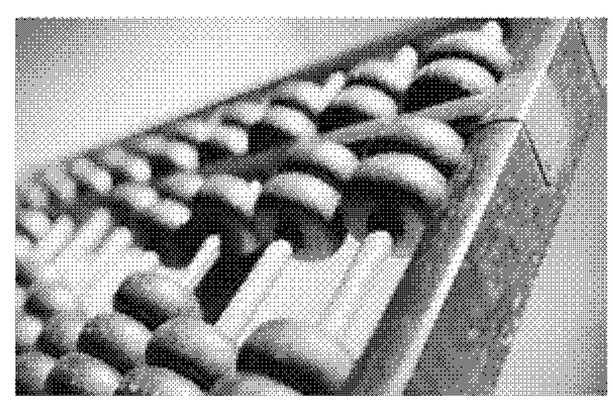
Policy Brief

Key Findings Following Two Years of Implementation

A briefing to the Massachusetts Department of Elementary and Secondary Education to inform ongoing dialog and strategy as it pertains to whole school reform and improvement in Massachusetts schools

November 2009





Introduction

In November 2006, four schools identified as candidates for designation as "chronically underperforming" schools were invited by the Massachusetts Board of Elementary and Secondary Education (the Board) to convert to Commonwealth Pilot schools. Each of these schools—Academy Middle School in Fitchburg, John J. Duggan Middle School in Springfield, Roger L. Putnam Vocational High School in Springfield, and The English High School in Boston—had been in underperforming status for four years or more. The following year, a fifth school, Homer Street Elementary School, also in Springfield, joined the Commonwealth Pilot Schools Initiative.

The Commonwealth Pilot Schools Initiative (the Initiative) is intended to introduce substantive reform to schools struggling with persistently low student achievement, and is patterned on a model in place in the Boston Public Schools (BPS). The Boston Pilot Schools model was developed by the BPS and the Boston Teachers Union in 1995. Since that time, the Center for Collaborative Education (CCE) has served as coordinator and advocate for the Boston Pilot Schools network. CCE has also served as a resource to the five Commonwealth Pilot schools, which are working to establish and use autonomy in five areas—staffing and hiring, school schedule and calendar, curriculum and assessment, governance, and budget—to their students' greatest advantage.

Under the direction of the Massachusetts Department of Elementary and Secondary Education (ESE), the University of Massachusetts Donahue Institute (the Institute) designed and implemented a comprehensive formative and summative evaluation of the Initiative. This evaluation remains ongoing as the schools enter the 2009–2010 school year (SY10). This briefing is intended to inform policy makers' and implementers' understanding of the findings to-date of that evaluation and their implications for the design, implementation, and management of this and other whole-school reform initiatives. Accordingly, this brief is organized into three succinct discussions:

- Implementation Progress
- Initial Impacts
- Lessons Learned

For an expanded view of evaluation findings, please consult the research publications website of ESE's Office of Strategic Planning, Research, and Evaluation (http://www.doe.mass.edu/research/reports/topic.html). Included under the "Commonwealth Pilot Schools" heading is a series of interim evaluation products, including annual reports featuring detailed summaries of the Initiative's implementation and initial impacts on school operations, culture, teaching, and learning, which are presented on a school-by-school basis.

Implementation Progress

The Initiative provides a tremendous opportunity to learn from participating Commonwealth Pilot schools' experiences, such that the introduction, design, and implementation of new models for school reform may proceed as smoothly and effectively as possible. An overarching finding derived from these schools' experience is the need to address reform systematically, allowing time for key structures and capacity to be developed, in advance of the pursuit of changes requiring high levels of staff expertise and collaboration, which may not be in place at the onset of reform.

After two years, findings reveal mixed progress in design plan implementation. Plans were developed rapidly in response to a schedule defined by ESE. They called for near-simultaneous development and implementation of an array of substantive changes to school staffing, structure, operations, and capacity. In Year One schools instituted a range of structural changes.[1] However, the effort associated with establishing these structures, training new and incumbent staff to use them effectively, and instilling new cultural norms was enormous, even with the support provided by ESE (in the form of targeted assistance grants and CCE technical assistance). As a result, many changes to curriculum, instruction, and assessment were deferred until Year Two.

Schools have experienced varying degrees of success in the implementation of their design plans. Findings highlight a variety of implementation and context-related factors that have influenced school-level implementation success, which may be instructive to future reform efforts. Following is a brief overview of implementation progress over the past two years, accompanied by an account of factors affecting progress.

Year One: Building a Foundation for Reform

Schools' initial focus was on the hiring and integration of new staff, with staff turnover rates exceeding 60% at two schools, including one in which a new principal was hired in June 2007. In addition to dramatic changes in staff, schools also needed to adjust to changes in student enrollment, with two dramatically reducing enrollment to meet Commonwealth Pilot guidelines, one remaining largely unchanged, and two others experiencing substantial change due to fluctuating demand. One of these schools experienced a decrease in enrollment, while the other experienced an increase. Changes at these latter two schools were unplanned and driven largely by school choice decisions in their communities.

Organizational structures were substantially revised in four of the five schools, with the two high schools adopting Smaller Learning Community (SLC) structures and one middle school adopting a new "house" and teacher team structure. The remaining middle school also grappled with a new organizational structure as it began implementing an Extended Learning Time grant. All of these changes represented significant reforms in their own right, with the potential to profoundly influence instructional planning, decision making, and delivery. Each of these reforms also required extensive organizational and staff development.

Revised school day schedules were implemented at four schools, with mixed impacts on instructional time. Expanded day schedules were implemented at two schools, both of which benefitted from substantial funding through other initiatives. Lacking such financial resources, time for instruction was decreased at two others in favor of increased collaborative professional time. The fifth school opted not to proceed with many of its intended scheduling changes following a self-assessment of its capacity to enact them. Instructional time was also affected by new student advisory and/or related programs in four schools (a fifth continued its existing advisory program).

[1] Throughout this report, Year One and Year Two refer to a school's first and second years as a Commonwealth Pilot, respectively. The Initiative's first cohort contained four schools, its second cohort just one. Therefore, Year One was SY08 for the first cohort and SY09 for the second. The first cohort completed Year Two in SY09; the second cohort has yet to complete Year Two.

New scheduling strategies enabled substantial increases in collaborative professional time at all schools. This was accomplished through the introduction of a weekly late start or early release day for students at four schools, among other strategies, and through the creation of additional afterschool time at the fifth. This time was largely used for professional development and for collaborative planning at the school, SLC, department, or grade level. Initially, much of this professional development activity focused on establishing new structures and on increasing staff capacity to leverage those structures in support of school improvement.

Compensation was provided to teachers at schools with increased teacher work weeks. The length of the teacher work week increased substantially at two schools and modestly at two others. Teachers received compensation for additional time worked, though the mechanism and source for this compensation varied by district. Lacking additional funding, a fifth school, part of the Initiative's second cohort, did not feel it could lengthen the teacher work week.

New governance structures were established to support school- and community-based decision making. Governance boards and leadership teams were established at all five schools by winter of Year One. With substantial outside facilitation and support, these boards developed capacity and focus throughout the year. Governing boards worked primarily on issues related to school policy, such as approving annual work election agreements and school budgets, and evaluating the school principal. Leadership teams focused more directly on operational matters and/or staff communication.

Great progress was realized in the development of new structures in Year One, but it was not always a straight or easy path, and some schools experienced greater success than others. Leaders and staff of all five schools reflected at length on the enormity of the change process and on the need to develop internal capacity to leverage the potential of these structures to support school improvement before tackling other, more complex, tasks. Leadership and staff time and expertise were stretched to a breaking point in Year One, particularly at schools from the first cohort. In this context, expectations of progress vis-à-vis implementing new curricula, assessments, and instructional practices were revised as the challenge and need to first accomplish "foundation" tasks became clearer. Notably, the second cohort school chose to maintain its existing instructional philosophy and district curriculum, focusing its efforts on improving the quality and consistency of instructional delivery.

A variety of factors were observed to impact implementation progress, including:

- **School and staff readiness to undertake critical tasks may vary**. Factors such as high rates of staff turnover, practical limits on leadership and staff capacity to manage and assimilate change, limited past experience with school-based decision-making models, and leadership transition (at one school), served to complicate and limit implementation progress. Each school displayed unique assets and limitations that affected readiness to undertake critical tasks defined in school design plans.

- **The scope of change being pursued overwhelmed some schools**. Comprehensive school reform is an extraordinary undertaking, even under the best of circumstances, and each of these schools entered the reform process following years of unsatisfactory accountability determinations. The complexity of this undertaking was sometimes underestimated. One school attempted to simultaneously implement both an Extended Learning Time grant and its Commonwealth Pilot design plan, which were thought to be complementary. Unfortunately, concurrent implementation of two major redesign initiatives dispersed limited resources, including administrative attention, too thinly, with adverse impacts on implementation and school stability.

- **Uncertainty regarding the extent of autonomy granted to schools complicated implementation**. Despite ongoing communication between ESE, CCE, and district leadership, schools expressed uncertainty regarding the extent of autonomy granted to them in all areas, but most particularly in relation to budget, as well as to curriculum, instruction, and assessment. This hampered their ability to move forward with intended changes and, potentially, to align budget resources with those changes.

- **Some schools lacked sufficient consensus with regard to aspects of their design plans**. At one school, the principal was selected subsequent to the planning phase, while at another the principal was noted to have limited engagement in the planning process. Where leadership was retained and active in the planning process, high staff turnover rates may also have complicated the equation. One school featured an engaged leader and articulated a plan to recruit staff who believed in the school's intended approach to reform. That school showed the greatest evidence of consensus buy-in to the new school design.

- **School characteristics complicated implementation of the pilot model**. Application of the model in vocational schools or schools that exceed enrollment guidelines (400 students), or in districts with a limited number of schools or in which a reduction in force occurs, may result in more complex implementation needs (such as building SLC structures) or complicate use of hiring or budget autonomy, in particular.

Ultimately, a phased approach to implementation of design plans, such as what evolved naturally during the first year of the Initiative, may offer a more feasible approach and set of expectations for intervening in under-performing schools. The design plan for the school entering as part of the Initiative's second cohort showed evidence of this phased approach, with less broad and ambitious goals for implementation of changes in its first year of operation as a Commonwealth Pilot school.

Year Two: Solidifying the Foundation, Impacting the Classroom

The four original Commonwealth Pilot schools continued their process of change in Year Two, with each having curriculum, instruction, and assessment (CIA) practice among its focal points. As the year began, each school found itself in a unique position relative to its capacity and status, and these factors greatly influenced their pursuit of stated goals vis-à-vis CIA. During periodic interviews, key administrative and instructional leaders in all four schools related a vision for what they intended and were able to accomplish in Year Two. Schools varied in their instructional leadership capacity, as well as in their existing instructional practice and knowledge. As a result, CIA goals varied widely across schools.

ESE support for school-level change was again substantial, taking the form of targeted grants and CCE technical assistance. The focus of support was defined through substantive engagement on the part of the schools receiving services. Much of the assistance was devoted to development or improvement of CIA, but some schools continued to exhibit an emphasis on developing school leadership and planning structures. This was particularly true at the increasingly large and organizationally complex vocational school. By the end of Year Two, all schools reported progress with respect to CIA, but none felt they were near an end point in their improvement process.

Three of the four schools undertook an examination of existing curricula as a basis for assessing needs, two of which made substantial progress in this regard. One school implemented a comprehensive English language arts (ELA) curriculum developed by its faculty under the guidance of a program director, and proposals for revised curricula were also submitted by its science, mathematics, and history departments in spring 2009. This school also sought to improve responsiveness to the needs of its English language learners. A second school engaged in curriculum mapping, adopted "power standards" (which continue to be refined), and developed a number of interdisciplinary "learning expeditions." This school also developed and implemented student assessments in four core subject areas, which it believes are more timely and better aligned with the school's curriculum than standard district assessments.

Less progress was achieved with regard to curriculum at two other schools. One of these experienced high turnover within its administrative leadership team and was still working to develop its SLC and instructional leadership structures. At this school, vocational and academic classroom teachers worked with CCE staff to begin curriculum evaluation and mapping, a process still in its beginning stages. The other school experienced 50% staff turnover prior to Year Two. The principal saw a need to focus on the fundamentals of instructional practice and classroom management and felt that staff were not yet ready to undertake a substantive revision of existing CIA.

A number of factors were observed to impact implementation of planned changes in Year Two, including:

- **Leadership and staff turnover affected readiness to build upon foundations established in Year One**. Following a year of structure and capacity building, turnover rates at the two middle schools exceeded 40%. Similarly, one high school experienced substantial administrative leadership turnover. These unplanned changes affected continuity of key initiatives and eroded capacity established in the prior year.

- **Two schools experienced significant external threats to design plan implementation**. For a variety of reasons, one district elected to close its Commonwealth Pilot school at the end of Year Two. Another school was informed that it would lose revenues supporting its extended day schedule and have a new principal at the end of Year Two. As these external "threats" became evident, they became a major distraction to faculty and diminished focus on, and possibly commitment to, design plan implementation.

- **Some schools reported increased autonomy, but others did not**. Interview data suggest continued tension regarding district accommodation of school-level autonomies, but reports vary by school, even within districts. This uncertainty, which is difficult to validate, may hamper schools' exercise of these rights.

- **Even where things went well, change proved a gradual process.** No school feels it accomplished all of its goals vis-à-vis CIA, despite their excitement at the progress they were able to achieve.

Initial Impacts

Design plan implementation has resulted in substantive changes to operations and practice at all five Commonwealth Pilot schools. The key question is whether these changes are resulting in the intended positive impacts on student learning and achievement. At this stage of implementation, the answer to that question remains unclear. Data suggest that important intermediate impacts such as improvements in school culture, capacity, and practice have been attained, but the scope—and even the direction—of impacts varies across schools. At the close of Year Two, some schools appeared better positioned to improve or accelerate student achievement than others, based on the proximity of realized changes to classroom instruction.

In Year One, staff of all five participating schools generally characterized the changes they had undertaken as the "right direction." In Year Two, this sentiment remained largely unchanged at two of these schools, but large proportions of staff expressed new uncertainty regarding their school's direction at two others. Not coincidentally, these were also the schools that faced uncertain futures due to planned closure or steep declines in available resources.

Preliminary Impacts

The Commonwealth Pilot Schools Staff Survey engaged returning staff from each school to understand the preliminary impacts of the Initiative on several measures of school vision, culture, and practice. A measure was considered to have improved, worsened, or remained the same if the largest number of staff selected that option.

As Reported by Returning Staff at the Conclusion of Year One (all five schools)

- **The first year of design plan implementation resulted in improvements in vision, culture, and practice at four schools**. Each of these schools' staff cited improvement on six or more of the nine key outcome measures, with no indication of worsening conditions. At the fifth school, impacts were mixed and directly reflected the school's struggle to implement its design plan.
- **Improvements in staff collaboration and in the schools' freedom to make decisions were reported at all five schools.** This finding reflects progress made in the institution of new schedules, governing boards, and SLC or instructional leadership team structures within the schools. These changes provided new time for collaboration and mechanisms through which leadership could be exercised.
- **Improvement was reported with regard to the quality of instruction, sense of direction, focus on student needs, and approach to student support services at four schools.** Returning staff of the remaining school generally reported no change on these measures, but they felt the school's sense of direction had worsened. Collegiality reportedly improved at three of the five schools and remained the same at two.
- **Mixed impacts were reported with regard to student behavior.** Returning staff at the two schools that systematically downsized enrollment overwhelmingly perceived improvement in student behavior, while staff at a third school indicated behavior had worsened. No change was reported at the remaining two schools.
- **Limited improvement was reported with respect to subject area curricula and the use of assessment data.** Returning staff of two schools reported improvement in the use of assessment data, with one reporting improvement in curricula. This reflects schools' decisions to defer many CIA design plan goals to Year Two.

As Reported by Returning Staff at the Conclusion of Year Two (the four original schools)

- **Progress continued in Year Two, as staff of all four schools cited improvement in vision, culture, and practice.** Two schools cited improvements on all nine key measures, while another cited seven. Notably, staff of the school that showed the least positive impacts in Year One noted modest improvement on five measures.
- **Improvements to curriculum, instruction, and assessment were evident at all schools.** This suggests the intended focus for SY09 was realized. Staff cited improvement in instructional quality and teachers' use of assessment data at all four schools. Improvements to curriculum were most commonly reported at three schools but were also in evidence at the fourth.
- **Improvements in staff collaboration and schools' focus on student needs were reported by staff of all four schools.** Data generally suggest continued progress in these areas. In addition, staff of three schools cited improvement in their collegiality and sense of direction.
- **Mixed impacts continued to be reported with regard to student behavior.** Further improvement was cited at the two schools where progress on this measure was reported in Year One, while behavior continued to worsen at a third. At the fourth school, staff generally continued to report no change in behavior, but a large minority of staff felt that it had worsened.
- **Substantial minorities of returning staff from two schools reported that freedom to make important decisions had diminished.** Both of these schools were affected by external changes (school closure, loss of revenue). Notably, many of their returning staff also cited improvement in decision-making freedom, underscoring the contradictory forces in play as governance and leadership structures continued to solidify, even in light of pending changes.

Catalysts of School Improvement

At the close of SY09, the Commonwealth Pilot Schools Staff Survey engaged all staff to assess the impact on school improvement of 12 specific changes that may have occurred in their schools. The goal of this exercise was to understand the connection between specific changes made and school improvement at this early point in the implementation process. Following are summary findings across the five schools.

Changes frequently reported to have a positive influence on school improvement

The development of school leadership teams, increased time for staff collaboration, and the introduction of new approaches to instruction received the highest overall rankings and were among the six most positive changes at most schools. At the two schools that systematically downsized enrollment as part of their design plan, this change was the single most positive factor in school improvement cited by staff. Similarly, staff of these schools highly valued decreased class sizes as a catalyst for improvement. No other school reported these findings.

Changes sometimes reported to have a positive influence on school improvement

Establishment of school governance boards, and changes to school staffing, professional development, assessment practices, and curriculum were all among the top six positive changes for two or three schools. The relative importance of these changes to school improvement varied widely by school and commonly reflected implementation priorities or contextual factors within the school or district.

Changes seldom reported to have a positive influence on school improvement

Increased school-level budget discretion and changes to instructional schedules were least frequently cited as contributing to school improvement, with no school's staff elevating them to a rank higher than seventh among the 12 changes that were assessed. It is unclear how well budget autonomy is understood at the staff level (many staff chose "don't know," which did not affect ranking) and the extent to which this autonomy exists and/or is exercised by schools is also not entirely clear.

Longer-Term Impact

The Initiative's long-term performance goals are linked directly to student MCAS achievement. In Year One, returning staff at three of the five schools reported improvement in their school's capacity to accelerate student learning, and there was evidence of at least some improvement at a fourth. Ratings were most positive at schools where the most improvement was reported with regard to intermediate outcomes pertaining to vision, culture, and practice. In Year Two, with implementation of key classroom-level changes still ongoing, returning staff at all four initial schools felt that their school had expanded their capacity to improve student learning.

Although perceptions of schools' capacity to improve student learning were generally positive, the Initiative does not yet appear to have had a substantial impact on school-level MCAS achievement. While three of the five schools experienced increases in their overall ELA CPI over the past two years, these increases are consistent with previously established improvement trends in these schools, and there is little evidence of acceleration in these trends.[2] It is notable that results at two other schools that recently experienced a decline in ELA achievement are also following previously established trends.

Trends in mathematics scores have been flat at three schools over the past two years. A fourth school had shown dramatic progress from 2005–2008 but experienced a modest decline in 2009. However, the fifth school may have begun to show acceleration in this subject area in 2009. While a single year of improvement does not constitute a trend, this school's particularly strong intermediate outcomes and specific emphasis on improving mathematics instruction during SY09 suggest it is an outcome worth monitoring.

[2] CPI, or composite performance index, is a calculation used to summarize MCAS achievement and illustrate progress towards proficiency. CPI scores are one factor used in determinations of adequate yearly progress (AYP) for accountability purposes. CPI scores included in this policy brief reflect overall scores for all tested grade levels at the school.

Lessons Learned

Examination of the experiences of the current Commonwealth Pilot schools suggests the need for a phased and nuanced approach to school reform. Design plans should engage the right leaders and reflect an objective assessment of school needs, such that they are built upon an awareness of the specific strengths, weaknesses, assets, and deficiencies that exist at both the school and district level. This ensures that priorities for both reform and technical assistance are grounded in knowledge of local context. From this point, new staff, structures, capacities, and tools can be developed strategically, with each phase supporting the success of the next and eventually leading to the goal of true whole-school reform.

Learning from these schools' experience, it is evident that change is not only a multi-step process, but one that is highly customized and open-ended in its duration, with implementation progress subject to changes in a landscape not entirely within the school's control. Nonetheless, several key developmental steps are evident, including:

Leadership Formation: Engage administrators, teachers, and other stakeholders with needed expertise and political/social capital

Planning: Assess assets and needs, develop a vision, and build an effective design plan

Foundation Building: Establish staffing and structures needed to support the vision and design plan

Capacity Building: Develop leader and staff skills and cultural norms to effectively leverage new structures and autonomies

Development: Leverage new capacity to develop new methods and tools related to CIA and student support

Diffusion: Implement new instructional and student support practices

These steps comprise a systematic approach to change that is grounded in Commonwealth Pilot schools' experience and is customizable to individual school and district needs. As these steps are considered, the role of leadership and technical assistance remains ongoing, as each school's change process must be managed to ensure that it builds successfully toward improvement and avoids implementation "meltdown." This management process should be informed by field-level knowledge of what is working, what is not, and why. This assessment can be further enhanced by measurement of specific short- and long-term benchmarks for success.

Several other observations emanating from this study may be relevant to ongoing management of school reform initiatives. These include:

- **Changes of great magnitude may commonly require an external imperative or other catalyst.** The autonomies associated with the Commonwealth Pilot Schools Initiative require concessions on the part of school districts and school staff that may be beyond the scope of what can be obtained in routine bargaining situations. Despite all parties being deeply invested in school improvement, these concessions may be hard to secure, as they affect chain of command, policy, and working conditions that are deeply institutionalized in public education. Absent an external impetus and accountability for change, certain autonomies may be difficult to realize, particularly those related to staffing, budget, and curriculum and instruction.

- **Successful change begins with an objective, deeply informed understanding of need and required support.** Assessment of district and school structures, skills, resources, and capacity can provide a greater understanding of a school's readiness to begin the proposed change process and of a district's ability to support the proposed change. Such a process would also help to define the technical assistance or support necessary to successfully pursue that change. This suggests the need for new or adapted diagnostic tools and

assessment protocols specific to this purpose, which can be applied at both the school and district level, as well as an expanded timeline for initial planning. The goal of assessment is to ensure an effective school design process, including a realistic plan for implementation.

Further, the assessment process may help identify whether schools (and districts) have characteristics and sufficient underlying capacity to make them suitable candidates for the type of substantive reform associated with the Commonwealth Pilot Schools Initiative. Experience suggests that some notable factors that may influence conversion include district size, school size and/or structural complexity, school specialty, the presence of engaged leadership within schools, the sufficiency of administrative resources, and the commitment of school and district leaders to autonomies.

- **Planning, technical assistance, and support may be required at both the school and district levels.** The implementation of autonomies central to the Commonwealth Pilot Schools model may require fundamental changes to existing school and district operations, with implications for budgeting, human resources, governance, and curriculum, instruction, and assessment systems. Further, to the extent that conversion leads to a substantial migration of students and staff, the process may have profound impacts on other district schools. Requiring districts to articulate plans early in the planning process and providing direct technical assistance in support of those plans may benefit schools' design plan implementation and, where applicable, help mitigate possible adverse effects on other schools.

- **Increased clarity regarding school and district accountability could facilitate program management and school success, so long as schools retain their freedom to innovate and refine plans.** As schools applied for Commonwealth Pilot school status, their design plans were carefully reviewed by an appointed committee of the Board of Education. However, accountability protocols associated with design plan implementation are not yet clearly articulated, and the initiative lacks a specified framework of short-term (implementation) and mid-term (culture and practice) performance benchmarks that anchor assessment of progress toward improvement. Lacking these benchmarks, AYP is perceived as the de facto success criteria, which may obscure important intermediate accomplishments. In addition, the establishment of attainable benchmarks for the early phases of implementation may help generate the "quick wins" for staff emphasized by technical assistance providers as a way to encourage buy-in and positive momentum for change.

- **Experience suggests that expedient solutions to financial resource constraints may in the long term complicate school reform.** Decisions that seem expedient may be problematic if they undermine the design process or the ability of a school to focus its resources, including administrative attention, on successful implementation of their design plan. In two instances, schools' plans leveraged financial resources associated with other initiatives. In each case, this co-mingling resulted in a substantial disruption in the school reform process. Although it is tempting to leverage any possible resource in support of school improvement, the implications of pursuing these resources for design plan implementation and sustainability should be carefully considered.

- **Uncertainty regarding commitment to the model complicates implementation.** Despite the provision of substantial technical assistance and targeted grants to the five participating schools, some leaders and staff have expressed uncertainty as to whether ESE is fully committed to the Commonwealth Pilot Schools model. This concern sometimes extends to the disposition of district and even school leaders, as well. Such uncertainty may complicate schools' ability to maintain staff buy-in and to develop and use autonomies, potentially retarding the reform process.

Lessons Learned by America's Choice from the Holyoke Turnaround Partnership

For America's Choice, the partnership with Holyoke Public Schools has been a challenging and rewarding experience. We have learned a great deal, as we have worked to make a difference for the students, teachers and administration across the school district. America's Choice is in agreement with The Meristerm Group's list of lessons learned from our partnership with ESE and the Holyoke School District. From our perspective, the list below includes the most important lessons America's Choice has learned.

A more thorough initial assessment of district strengths and needs at the onset of the Initiative would lead to better planning and implementation. While an initial assessment of schools was conducted in Holyoke, the recognition of effective practices might have been used as the foundation for the work with America's Choice, as well as other external partners. It is as vital to continue any practices and programs that are having positive impacts, as it is to end programs and practices that are not producing results and are not aligned with the proposed innovations in the Initiative.

Effective use of data must be a driving force in turning around a school district. Effective use of data must be at the core of developing leadership, establishing targets, allocating resources and improving instruction. By establishing measurable short-term and long-term targets, based on that data, stakeholders become well informed on school and district progress. Data collected, analyzed and used to plan by teachers, school leadership teams, and district administrators should include not only state assessments and standards based-benchmarks for reviewing student work, but also district/teacher developed assessments. The value of school-designed assessments that are aligned to state standards is an invaluable tool in driving instruction and improving performance.

Building district-level capacity and improving local school performance must go hand-in-hand. In as much as the role of the district is to support schools, attention to the district structure and operational capacity is a critical factor in a turnaround initiative. This focus must go hand-in-hand with school improvement efforts so that the capacity of district staff to work with schools on changing practice is built. In particular, the Curriculum Director, and those reporting to the Curriculum Director, must operate with laser-like focus on monitoring and implementation of standards-based instructional programs across the school district. Too often, people in this position are pulled in too many directions and their true purpose loses its urgency.

Differentiating instruction is critical to addressing the needs of all students. Future efforts with turnaround districts need to have an increased focus on the differentiated needs of learners. This work begins in the regular classroom with every teacher. The current year's efforts of America's Choice in Holyoke are intended to provide more support to English Language Learners. Likewise, through tiered intervention, ACI is increasingly assisting schools in the kind of instructional practices and programs required by Response to Intervention (RTI).

Careful coordination of Partnership in Holyoke builds synergy and assures good results. An effective Turnaround Initiative draws on the expertise and resources of the school community and external partners to improve district and school performance. This role has been played

effectively by DESE in terms of problem solving, dealing with conflicting agendas and keeping the focus. Creating, as The Meristerm Group suggests, a Turnaround Collaborative that includes external service providers and community-based organizations, would strengthen coordination. Great care must be taken to ensure consistent messages within the schools and across the district.

Making certain that parents, teachers, administrators and other members of the community understand the changes represented by the Initiative builds support for successful implementation. The establishment of a Turnaround Initiative is more likely to be effective if the district community believes that their opinions are valued and that they are playing a role in improving outcomes for students. Where new curriculum materials or instructional practices are being proposed a sincere dialogue between the community, the state and the partners nurtures an environment of mutual understanding and goal setting. Efforts must be made to provide access to these conversations for parents for whom English is not the primary language.

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Appendix F1: Statute Governing Charter Schools

AN ACT RELATIVE TO THE ACHIEVEMENT GAP

SENATE NO. 2247

PASSED BY THE MASSACHUSETTS LEGISLATURE (GREAT AND GENERAL COURT), JANUARY 14, 2010

EXCERPTS RELATING TO CHARTER SCHOOLS

[Incentives for districts to sell or lease excess capacity to charter schools or charter school applicants]

SECTION 4. Subsection (b) of section 15 of chapter 70B of the General Laws, as so appearing, is hereby amended by adding the following paragraph:-

Before the sale or lease of an assisted structure or facility or a portion of that structure or facility, the school district in control of the structure or facility shall submit to the authority a district-wide school facility use plan that shall include, but not be limited to, a listing of all school facilities under the control of the school district, a detailed description of both the current use and proposed use of each school facility, the most recent enrollment data, by school facility, then available to the school district, a detailed floor plan of each school facility that shows and labels each space in the facility and whether it is used as a classroom or has some other use and any other information that may be required by the authority to understand the district's school facility use plan. If the plan includes the closure, sale or lease of a school facility or any part of a school facility, the authority may conduct, with the full cooperation of the district, an analysis of district-wide enrollment capacity and future enrollment trends for the district. If the capacity analysis and enrollment projection indicate an extended period of significant excess capacity within the district's educational facilities, the district may, prior to consideration of any other disposition of the identified excess capacity, make a good faith offer to sell or lease at fair market value the

identified excess capacity to a commonwealth charter school established pursuant to section 89 of chapter 71 or an applicant for a commonwealth charter school pursuant to said section 89 of said chapter 71 that serves or is seeking to serve students who live in the school district. The authority shall not recapture commonwealth and authority assistance for any such excess capacity that is sold or leased to a commonwealth charter school or applicant for a commonwealth charter school.

[Charter school statute]

SECTION 7. Said chapter 71 is hereby further amended by striking out section 89, as so appearing, and inserting in place thereof the following section:-

Section 89. (a) As used in this section the following words shall, unless the context clearly requires otherwise, have the following meanings:-

"Board", the board of elementary and secondary education.

"Charter school", commonwealth charter schools and Horace Mann charter schools unless specifically stated otherwise.

"Commissioner", the commissioner of elementary and secondary education.

"Department", the department of elementary and secondary education.

"District", or "school district", the school department of a city, town, regional school district, or county agricultural school.

"Superintendent", the superintendent of the district.

(b) The purposes of establishing charter schools are: (i) to stimulate the development of innovative programs within public education; (ii) to provide opportunities for innovative learning and assessments; (iii) to provide parents and students with greater options in selecting schools within and outside their school districts; (iv) to provide teachers with a vehicle for establishing

schools with alternative, innovative methods of educational instruction and school structure and management; (v) to encourage performance-based educational programs; (vi) to hold teachers and school administrators accountable for students' educational outcomes; and (vii) to provide models for replication in other public schools.

(c) A commonwealth charter school shall be a public school, operated under a charter granted by the board, which operates independently of a school committee and is managed by a board of trustees. The board of trustees of a commonwealth charter school, upon receiving a charter from the board, shall be deemed to be public agents authorized by the commonwealth to supervise and control the charter school.

A Horace Mann charter school shall be a public school or part of a public school operated under a charter approved by the school committee and the local collective bargaining unit in the district in which the school is located; provided that all charters shall be granted by the board of elementary and secondary education. A Horace Mann charter school shall have a memorandum of understanding with the school committee of the district in which the charter school is located which, at a minimum, defines the services and facilities to be provided by the district to the charter school and states the funding of the charter school by the district. A Horace Mann charter school established as a conversion of an existing public school shall not require approval of the local collective bargaining unit, but shall require a memorandum of understanding agreement regarding any waivers to applicable collective bargaining agreements; provided further, that the memorandum of understanding shall be approved by a majority of the school faculty; provided further, that Horace Mann charter schools that are conversion of existing public schools shall not be subject to clause (1) of subsection (i). A vote by the school faculty shall be held and finalized within 30 days of submission of the charter school application to the board of elementary and secondary education. A Horace Mann charter school shall be operated and managed by a board of

trustees independent of the school committee which approved the school. The board of trustees may include a member of the school committee.

(d) Persons or entities eligible to submit an application to establish a charter school shall include, but not be limited to: (i) a non-profit business or corporate entity; (ii) 2 or more certified teachers; or (iii) 10 or more parents; provided, however, that for profit business or corporate entities shall be prohibited from applying for a charter. The application may be filed in conjunction with a college, university, museum or other similar non-profit entity. Private and parochial schools shall not be eligible for charter school status. The board may authorize a single board of trustees to manage more than 1 charter school; provided, however, that each school is issued its own charter. The commissioner shall provide technical assistance to public school districts to assist in the development of proposals for Horace Mann charter schools.

(e) The board shall establish the information needed in an application for the approval of a charter school; provided that the application shall include, but not be limited to, a description of: (i) the mission, purpose, innovation and specialized focus of the proposed charter school; (ii) the innovative methods to be used in the charter school and how they differ from the district or districts from which the charter school is expected to enroll students; (iii) the organization of the school by ages of students or grades to be taught, an estimate of the total enrollment of the school and the district or districts from which the school will enroll students; (iv) the method for admission to the charter school; (v) the educational program, instructional methodology and services to be offered to students, including research on how the proposed program may improve the academic performance of the subgroups listed in the recruitment and retention plan; (vi) the school's capacity to address the particular needs of limited English-proficient students, if applicable, to learn English and learn content matter, including the employment of staff that meets the criteria established by the department; (vii) how the school shall involve parents as partners in the education of their children; (viii) the school governance and bylaws; (ix) a

proposed arrangement or contract with an organization that shall manage or operate the school, including any proposed or agreed upon payments to such organization; (x) the financial plan for the operation of the school; (xi) the provision of school facilities and pupil transportation; (xii) the number and qualifications of teachers and administrators to be employed; (xiii) procedures for evaluation and professional development for teachers and administrators; (xiv) a statement of equal educational opportunity which shall state that charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, proficiency in the English language or academic achievement; (xv) a student recruitment and retention plan, including deliberate, specific strategies the school will use to ensure the provision of equal educational opportunity as stated in clause (xiv) and to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school is expected to enroll students, contains a comparable academic and demographic profile; and (xvi) plans for disseminating successes and innovations of the charter school to other non-charter public schools.

(f) The student recruitment and retention plan required under clause (xv) of subsection (e) shall include, but not be limited to, a detailed description of deliberate, specific strategies the school will use to maximize the number of students who successfully complete all school requirements and prevent students from dropping out. The student recruitment and retention plan shall be updated annually and shall include annual goals for: (i) recruitment activities; (ii) student retention activities; and (iii) student retention.

(g) To ensure that a commonwealth charter school shall fulfill its obligations under its recruitment and retention plan, the school district or districts from which the commonwealth charter school is expected to enroll students shall annually provide, at the request of a commonwealth charter school, to a third party mail house authorized by the department, the

addresses for all students in the district eligible to enroll in the school, unless a student's parent or guardian requests that the district withhold that student's information; provided, however, that the department may require the charter school to send the mailing in the most prevalent languages of the district or districts that the charter school is authorized to serve.

At the request of a school district from which a commonwealth charter school enrolls students, the charter school shall provide to a third party mail house the addresses for all students currently enrolled in the commonwealth charter school from the district; provided, however, that the information shall not be provided if a student's parent or guardian requests that the school withhold that student's information. Each district shall be permitted to supply a mailing to the third party mail house and pay for it to be copied and mailed to families of students from said district enrolled in the commonwealth charter school.

(h) An application submitted for the establishment of a commonwealth charter school shall: (i) be submitted to the board for approval under this section; and (ii) be filed with the local school committee for each school district from which the charter school is expected to enroll students. Before final approval to establish a commonwealth charter school, the board shall hold a public hearing on the application in the school district in which the proposed charter school is to be located and solicit and review comments on the application from the local school committee of each school district from which the charter school is expected to enroll students and any contiguous districts. At least 1 member of the board shall attend the public hearing. A comprehensive written summary of all materials prepared by the department or its administrative subdivisions, which evaluates or recommends approval or disapproval of a charter application must be delivered to the members of the board, the applicant, in support of, or in opposition to, the school submitted not later than 3 days before any board vote on the charter application.

All material in support of, or in opposition to, the school submitted to the department or the board shall be made available to the applicant and affected school districts before a vote by the board on a commonwealth charter school application.

(i) (1) Not more than 120 charter schools shall be allowed to operate in the commonwealth at any time, excluding those approved pursuant to paragraph (3); provided, however, that of the 120 charter schools, not more than 48 shall be Horace Mann charter schools; provided, however, notwithstanding subsection (c) the 14 new Horace Mann charter schools shall not be subject to the requirement of an agreement with the local collective bargaining unit prior to board approval; provided, further, that after the charter for these 14 new Horace Mann charter schools have been granted by the board, the schools shall develop a memorandum of understanding with the school committee and the local union regarding any waivers to applicable collective bargaining agreements; provided, further, that if an agreement is not reached on the memorandum of understanding at least 30 days before the scheduled opening of the school, the charter school shall operate under the terms of its charter until an agreement is reached; provided, further, that not less 4 of the new Horace Mann charter schools shall be located in a municipality with more than 500,000 residents; and not more than 72 shall be commonwealth charter schools. The board shall not approve a new commonwealth charter school in any community with a population of less than 30,000 as determined by the most recent United States Census estimate, unless it is a regional charter school.

Applications to establish a charter school shall be submitted to the board annually by November 15. The board shall review the applications and grant new charters in February of the following year.

(2) In any fiscal year, no public school district's total charter school tuition payment to commonwealth charter schools shall exceed 9 per cent of the district's net school spending;

provided, however, that a public school district's total charter tuition payment to commonwealth charter schools shall not exceed 18 per cent of the district's net school spending if the school district qualifies under paragraph (3). The commonwealth shall incur charter school tuition payments for siblings attending commonwealth charter schools to the extent that their attendance would otherwise cause the school district's charter school tuition payments to exceed 9 per cent of the school district's net school spending or 18 per cent for those districts that qualify under said paragraph (3).

Not less than 2 of the new commonwealth charters approved by the board in any year shall be granted for charter schools located in districts where overall student performance on the statewide assessment system approved by the board under section 1I of chapter 69 is in the lowest 10 per cent statewide in the 2 years preceding the charter application.

In any fiscal year, the board shall approve only 1 regional charter school application of any commonwealth charter school located in a school district where overall student performance on the statewide assessment system is in the top 10 per cent in the year preceding charter application. The board may give priority to applicants that have demonstrated broad community support, an innovative educational plan, a demonstrated commitment to assisting the district in which it is located in bringing about educational change and a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve.

(3) In any fiscal year, if the board determines based on student performance data collected pursuant to section 1I, said district is in the lowest 10 per cent of all statewide student performance scores released in the 2 consecutive school years before the date the charter school application is submitted, the school district's total charter school tuition payment to commonwealth charter schools may exceed 9 per cent of the district's net school spending but

shall not exceed 18 per cent. For a district qualifying under this paragraph whose charter school tuition payments exceed 9 per cent of the school district's net school spending, the board shall only approve an application for the establishment of a commonwealth charter school if an applicant, or a provider with which an applicant proposes to contract, has a record of operating at least 1 school or similar program that demonstrates academic success and organizational viability and serves student populations similar to those the proposed school seeks to serve, from the following categories of students, those: (i) eligible for free lunch; (ii) eligible for reduced price lunch; (iii) that require special education; (iv) limited English-proficient of similar language proficiency level as measured by the Massachusetts English Proficiency Assessment examination; (v) sub-proficient, which shall mean students who have scored in the "needs improvement", "warning" or "failing" categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (vi) who are designated as at risk of dropping out of school based on predictors determined by the department; (vii) who have dropped out of school; or (viii) other at-risk students who should be targeted to eliminate achievement gaps among different groups of students. For a district approaching its net school spending cap, the board shall give preference to applications from providers building networks of schools in more than 1 municipality.

The recruitment and retention plan of charter schools approved under this paragraph shall, in addition to the requirements under subsections (e) and (f), include, but not limited to: (i) a detailed description of deliberate, specific strategies the charter school shall use to attract, enroll and retain a student population that, when compared to students in similar grades in schools from which the charter school shall enroll students, contains a comparable or greater percentage of special education students or students who are limited English-proficient of similar language proficiency as measured by the Massachusetts English Proficiency Assessment examination and 2

or more of the following categories: students eligible for free lunch; (ii) students eligible for reduced price lunch; students who are sub-proficient, those students who have scored in the ”needs improvement”, ”warning” or ”failing” categories on the mathematics or English language arts exams of the Massachusetts Comprehensive Assessment System for 2 of the past 3 years or as defined by the department using a similar measurement; (iii) students who are determined to be at risk of dropping out of school based on predictors determined by the department; (iv) students who have dropped out of school; or (v) other at-risk students who should be targeted in order to eliminate achievement gaps among different groups of students. A charter school approved under this section shall supply a mailing in the most prevalent languages of the district the charter is authorized to serve to a third party mail house and pay for it to be copied and mailed to eligible students. If a school is or shall be located in a district with 10 per cent or more of limited English-proficient students, the recruitment strategies shall include a variety of outreach efforts in the most prevalent languages of the district. The recruitment and retention plan shall be updated each year to account for changes in both district and charter school enrollment.

If a district is no longer in the lowest 10 per cent, the net school spending cap shall be 9 per cent, unless the district net school spending was above 9 per cent in the year prior to moving out of the lowest 10 per cent in which case the net school spending cap shall remain at the higher level plus enrollment previous approved by the board. The department shall determine and make available to the public a list of the school districts in said lowest 10 per cent.

(j) The board shall make the final determination on granting charter school status and may condition charters on the applicant's taking certain actions or maintaining certain conditions. The board shall establish criteria for the approval of a charter application and recommendations to the board shall be based upon and reference those criteria.

If a final application is deemed inadequate by the department, the department may provide feedback to the applicant and invite it to submit a stronger application subsequently. Once a final application has been filed, only minor, non-substantive amendments shall be allowed. The department shall maintain a written detailed summary of interviews it conducts with final charter applicants and include that summary with the final application materials that are provided to the board, local school officials and the public.

(k) A charter school established under a charter granted by the board shall be a body politic and corporate with all powers necessary or desirable for carrying out its charter program, including, but not limited to, the power to:

(1) adopt a name and corporate seal; provided that any name selected must include the words "charter school";

(2) sue and be sued, but only to the same extent and upon the same conditions that a municipality can be sued;

(3) acquire real property, from public or private sources, by lease, lease with an option to purchase or by gift, for use as a school facility; provided, however, in the case of a Horace Mann charter school, the approval of the local school committee shall be obtained before acquisition of any such real property owned or controlled by the body;

(4) receive and disburse funds for school purposes;

(5) make contracts and leases for the procurement of services, equipment and supplies; provided, however, that if the charter school intends to procure substantially all educational services under contract with another person, the terms of such a contract must be approved by the board either as part of the original charter or by way of an amendment thereto; provided, further that the board shall not approve any such contract terms, the purpose or effect of which is to

avoid the prohibition of this section against charter school status for private and parochial schools;

(6) incur temporary debt in anticipation of receipt of funds; provided that a Horace Mann school shall obtain the approval of the local school committee and appropriate local appropriating authorities and officials relative to any proposed lien or encumbrance upon public school property or relative to any financial obligation for which the local school district shall become legally obligated; and provided further, that notwithstanding any general or special law to the contrary, the terms of repayment of any charter school's debt shall not exceed the duration of the school's charter without the approval of the board;

(7) solicit and accept grants or gifts for school purposes; and

(8) have such other powers available to a business corporation formed under chapter 156B that are not inconsistent with this chapter.

(l) Charter schools shall not charge a public school for the use or replication of a part of their curriculum subject to the prescriptions of a contract between the charter schools and any third party providers.

(m) Charter schools shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, or proficiency in the English language or a foreign language or academic achievement. Charter schools may limit enrollment to specific grade levels and may structure curriculum around particular areas of focus such as mathematics, science or the arts. There shall be no application fee for admission to a charter school. There shall be no tuition charge for students attending charter schools.

(n) Preference for enrollment in a commonwealth charter school shall be given to students who reside in the city or town in which the charter school is located. Priority for enrollment in a Horace Mann charter school shall be given first to students actually enrolled in the school on the date that the application is filed with the board and to their siblings; second to other students actually enrolled in the public schools of the district where the Horace Mann charter school is to be located; and third to other resident students.

If the total number of students who are eligible to attend and apply to a charter school and who reside in the city or town in which the charter school is located or are siblings of students already attending said charter school, is greater than the number of spaces available, an admissions lottery, including all eligible students applying, shall be held to fill all of the spaces in that school from among the students. If there are more spaces available than eligible applicants from the city or town in which the charter school is located and who are siblings of current students and more eligible applicants than spaces left available, a lottery shall be held to determine which of the applicants shall be admitted; provided, however, that a lottery conducted for Horace Mann charter schools shall reflect the enrollment priorities of this section. Notwithstanding this subsection, upon application by the board of trustees of a charter school or by the persons or entities seeking to establish a charter school, the board may amend or grant a charter designating such school a regional charter school; provided, however, that such regional charter school shall be exempt from the local preference provision of this paragraph; provided further, that such regional charter school shall continue to grant a preference of siblings of currently enrolled students; and provided further, that if the number of applicants remaining is greater than the number of spaces available, such regional charter school shall conduct a single lottery to determine which applicants shall be admitted.

In any instance where a charter school approved after January 1, 2011 enrolls more than 20 per cent of its total enrollment from school districts not included in its original charter

pursuant to subsection (h) for 2 consecutive years, the charter school shall submit an application to the board for an amendment to its charter that reflects its actual enrollment patterns; provided further that upon renewal of a charter school approved prior to January 1, 2011, the board shall establish a timeline of not less than 5 years for the charter to comply with this requirement.

Nothing in this section shall be construed to require a charter school to unenroll any student currently in attendance at the time this act takes effect.

When a student stops attending a charter school for any reason, the charter school shall fill the vacancy with the next available student on the waitlist for the grade in which the vacancy occurs and shall continue through the waitlist until a student fills the vacant seat. If there is no waitlist, a charter school shall publicize an open seat to the students of the sending district or districts and make attempts to fill said vacant seat. Charter schools shall attempt to fill vacant seats up to February 15, provided, however, that charter schools may but are not required to fill vacant after February 15. If a vacancy occurs after February 15, such vacancy shall remain with the grade cohort and shall be filled in the following September if it has not previously been filled. A vacancy occurring after February 15 shall not be filled by adding a student to a lower grade level. Charter schools shall attempt to fill vacant seats up to February 15, excluding seats in the last half of the grades offered by the charter school, and grades 10, 11 and 12. Within 30 days of a vacancy being filled, the charter school shall send the name of the student filling such vacancy to the department for the purposes of the department updating its waitlist.

The names of students who entered the lottery but did not gain admission shall be maintained on a waitlist, which shall be forwarded to the department not later than June 1 in the year in which the lottery is held. In addition to the names of students, the school shall supply to the department each student's home address, telephone number, grade level and other information the department deems necessary. The department shall maintain a consolidated waitlist for each

municipality in order to determine the number of individual students in each municipality seeking admission to charter schools.

(o) Each charter school shall annually, not later than April 1, notify each public school district in writing of the number and grade levels of students who will be attending the charter school from that district the following September as well as the number of new students who will be transferring from that district to the charter school in the following September. Tuition for charter school students shall only be paid for the number of students for whom notification has been reported by April 1. Tuition for charter school students shall be paid only for students actually enrolled in the school.

(p) A student may withdraw from a charter school at any time and enroll in another public school where the student resides.

A student may be expelled from a charter school based on criteria determined by the board of trustees, and approved by the board, with the advice of the principal and teachers; provided, however, that charter school policies shall be consistent with sections 37H and 37H½.

(q) A charter school may be located in part of an existing public school building, in space provided on a private work site, in a public building or any other suitable location; provided, however, that no school building assistance funds authorized under chapter 70B shall be awarded to a commonwealth charter school for the purpose of constructing, reconstructing or improving a commonwealth charter school.

(r) The school committee of each district where a Horace Mann charter school is located shall develop a plan to disseminate innovative practices of the charter school to other public schools within the district subject to the provisions of any contract between the Horace Mann charter school and any third party provider.

The commissioner shall facilitate the dissemination of successful innovation programs of charter schools and provide technical assistance for other school districts to replicate such programs. Each charter school shall collaborate with its sending district on the sharing of innovative practices.

(s) A charter school shall operate in accordance with its charter and the provisions of law regulating other public schools; provided, however, that sections 41 and 42 shall not apply to employees of commonwealth charter schools. Charter schools shall comply with the chapters 71A and 71B; provided, however, that the fiscal responsibility of a special needs student currently enrolled in or determined to require a private day or residential school shall remain with the school district where the student resides. If a charter school expects that a special needs student currently enrolled in the charter school may be in need of the services of a private day or residential school, it shall convene an individual education plan team meeting for the student. Notice of the team meeting shall be provided to the special education department of the school district in which the child resides at least 5 days in advance. Personnel from the school district in which the child resides shall be allowed to participate in the team meeting concerning future placement of the child.

(t) Horace Mann charter schools shall be exempt from local collective bargaining agreements to the extent provided by the terms of its charter; provided, however, that employees of the Horace Mann charter school shall continue to be members of the local collective bargaining unit and shall accrue seniority and shall receive, at a minimum, the salary and benefits established in the contract of the local collective bargaining unit where the Horace Mann charter school is located. Employees of Horace Mann charter schools shall be exempt from all union and school committee work rules to the extent provided by the school's charter. Employees in Horace Mann charter schools shall be required to work the full work day and work year to the extent provided by the terms of the school's charter.

(u) Notwithstanding this section or any other general or special law to the contrary, for the purposes of chapter 268A: (i) a charter school shall be deemed to be a state agency; and (ii) the appointing official of a member of the board of trustees of a charter school shall be deemed to be the commissioner. Members of boards of trustees of charter schools operating under the this section shall file a disclosure annually with the state ethics commission, the department and the city or town clerk wherein such charter school is located. The disclosure is in addition to the requirements of said chapter 268A and a member of a board of trustees must also comply with the disclosure and other requirements of said chapter 268A. The form of the disclosure shall be prescribed by the ethics commission and shall be signed under penalty of perjury. Such form shall be limited to a statement in which members of the board of trustees shall disclose any financial interest that they or a member of their immediate families, as defined in section 1 of said chapter 268A, have in any charter school located in the commonwealth or in another state or with a person doing business with a charter school.

Each member of a board of trustees of a charter school shall file such disclosure for the preceding calendar year with the commission within 30 days of becoming a member of the board of trustees, by September 1 of each year thereafter that the person is a member of the board and by September 1 of the year after the person ceases to be a member of the board; provided, however, that no member of a board of trustees shall be required to file a disclosure for the year in which he ceases to be a member of the board if he served less than 30 days in that year.

(v) Students in charter schools shall be required to meet the same performance standards, testing and portfolio requirements set by the board for students in other public schools.

(w) The board of trustees, in consultation with the teachers, shall determine the school's curriculum and develop the school's annual budget. The board of trustees of each Horace Mann charter school shall annually submit to the superintendent and school committee of the district in

which the school is located a budget request for the following fiscal year. The school committee shall act on the budget request in conjunction with its actions on the district's overall budget. Each Horace Mann charter school shall receive in response to the budget request not less than it would have under the district's budgetary allocation rules. The board of trustees may appeal any disproportionate budgetary allocation to the commissioner, who shall determine an equitable funding level for the school and shall require the school committee to provide the funding.

Following the appropriation of the district's operating budget for the fiscal year, the amount approved by the local appropriating authority for the operation of each Horace Mann charter school shall be available for expenditure by the board of trustees of the school for any lawful purpose without further approval by the superintendent or the school committee. A Horace Mann charter school shall not expend or incur obligations in excess of its budget request; provided, however, that a Horace Mann charter school may spend federal and state grants and other funds received independent of the school district not accounted for in the charter school's budget request without prior approval from the superintendent or the school committee.

(x) Upon approval of a Horace Mann charter school by the board, the superintendent where the Horace Mann charter school is to be located shall reassign, to the extent provided by the terms of its charter, any faculty member who wishes to be reassigned to another school located within the district.

(y) Employees of charter schools shall be considered public employees for purposes of tort liability under chapter 258 and for collective bargaining purposes under chapter 150E. The board of trustees shall be considered the public employer for purposes of tort liability under said chapter 258 and for collective bargaining purposes under said chapter 150E; provided, however, that in the case of a Horace Mann charter school, the school committee of the school district in which the Horace Mann charter school is located shall remain the employer for collective

bargaining purposes under said chapter 150E. Teachers employed by a charter school shall be subject to the state teacher retirement system under chapter 32 and service in a charter school shall be creditable service within the meaning thereof.

A charter school shall recognize an employee organization designated by the authorization cards of 50 per cent of its employees in the appropriate bargaining unit as the exclusive representative of all the employees in such unit for the purpose of collective bargaining.

(z) Each local school district shall be required to grant a leave of absence to any teacher in the public schools system requesting such leave to teach in a commonwealth charter school. A teacher may request a leave of absence for up to 2 years.

At the end of the second year, the teacher may either return to his former teaching position or, if he chooses to continue teaching at the commonwealth charter school, resign from his school district position.

(aa) Notwithstanding section 59C, the internal form of governance of a charter school shall be determined by the school's charter.

(bb) A charter school shall comply with all applicable state and federal health and safety laws and regulations.

(cc) The students who reside in the school district in which the charter school is located shall be provided transportation to the charter school by the resident district's school committee on similar terms and conditions as transportation is provided to students attending local district schools if the transportation is requested by the charter school. In providing the transportation, the school committee shall accommodate the particular school day and school year of the charter school; provided, however, that in the event that a school committee limits transportation for district school students, the school district shall not be required to provide transportation to any

commonwealth charter school beyond the limitations. A charter school and the sending district shall meet to plan bus routes and charter school starting and ending times in order to assist the district with cost effective means of transportation. Schools operating under a charter granted after January 1, 1997, and all charter schools operating during fiscal year 1999 and thereafter, shall not receive funds for transportation above the amount actually required by such charter school for the provision of transportation services to eligible students. If the sending district provides an alternative method of transportation for students enrolled in the sending district's public schools, it shall not be assessed for transportation costs which exceed the per pupil cost of said alternative. Costs for transportation shall be included only if transportation is provided for students in the same program and grade level as those in the charter school. Students who do not reside in the district in which the charter school is located shall be eligible for transportation in accordance with section 12B of chapter 76. A regional charter school as designated by the board, and whose charter provides for transportation of all students from charter municipalities shall also be reimbursed by the commonwealth under section 16C of chapter 71 for transportation provided to pupils residing outside the municipality where the charter school is located, but no reimbursement for transportation between the charter school and home shall be made on account of any pupil who resides less than 1.5 miles from the charter school, measured by a commonly traveled route. If a charter school provides its own transportation, the school shall coordinate and collaborate with the sending district to provide cost effective means of transportation. All such transportation shall be determined in advance of the approval of the district's final budget for a fiscal year; provided, however, that a commonwealth charter school shall be required to determine such transportation in the first year of its operation as soon as practicable.

(dd) A charter granted by the board shall be for 5 years. The board shall develop procedures and guidelines for revocation and renewal of a school's charter; provided, however, that a charter for a Horace Mann charter school shall not be renewed by the board without a

majority vote of the school committee and local collective bargaining unit in the district where said charter school is located; provided, however, that a commonwealth charter shall not be renewed unless the board of trustees of the charter school has documented in a manner approved by the board that said commonwealth charter school has provided models for replication and best practices to the commissioner and to other public schools in the district where the charter school is located.

When deciding on charter renewal, the board shall consider progress made in student academic achievement, whether the school has met its obligations and commitments under the charter, the extent to which the school has followed its recruitment and retention plan by using deliberate, specific strategies towards recruiting and retaining the categories of students enumerated in paragraph (3) of subsection (i) and the extent to which the school has enhanced its plan as necessary. The board may impose conditions on the charter school upon renewal if it fails to adhere to and enhance its recruitment and retention plan as required. When deciding on charter renewal, the board shall take into account the annual attrition of students. The board shall also consider innovations that have been successfully implemented by the charter school and the evidence that supports the effectiveness of these practices. Upon renewal of its charter, a school shall update and enhance its recruitment and retention plan as necessary to account for changes in enrollment.

(ee) The board may revoke a school's charter if the school has not fulfilled any conditions imposed by the board in connection with the grant of the charter or the school has violated any provision of its charter. The board may place conditions on a charter or may place a charter school on a probationary status to allow the implementation of a remedial plan after which, if said plan is unsuccessful, the charter may be summarily revoked.

(ff) Commonwealth charter schools shall be funded as follows: the commonwealth shall pay a tuition amount to the charter school, which shall be the sum of the tuition amounts calculated separately for each district sending students to the charter school. Tuition amounts for each sending district shall be calculated by the department using the formula set forth herein, to reflect, as much as practicable, the actual per pupil spending amount that would be expended in the district if the students attended the district schools. The tuition amount shall be calculated separately for each district sending students to a charter school, and for each charter school to which a district sends students. Each district's per pupil tuition amount for each charter school to which it sends students shall include a per pupil foundation budget component, adjusted to reflect the actual net school spending in the sending district.

In calculating the per pupil foundation budget component, the department shall calculate a foundation budget for the students from each sending district attending the charter school in the previous fiscal year, pursuant to the provisions of section 2 of chapter 70; provided, that the department shall not include in said calculation the assumed tuitioned-out special education enrollment, nor any amounts generated by said assumed enrollment, as defined by said section 2. The per pupil foundation budget component shall be the district's foundation budget for the charter school, as so calculated, divided by the number of students attending the charter school from the sending district in the previous fiscal year. The per pupil foundation budget component shall be calculated separately for each charter school to which a district sends students. The foundation budget for a charter school shall be the sum of the foundation budgets for the charter school for each district sending students to the charter school.

In adjusting the per pupil foundation budget component, the department shall calculate for each sending district an above foundation spending percentage, which shall be the percentage by which the district's actual net school spending exceeds the foundation budget for the district, as calculated pursuant to the provisions of chapter 70. The department shall further calculate the

percentage of actual net school spending reported by the sending district associated with tuition costs for tuitioned-out special education students, including education that occurs in educational collaboratives, and with spending on health care costs for retired employees, for any district for which such costs are included in net school spending, and shall reduce the district's above foundation spending percentage proportionately. The per pupil foundation budget component for each charter school to which the sending district sends students shall be increased by said adjusted above foundation spending percentage.

The total tuition amount owed by a sending district to a charter school shall be the per pupil tuition amount as defined above, multiplied by the total number of students attending the charter school from that district in the current fiscal year. The sending district's total charter school tuition amount for purposes of the following paragraphs shall be the sum of the district's tuition amounts for each charter school to which the district sends students, calculated using the provisions of this section. The receiving charter school's total charter school tuition amount shall be the sum of the tuition amounts calculated for the charter school for each district sending students to the charter school.

If a charter school student previously attended a private or parochial school or was home schooled, the commonwealth shall assume the first year cost for that student and shall not reduce the sending district's chapter 70 aid for that student's tuition in that fiscal year.

The state treasurer is hereby authorized and directed to deduct a district's total charter school tuition amount, as calculated herein, from the total state school aid, as defined in section 2 of said chapter 70, of the district in which the student resides prior to the distribution of said aid. In the case of a child residing in a municipality which belongs to a regional school district, the charter school tuition amount shall be deducted from said chapter 70 education aid of the school district appropriate to the grade level of the child. If, in a single district, the total of all such

deductions exceeds the total of said education aid, this excess amount shall be deducted from other aid appropriated to the city or town. If, in a single district, the total of all such deductions exceeds the total state aid appropriated, the commonwealth shall appropriate this excess amount; provided, however, that if said district has exempted itself from the provisions of said chapter 70 by accepting section 14 of said chapter 70, the commonwealth shall assess said district for said excess amount.

The state treasurer is hereby further authorized and directed to disburse to the charter school an amount equal to the charter school's total charter school tuition amount as defined above.

If more than 1 charter school is managed by a single network or board of trustees, funding shall not be transferred among individual schools within the network unless such schools are located in the same school district.

The department shall, subject to appropriation, provide funding to charter schools for a portion of the per pupil capital needs component included in the charter tuition amount and shall reimburse the sending school districts for said costs. In fiscal year 2011 and thereafter, such funding shall not be less than the per pupil amount provided in fiscal year 2010.

(gg) Any district whose total charter school tuition amount is greater than its total charter school tuition amount for the previous year shall be reimbursed by the commonwealth in accordance with this paragraph and subject to appropriation; provided, however, that no funds for said reimbursements shall be deducted from funds distributed pursuant to chapter 70. The reimbursement amount shall be equal to 100 per cent of the increase in the year in which the increase occurs and 25 per cent in the second, third, fourth, fifth and sixth years following.

(hh) If the unencumbered amount of cumulative surplus revenue from tuition held by a charter school at the end of a fiscal year, less (i) the amount of the fourth quarter tuition payment,

(ii) the amount held in reserve for the purchase or renovation of an academic facility pursuant to a capital plan, and (iii) any reserve funds held as security for bank loans, exceeds 20 per cent of its operating budget and its budgeted capital costs for the succeeding fiscal year as is reported in a capital plan to be submitted in the school's most recent annual report, the amount in excess of said 20 per cent shall be returned by the charter school to the sending district or districts and the state in proportion to their share of tuition paid during the fiscal year. At the end of each fiscal year, the commissioner shall certify the amounts described above and the amount, if any, by which it exceeds 20 per cent of the school's operating budget and its budgeted capital costs for the succeeding fiscal year, and shall report such amount to the school committee of the sending district or districts and the applicable board of selectmen or city council by December 1 of each year. A charter school shall annually make any payment required by this subsection no later than December 31.

(ii) No teacher shall be hired by a commonwealth charter school who is not certified pursuant to section 38G unless the teacher has successfully passed the state teacher test as required in said section 38G.

(jj) Each charter school shall submit an annual report, no later than August 1, to the board, the local school committee, each parent or guardian of its enrolled students and each parent or guardian contemplating enrollment in that charter school. The annual report shall be in such form as may be prescribed by the board and shall include, but not be limited to: (i) discussion of progress made toward the achievement of the goals set forth in the charter; and (ii) a financial statement setting forth by appropriate categories the revenue and expenditures for the year just ended and a balance sheet setting forth the charter school's assets, liabilities and fund balances or equities.

The department shall promulgate regulations creating a reporting requirement for a charter school's net asset balance at the end of the fiscal year; provided, however, that said regulations shall require, without limitation, the following: the revenue and expenditures for the year just ended with a specific accounting of the uses of public and private dollars; how the capital needs component of the charter school's tuition was spent; compensation and benefits for teachers, staff, administrators, executives, and board of trustees; the amount of any and all funds transferred to a management company; the sources of any surplus funds, specifically whether they are private or public; how any surplus funds were used in the previous fiscal year; and the planned use of any surplus funds in the upcoming fiscal year on in future fiscal years.

Each charter school shall keep an accurate account of all its activities and all its receipts and expenditures and shall annually cause an independent audit to be made of its accounts. Such audit shall be filed annually on or before January 1 with the department and the state auditor and shall be in a form prescribed by the state auditor. The state auditor may investigate the budget and finances of charter schools and their financial dealings, transactions and relationships, and shall have the power to examine the records of charter schools and to prescribe methods of accounting and the rendering of periodic reports.

(kk) The commissioner shall collect data on the racial, ethnic and socio-economic make-up of the student enrollment of each charter school in the commonwealth. The commissioner shall also collect data on the number of students enrolled in each charter school who have individual education plans pursuant to chapter 71B and those requiring English language learners programs under chapter 71A. The commissioner shall file said data annually with the clerks of the house and senate and the joint committee on education not later than December 1.

(ll) Individuals or groups may complain to a charter school's board of trustees concerning any claimed violations of the provisions of this section by the school. If, after presenting their

complaint to the trustees, the individuals or groups believe their complaint has not been adequately addressed, they may submit their complaint to the board which shall investigate such complaint and make a formal response.

(mm) The board shall promulgate regulations for implementation and enforcement of this section.

[Phase-in of increase to charter net school spending cap]

SECTION 9. For the school districts in which net school spending on charter school tuition does not exceed 18 per cent as set forth in subsection (i) of section 89 of chapter 71, the following shall apply: (1) in fiscal year 2011, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 12 per cent of the district's net school spending; (2) in fiscal year 2012, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 13 per cent of the district's net school spending; (3) in fiscal year 2013, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 14 per cent of the district's net school spending; (4) in fiscal year 2014, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 15 per cent of the district's net school spending; (5) in fiscal year 2015, a public school district's total charter school tuition payment to commonwealth charter schools shall be limited to 16 per cent of the district's net school spending; (6) in fiscal year 2016, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 17 per cent of the district's net school spending; and (7) in fiscal year 2017, a public school district's total charter tuition payment to commonwealth charter schools shall be limited to 18 per cent of the district's net school spending.

[Other provisions relating to charter schools]

SECTION 11. Notwithstanding any general or special law to the contrary, the department of elementary and secondary education shall draft a model policy for school districts regarding the grade placement and eligibility for high school graduation of students leaving a commonwealth charter school and seeking to enroll in a district school. In drafting the model policy, the department shall confer with school districts and commonwealth charter schools. The model

policy shall be made available not later than December 31, 2010. Until a school district adopts a policy regarding the grade placement or eligibility for high school graduation of students leaving a commonwealth charter school, when determining the appropriate grade placement or eligibility for high school graduation of a student leaving a commonwealth charter school and enrolling in a district school, a district shall examine the course of study and level of academic attainment of the student.

SECTION 12. Notwithstanding any general or special law to the contrary, a charter school whose charter was granted before January 1, 2010 shall have a recruitment and retention plan required under subsection (f) of section 89 of chapter 71 of the General Laws in effect for the 2011-2012 school year or at the time of its next charter renewal, whichever occurs first.

SECTION 13. Notwithstanding subsection (gg) of section 89 of chapter 71 of the General Laws, any district that incurred an increase in commonwealth charter tuition costs between July 1, 2008 and June 30, 2010 shall be reimbursed in an amount equal to 100 per cent of the increase in the year in which the increase occurs, 60 per cent of that amount in the first year following and 40 per cent of that amount in the second year following.

SECTION 14. Notwithstanding any special or general law to the contrary, the department of elementary and secondary education shall study the possibility of allowing students living outside of the commonwealth who are eligible to attend public schools operating in the same geographic area as a charter school or a regional charter school to be eligible to attend the charter or regional charter school. The department shall examine the rules and regulations necessary to implement this change which shall include, but not be limited to, collection of out-of-state tuition from students living outside of the commonwealth and attending a commonwealth charter school, collection of tuition from foreign exchange students attending a commonwealth charter school and reimbursement of commonwealth charter schools for services rendered to foreign exchange

students and students living outside of the commonwealth. The department shall issue its report and its recommendations, if any, together with drafts of legislation necessary to carry those recommendations into effect to the joint committee on education not later than August 15, 2010.

MASSACHUSETTS BOARD OF ELEMENTARY AND SECONDARY EDUCATION

REGULATIONS ON UNDERPERFORMING SCHOOLS AND SCHOOL DISTRICTS – AS OF JANUARY 14, 2010

603 CMR 1.00:
Charter Schools

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Most Recently Amended by the Board of Elementary and Secondary Education: December 15, 2009

1.01: Scope, Purpose and Authority

(1) *Purpose*. The purpose of 603 CMR 1.00 is to provide uniform rules and procedures governing the establishment of charter schools.

(2) *Authority*. 603 CMR 1.00 is promulgated under the authority of M.G.L. c. 69, § 1B, c. 71, § 89.

1.02: Definitions

As used in 603 CMR 1.00, unless the context clearly requires otherwise, terms shall have the following meanings:

Administrator. Any individual duly authorized by a charter school's board of trustees to manage the programs and operations of the charter school in accordance with its charter as well as federal and state laws and regulations.

Application Cycle. The period beginning with the availability of application information and extending through the receipt of final charter school applications for review, ending no later than the following February when the

Board of Elementary and Secondary Education makes final decisions on awarding new charters. The various stages of the application cycle occur in accordance with the schedule established by the Department of Elementary and Secondary Education.

Board. The Board of Elementary and Secondary Education or a person duly authorized by the Board.

Board of Trustees. Public agents authorized by the state to supervise and control the charter school. The boards of trustees shall be considered public employers for purposes of tort liability under M.G.L. c. 258. Boards of trustees of Commonwealth charter schools shall be considered public employers for collective bargaining purposes under M.G.L. c. 150E. In the case of Horace Mann charter schools, the school committee shall be considered the public employer for purposes of collective bargaining under M.G.L. c. 150E.

Charter. A license issued by the Board under the provisions of M.G.L. c. 71, § 89, and 603 CMR 1.00, allowing the grantee to operate a charter school for a period of five years.

Charter Applicant. A charter applicant shall include but is not limited to: individuals; groups; not-for-profit corporate entities; two or more certified teachers; or ten or more parents qualified under M.G.L c. 71, § 89, to apply for a charter. An application for a charter school may be filed in conjunction with a college, university, museum, or other similar entity, or any combination thereof.

Charter School. A public school operated under a charter granted by the Board. This term encompasses Commonwealth and Horace Mann charter schools unless otherwise specified. A charter school is managed by a board of trustees and operates independent of any school committee. A Commonwealth charter school is considered a local education agency for all purposes. A Horace Mann charter school is a school or part of a school that operates under a charter approved by the local school committee and the local teachers' union and granted by the Board of Education. To the extent provided by the terms of their charters and a Memorandum of Understanding with the local district and collective bargaining unit, Horace Mann charter schools may be exempt from local collective bargaining agreements, provided that employees of the school will continue:
(a) to be members of the local collective bargaining unit,
(b) to accrue seniority, and
(c) to receive at minimum, the salary and benefits established by the local collective bargaining agreement. Employees will be exempt from all union and school committee work rules to the extent provided by their charter and the Memorandum of Understanding with the local district and collective bargaining unit.

Commissioner. The Commissioner of Elementary and Secondary Education or his designee.

Department. The Department of Elementary and Secondary Education.

Memorandum of Understanding. An agreement between a Horace Mann charter school, the school committee of the district in which the charter school is located, and the collective bargaining unit for the district that, at a minimum, defines any modifications of the relevant collective bargaining agreement(s), services and facilities provided by the district to the charter school, and funding of the charter school by the district.

Regional Charter School. A charter school with a charter designating it as "regional" is required to give preference in enrollment to students residing in a specified region containing more than one district.

Sending District. A Massachusetts city, town, or regional school district in which a charter school student resides and where the student would otherwise attend a public school. If a charter school has a residential component, the sending district is the city, town, or regional school district in which the parent or legal guardian of the charter school student resides or, if no parent or legal guardian can be identified, the school district in which the student last attended school.

1.03: General Provisions

(1) *Administrative Bulletins*. The Board and the Department may, from time to time, issue administrative bulletins to interpret, implement, and provide guidance on 603 CMR 1.00.

(2) *Waivers*. Upon written request from a charter applicant or charter school board of trustees, the Board may waive the applicability of one or more provisions of 603 CMR 1.00, provided that all such requests:
(a) are in writing, signed by the waiver applicant;
(b) specify the provisions of 603 CMR 1.00 to be waived, the duration of the waiver, and the circumstances to which the waiver applies;
(c) include a certification that the waiver applicant has made a good faith effort to comply with said provisions; and
(d) are accompanied by supporting documentation considered sufficient by the Board to support the special circumstances or the need for relief.

Waivers of 603 CMR 1.00 shall be considered only under circumstances the Board deems exceptional and shall be granted only to the extent allowed by law.

(3) *Prohibitions*. Private and parochial schools are not eligible for charter school status. Charter schools may not charge students an application fee or tuition. Charter schools may not charge their students any fee related to the provision of required educational programs. Charter schools may not charge any public school for the use of their curriculum, subject to the restrictions contained in any contract between charter schools and third party providers. For-profit corporations may not apply for a charter.

1.04: Charter Application and Procedures for Granting Charters

(1) *Charter Application Process*. There shall be a two-stage application process leading to the granting of a charter. Applicants shall submit to the Department prospectuses and final applications in accordance with the schedule, application form, and guidelines established by the Department. Following the submission of prospectuses, the Commissioner will invite selected applicants to submit final applications.

(2) *Local Approval of Horace Mann Applications*. Teachers, parents, and others may petition school committees to convert, in whole or in part, a public school in the district to a Horace Mann charter school. A school committee shall notify the Department within ten days of receiving such a petition. The school committee shall send to the Department a written explanation of the action taken by the committee on a petition within 60 days of receiving said petition. Applications for Horace Mann charter schools shall describe in the charter application and a Memorandum of Understanding:
(a) the elements of the local collective bargaining agreement that apply to employees of the school, other than those already mandated by law;
(b) the services and facilities the school district will provide to the school; and
(c) the school's first annual budget allocation from the district, consistent with the allocation for other public schools in the district.
A valid application for a Horace Mann charter school shall have the written approval of the local teachers' union and the school committee.

(3) *Review Process*.
(a) The Department shall review each prospectus and each final application submitted by the required deadlines. Prospectuses and final applications will be reviewed and evaluated according to criteria outlined in 603 CMR 1.05 and in the charter school application itself. In addition, the Department will conduct interviews with all final applicants in order to better assess their qualifications to start a charter school.
(b) Each applicant submitting a prospectus and a final application for a Commonwealth charter school shall also send a copy of the application to the superintendent of the school districts from which the applicant intends to draw students. The Board and the Department shall hold one or more public hearings on final applications and solicit and review comments on the application from the school committees of the school districts from which the applicant intends to draw students. Such hearings shall be held in locations convenient to the affected districts. At least one member of the Board shall attend each public hearing soliciting comment on the merits of pending applications and shall report to the Board on the hearing.
(c) The Board will grant new charters in February. The Board and Department may be assisted in this process by review panels comprised of individuals appointed by the Commissioner. Members of these panels may review applications but the reviewers' role shall be solely advisory.

(4) *Granting of Charters.*
(a) The Board shall grant charters to approved charter applicants under M.G.L. c. 71, § 89, and under such conditions and at such time as the Board specifies under 603 CMR 1.05 (2).
(b) A charter granted by the Board shall be effective for five years, beginning July 1st of the first year the school enrolls students, unless revoked pursuant to M.G.L. c. 71, § 89, and 603 CMR 1.12. If no students are attending a charter school within 19 months from the date the charter was granted, the charter will be null and void.
(c) Should the Board elect to award fewer than the number of charters specified under M.G.L. c. 71, § 89, in any given cycle, the Board may grant those charters not awarded in any subsequent application cycles in addition to the number of charters scheduled to be awarded and notwithstanding any limitations on the number of new charters authorized in such year.
(d) The Board may award any charter revoked or returned to the Board in subsequent application cycles in addition to the number of charters scheduled to be awarded and notwithstanding any limitations on the number of new charters authorized in such year.
(e) The Board will use the most recent United States Census estimate to determine the population of a city or town proposed as the location for a charter school.

1.05: Criteria for Assessment and Approval of Charter Applications, Awarding of Charters

(1) *Criteria for Assessment and Approval of Charter Applications.* The Department will review charter applications to ensure that the applicant has demonstrated ability:
(a) to further the purposes for establishment of charter schools specified in M.G.L. c. 71, § 89.
(b) to conform with M.G.L. c. 71, § 89, and all other applicable laws and regulations, including any guidelines the Board may issue, and including those related to English learners and students with disabilities;
(c) to assure that the charter school will meet its enrollment projections through demonstration of need and support for the proposed charter school in the communities from which students would be likely to enroll;
(d) to demonstrate that the applicant will be able to provide educational models, including programs, curriculum, and teaching methods that can be replicated by other public schools;
(e) to develop a management structure and plan which enables the charter school to achieve the goals and mission set forth in its charter, including the selection, role, and responsibilities of the board of trustees;
(f) to assure that students will meet the same performance standards and assessment requirements set by the Board for students in other public schools;
(g) to develop an accountability plan, at the end of the first year of the

school's charter, establishing specific five-year performance objectives to help measure the school's progress and success in raising student achievement, establishing a viable organization, and fulfilling the terms of its charter;
(h) to administer its educational programs, school operations, and finances effectively;
(i) to establish a process to provide to students, parents, the Board, other interested parties, and the public all information required by law and regulation, as well as to provide other information the Board may request;
(j) to develop an enrollment policy consistent with 603 CMR 1.06;
(k) to ensure the thoroughness and accuracy of the charter school application; and
(l) to demonstrate that the applicant has access to school facilities that are in compliance with municipal building codes and other applicable laws, affordable, and adequate to meet the school's program requirements.

(2) *Conditions for Awarding Charters to Approved Applicants.* Charters shall be awarded subject to the conditions listed in 603 CMR 1.05(2)(a) through (i), and any additional conditions that the Board may specify. The Board may temporarily waive such conditions and award a charter, provided that the applicant submits adequate written assurance that all such conditions will be met prior to the opening of the school. Failure to comply with any specified condition prior to the opening of the school shall constitute grounds for placing a charter school on probation.
(a) the charter applicant shall submit to the Department the names, home addresses, and employment, and educational histories for the proposed members of the board of trustees and a plan for the administration and management of the school, including the organization structure and by-laws;
(b) in such cases where the charter school board of trustees intends to procure substantially all educational services under contract with another person, the board of trustees shall provide for the Board's approval the terms of said contract;
(c) the charter applicant shall submit to the Department a copy of the school's criteria and procedures for expulsion of students;
(d) the charter applicant shall provide the Department with written documentation that a criminal background check has been performed on all employees of the school;
(e) the charter applicant shall provide the Department with a copy of the school's enrollment policy;
(f) the charter applicant shall provide the Department with written documentation that the facilities to be used by the charter school are approved for use as a school by the building inspector in the municipality in which the building is located;
(g) the charter applicant shall provide the Department with written documentation that the facilities occupied by the charter school have been inspected by the Fire Department of the municipality in which the facilities are located;
(h) if explosives or flammable compounds or liquids are used in connection

with courses taught at the school, the charter applicant shall provide the Department with written documentation that approval under M.G.L. c. 148 has been secured from the licensing authority of the municipality in which the building is located; and
(i) the charter applicant shall provide the Department with written documentation that the school is in compliance with all other applicable federal and state health and safety laws and regulations, including evidence of compliance with any required insurance coverage.

(3) *Information for Distribution of Public Funds*. Upon receiving its charter, a charter school shall provide the Department with a federal tax identification number issued solely to the charter school, and banking information regarding a bank account solely in the name of the charter school, as required by the State Treasurer for the transfer of public funds.

1.06: Charter School Enrollment

(1) Eligibility for enrollment may be consistent with the school's grade levels. Charter schools shall not discriminate on the basis of race, color, national origin, creed, sex, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, proficiency in the English language or a foreign language, or prior academic achievement.

(2) Charter schools may not administer tests to potential applicants or predicate enrollment on results from any test of ability or achievement. Requirements for enrollment in a charter school, including but not limited to attendance at informational meetings and interviews, shall not be designed, intended or used to discriminate.

(3) Schools shall give reasonable public notice, of at least one month, of all application deadlines.

(4) In conformance with M.G.L. c. 71, § 89, enrollment in Commonwealth charter schools shall be conducted as follows:
(a) in such cases where there are fewer spaces than eligible applicants who reside in the city or town in which a Commonwealth charter school is located, or who are siblings of students already attending said charter school, the charter school shall hold an enrollment lottery for all such applicants;
(b) if there are more spaces available than eligible applicants from the city or town in which said Commonwealth charter school is located and who are siblings of current students, and there are more eligible applicants from outside of that city or town than spaces available, the charter school shall hold an enrollment lottery;
(c) the Department shall notify each Commonwealth charter school no later than February 15th of any limitation on the number of students from a district that may be enrolled in charter schools for the upcoming school year; and

(d) Charter schools shall place names of students not selected in an enrollment lottery on a waiting list in the order the names were drawn. Students on the waiting list may be enrolled as space becomes available. In cases where the enrollment of a student, who is not a sibling of another previously enrolled student, from the waiting list would exceed the district charter tuition cap, the student should be skipped over but kept on the waiting list. In cases where the enrollment of a student who is a sibling of a student already attending a charter school would exceed the district charter school tuition cap, the sibling may be enrolled with the Commonwealth of Massachusetts providing tuition for said sibling, subject to appropriation.

(5) In conformance with M.G.L. c. 71, § 89, enrollment in a Horace Mann charter school shall be conducted as follows:
(a) priority shall be given first to any students actually enrolled in said school on the date that the final application is filed with the Board and to their siblings. In such cases where there are fewer spaces in a Horace Mann charter school than eligible applicants who were enrolled in said school, the charter school shall hold an enrollment lottery;
(b) if there are more spaces available than eligible applicants from the school, and there are more applicants than spaces available who reside in the district in which the charter school is located and who are currently enrolled in the public schools of the district in which the Horace Mann charter school is located, the charter school shall hold an enrollment lottery for all such applicants; and
(c) if there are more spaces available than eligible applicants from the school or district, and there are more applicants than spaces available who reside in the district in which the Horace Mann charter school is located, the charter school shall hold an enrollment lottery for all such applicants.

(6) If the principal enrollment process fails to produce an adequate number of enrolled students, a school may repeat the process more than once, if necessary, providing such process is fair and open, with reasonable public notice given at least one week prior to the application deadline. As spaces become available during the school year, a school may repeat the enrollment process to fill these openings. No student entering an enrollment process may be admitted ahead of other eligible students who were previously placed on a waiting list during a prior enrollment process, except in cases described in to 603 CMR 1.06 (4) (d). The total number of students attending a charter school in a given school year cannot exceed the total number of students reported to the Department in the previous spring in accordance with 603 C.M.R. 1.09(4).

(7) All lotteries shall be conducted in public, with a disinterested party drawing names, and with reasonable public notice given at least one week prior to the lottery.

(8) A school may integrate its enrollment process with that of the school district, provided that the enrollment application is submitted in conjunction with the

local school district and such district maintains an intra-district school choice enrollment program.

(9) A school shall specify age thresholds and ceilings for kindergarten and/or high school programs, respectively.

1.07: Charter School Staff

Charter school teachers hired after August 10, 2000 must either:

(1) take and pass, within their first year of employment at a charter school, the Massachusetts Tests for Educator Licensure; or

(2) be already certified to teach in Massachusetts.

1.08: Charter School Funding

(1) Horace Mann charter schools shall be funded through the local school district under the terms of the Memorandum of Understanding. A Horace Mann charter school shall submit a budget request annually, in accordance with the budget schedule of the local school district and no later than April 1st, to the superintendent and school committee of the district in which the charter school is located. The school committee shall act on the charter school budget request in conjunction with its approval of the district's overall budget. A Horace Mann charter school's budget allocation shall be consistent with the allocation of other public schools in the district. In the case of budget reductions in the school district, a Horace Mann charter school's budget may not be reduced disproportionately to other schools in the district. The charter school board of trustees may appeal any disproportionate budget allocation to the Commissioner, who shall determine an equitable funding level for the school and shall require the school committee to provide such funding.

(2) Each operating Commonwealth charter school shall receive tuition payments from each school district whose students attend the charter school. Such tuition payments shall be equal to the appropriate charter school tuition rate, as determined in accordance with 603 CMR 1.08 (3), multiplied by the number of students attending the charter school from the sending district in the current year. For students who attend the charter school for less than the full year, the tuition payment shall be reduced based on the number of days of enrollment. Such tuition payments shall be paid in accordance with 603 CMR 1.08 (6).

(3) For each sending district, a separate foundation budget dollar amount and charter school tuition rate shall be calculated as follows for each charter school to which the district sends students.

(a) The foundation budget dollar amount shall be calculated, based on the foundation budget factors used for the distribution of Chapter 70 aid in the current year, provided that the out-of-district special education tuition component of the foundation budget shall be excluded from the calculation.

The student data for this calculation shall be the foundation enrollment information reported by the charter school as of October 1 of the prior school year. The tuition rate shall equal the foundation budget dollar amount divided by the number of students. If no students attended a particular charter school from a particular sending district in the prior year, then the sending district's average foundation budget per pupil will be used as the tuition rate.
(b) Each tuition rate shall be increased by the ratio of the sending district's current year budgeted net school spending, as reported on schedule 19 of the Department's end of year pupil and financial returns, to the sending district's total current year foundation budget. Amounts reported on schedule 19 for out-of-district special education tuition and retired teachers' health insurance shall be excluded from this calculation.
(c) The Department shall annually calculate the statewide average of district expenditures per pupil for the acquisition, construction, and improvement of school buildings, and for the acquisition of land for such buildings, and for debt service thereon, and shall add such capital component to each of the tuition rates calculated above.

(4) Any amounts appropriated under line item 7010-0030 for the purpose of per pupil facilities aid for Commonwealth charter schools shall be used to reimburse sending districts for the capital component of the tuition payments, as calculated in 603 CMR 1.08(3)(c), but shall not affect the payments due to Commonwealth charter schools.

(5) For each sending district, the sum of its tuition payment to each Commonwealth charter school, less any charter school capital facility reimbursement received pursuant to 603 CMR 1.08(4), shall be used as the district's "total charter school tuition payment" for the purposes of G.L. c.71 s.89(i) and shall be used as the district's "total charter school tuition amount" for the purposes of G.L. c.71 s.89(oo).

(6) The State Treasurer shall make quarterly payments to Commonwealth charter schools. In making such payments, the Commonwealth shall reduce each sending district's M.G.L. c. 70 allocation by an amount sufficient to meet its charter school obligations for the quarter. If there are insufficient M.G.L. c. 70 funds to meet a district's obligation, the Commonwealth shall reduce other state aid allocated to the applicable cities and towns. If there are insufficient state aid funds of any kind to meet a district's obligation, the Board shall recommend to the Governor and legislature that a supplemental appropriation be made to pay any remaining obligation to the charter school(s).

(7) The Department shall notify both the Commonwealth charter school and the sending district(s) of the amount of these M.G.L. c. 70 reductions.

(8) The first quarterly payment to Commonwealth charter schools shall be based on each charter school's pre-enrollment report, filed with the Department pursuant to 603 CMR 1.09(4). The remaining three quarterly payments of each fiscal year shall be based on updated enrollment reports, submitted to the

Department by each charter school. Although each quarterly payment is intended to equal approximately one quarter of the projected annual amount, payments in the later quarters of each fiscal year shall include adjustments to correct any over- or under-payments in earlier quarters.

(9) In its first year of operation, a Commonwealth charter school may be paid its first quarterly payment within 45 days after the start of the Commonwealth's fiscal year. The remaining three payments shall occur at the end of the Commonwealth's second, third, and fourth fiscal quarters. After its first year of operation, a Commonwealth charter school shall receive all of its quarterly payments, including its first quarter payment, at the end of the Commonwealth's fiscal quarters. The timing of all payments to charter schools is subject to the timely enactment of the Commonwealth's annual budget.

(10) In order to facilitate the acquisition of cash-flow financing, the Commissioner may, at his discretion, provide a good faith estimate of the tuition payments expected to be made to a Commonwealth charter school during the current fiscal year, provided that such estimate shall not represent a commitment or obligation of the Commonwealth.

(11) *Transportation*. School districts shall provide transportation to charter School students on the same basis as it is provided to students attending public schools operated by the district. In providing such transportation, districts shall accommodate the particular school year and school day of the charter school, in accordance with M.G.L. c. 71, § 89. If a district and a charter school cannot reach agreement about the service to be provided, and if the charter school finds an alternative that costs the same as or less than the average cost of transportation per student in the district, the charter school may provide its own transportation services to students eligible for transportation. In such cases, the costs for such services will be deducted from a district's M.G.L. c. 70 account on a quarterly basis as described in 603 CMR 1.08(6), based on estimated and actual expenditures for transportation.

1.09: Ongoing Review of Charter Schools

(1) *Annual Report*. A charter school shall submit to the Board and the local school committee and make available to every parent or guardian of its enrolled students and to every parent or guardian who expresses interest in enrolling in that charter school, an annual report. The annual report shall be issued no later than August 1st of each year for the preceding school year. The annual report shall include the following information:
(a) a financial statement setting forth by appropriate categories the revenue and expenditures for the year just ended, and a balance sheet setting forth the charter school's assets, liabilities, and fund balances or equities;
(b) projections of income and expenses for the upcoming school year;
(c) discussion of progress made toward achievement of the goals of the charter and accountability plan;
(d) evidence that the charter school is developing or has provided models for replication and best practices in education; and
(e) such other information as the Board may require in guidelines.

(2) *Site Visits*. The Department may send evaluation teams to visit each charter school on an annual basis to corroborate and augment the information provided in the annual report in accordance with guidelines issued by the Department. Site visit teams may also gather any other evidence relevant to the school's performance. The written reports from these site visits shall become part of the charter school's record, along with any written addendum that the school wishes to submit in response to a report.

(3) *Financial Audits*. In accordance with M.G.L. c. 71, § 89, each charter school shall have an independent audit conducted of its accounts, consistent with generally accepted auditing principles, and consistent with any guidelines the Department may issue. Audits shall be filed annually on or before January 1st with the Department and the State Auditor.

(4) *Enrollment Reports*. Each charter school shall conclude its principal enrollment process no later than March 15th of each year, and shall file a pre-enrollment report annually with the Department in accordance with deadlines established by the Department. The Department will report to districts the aggregate number of students who are anticipated to attend charter schools during the upcoming school year from their districts and the total enrollment for each charter school. No charter school shall receive tuition payments that exceed the total enrollment for that charter school as it was reported to the Department.

In their pre-enrollment reports, charter schools must notify the Department of:
(a) the school's total enrollment for the subsequent academic year;
(b) the projected number of students, by grade, to be enrolled in the charter school from each sending district for the subsequent academic year, and
(c) the number of students, by grade, from each sending district on the waiting list, who, as a result, may be enrolled in the charter school in the subsequent academic year.

Each charter school shall also submit reports no later than October 15th and March 1st of actual enrollment as of October 1st and February 15th, respectively. The report shall be filed on a form provided by the Board.

(5) *Additional Reports*. The charter school shall be responsible for filing any data reports or school returns as required under public school law and regulations, in accordance with guidelines published by the Department ensuring that charter schools are not asked for the same data more than once.

(6) As required by the Department, the charter school shall submit written documentation that the school remains in compliance with all building, health, safety, and insurance requirements established as conditions for charter granting in 603 CMR 1.05 (2) and that all related inspections and approvals are

current.

(7) *Notification of New Circumstances*. The charter school shall notify the Department in writing immediately of any change in circumstances that may have a significant impact on a charter school's ability to fulfill its goals or mission as stated in its charter. Within 30 days after receiving such notice, the Commissioner shall determine whether any remedial action is required, and shall recommend such action to the Board. Such actions may include suspension or revocation of the charter or placing the charter school on probation under 603 CMR 1.12.

(8) *Additional Information*. At the discretion of the Board, charter schools may be required to submit additional information other than that specifically required by 603 CMR 1.00.

(9) *Signatory Authorization*. Any information supplied to the Board, the Commissioner, or the Department by the charter school under 603 CMR 1.00 shall be signed by an individual given signatory authorization by the charter school board of trustees. All such information is submitted under penalty of perjury.

1.10: Complaint Procedure

(1) A parent, guardian or other individuals or groups who believe that a charter school has violated or is violating any provision of M.G.L. c. 71, § 89, or 603 CMR 1.00 may file a complaint with the charter school's board of trustees.

(2) The board of trustees shall respond no later than 30 days from receipt of the complaint in writing to the complaining party.

(3) The board of trustees shall, pursuant to a complaint received under 603 CMR 1.10, or on its own initiative, conduct reviews to ensure compliance with M.G.L. c. 71, § 89, and 603 CMR 1.00. The charter school and the specific individuals involved shall cooperate to the fullest extent with such review.

(4) A complaining party who believes the complaint has not been adequately addressed by the charter school board of trustees may submit the complaint in writing to the Commissioner, who shall investigate such complaint and make a written response.

(5) In the event the charter school is found in non-compliance with M.G.L. c. 71, § 89, or 603 CMR 1.00, as a result of a complaint or upon investigation, the Commissioner or Board may take such action as it deems appropriate, including but not limited to suspension or revocation of the charter under 603 CMR 1.13, or referral of the matter to the District Attorney or the Office of the Attorney General for appropriate legal action.

(6) A parent, guardian or other individuals or groups who believe that a charter school has violated or is violating any state or federal law or regulation

regarding special education may file a complaint directly with the Department.

1.11: Amendments to Charters

(1) If a charter school plans to make a major change in its operations, the school's board of trustees shall submit in writing to the Board a request to amend its charter. Major changes are defined as those that fundamentally affect a school's mission, organizational structure, or educational program. Such changes include, but are not limited to:
(a) Educational philosophy or mission;
(b) Governance or leadership structure;
(c) Contractual relationships with an education management organization providing or planning to provide substantially all the school's educational services;
(d) Curriculum models or whole-school designs that are inconsistent with those specified in the school's charter;
(e) Location of facilities, if such change involves relocating or expanding to another municipality;
(f) Districts specified in the school's charter;
(g) Maximum enrollment; or
(h) Grades served.

(2) If a charter school plans to make a minor change in its operations, the school's board of trustees shall submit in writing to the Commissioner a request to amend its charter. Minor changes are defined as changes that do not fundamentally alter a school's organizational structure or educational program. Such changes include, but are not limited to:
(a) Bylaws;
(b) Schedule (length of school year, school week, or school day);
(c) Enrollment process;
(d) Expulsion policy;
(e) Corrections and clarifications involving the mission statement or other sections of the charter;
(f) School name; or
(g) (g) Membership of the board of trustees (as specified under 603 CMR 1.05(2)(a)); or
(h) Memorandum of Understanding (for Horace Mann charter schools).

(3) The Commissioner and the Board may consider a charter school's compliance with applicable state, federal, and local law and the evidence the school has provided regarding the three areas set forth in 603 CMR 1.12(3) in reaching a determination regarding a school's request to amend its charter.

(4) The Board or the Commissioner shall endeavor to approve or deny amendment requests within 60 days after receiving complete requests. An amendment request for a change to a Horace Mann charter school's operations requires the approval of the local teachers' union and the local school

committee.

(5) If a Commonwealth charter school seeks an amendment to change its maximum enrollment (including grades served), the municipality of its location, or the districts specified in its region; the Department will provide a copy of the request to the superintendents of the affected districts and provide them notice of their right to submit written comment to the Commissioner within 15 days.

(6) Should the Commissioner deny an amendment request, the charter school's board of trustees may seek review of the Commissioner's decision by the Board.

1.12: Renewal of Charters

A charter school seeking renewal of its charter shall proceed as follows:

(1) The charter school shall submit its application for renewal of a charter under 603 CMR 1.00 no earlier than March 1st of the third school year and no later than August 1st after the end of fourth school year. The Board will review renewal applications pursuant to the criteria set forth in 603 CMR 1.05 and M.G.L. c.71, § 89. For renewal applications received on or before August 1st, the Board shall notify the charter applicant of the decision to renew or not to renew the charter and the reasons therefore no later than March 1st following receipt of the renewal application. In the event the renewal is denied, the charter school shall have all rights of review as provided in M.G.L. c. 30A and 801 CMR 1.00.

(2) The charter school may apply for renewal of its charter under renewal application guidelines established by the Board. Applications for the renewal of Horace Mann charters must be submitted with the approval of the local teachers' union and the local school committee.

(3) The Department shall issue guidelines describing the evaluation process to be followed in reviewing applications for charter renewal, including protocols for renewal inspections. The decision by the Board to renew a charter shall be based upon the presentation of affirmative evidence regarding the success of the school's academic program; the viability of the school as an organization; and the faithfulness of the school to the terms of its charter. The Department will gather evidence regarding these issues from the renewal application and from other information, including but not limited to, a school's annual reports, financial audits, test results, site visit reports, and renewal inspection. All charter schools will be evaluated on the same performance criteria as provided in the guidelines, provided, however, that the criteria will take into account each school's charter and accountability plan.

(4) Charters that are renewed shall be for five years from the expiration of the previous charter under such conditions as the Board may establish under 603 CMR 1.05 (2). Charters of schools that do not file renewal applications shall expire at the end of the fifth year of the charter school's operation, subject to 603 CMR 1.13.

1.13: Charter Revocation, Probation, Suspension, and Non-Renewal

(1) The Board may suspend or revoke (hereinafter, "revoke") a charter for cause, including but not limited to:
(a) a material misrepresentation in the application for approval of the charter;
(b) failure to comply substantially with the terms of the charter, with any of the applicable provisions of M.G.L. c.71, or with any other applicable law or regulation;
(c) financial insolvency;
(d) misappropriation, conversion, mismanagement, or illegal withholding of funds or refusal to pay any funds that belong to any person otherwise entitled thereto and that have been entrusted to the charter school or its administrators in their fiduciary capacities;
(e) fraud or gross mismanagement on the part of charter school administrators or board of trustees;
(f) criminal convictions on the part of the charter school or its board of trustees; or
(g) failure to fulfill any conditions imposed by the Board in connection with the grant of a charter.

(2) Before the Board revokes a charter, it shall notify the charter school in writing that the Board intends to revoke the charter. In the case of a Horace Mann charter, the Board shall also notify the district in which the school is located. Except in an emergency, the Board shall send the notice 60 days before the revocation takes effect.

(3) Upon receiving a notice of intent to revoke a charter, or notice of an emergency revocation where the health, safety or education of the school's students is at immediate risk, the school shall have all rights of review as provided in M.G.L. c. 30A, § 13, and 801 CMR 1.00. All requests for hearings, where hearings are provided by said statutes, shall be in writing, addressed to the Board, and must be received within 15 days of receipt by the charter school of the notice of intent to revoke a charter.

(4) The Board may place a charter school on probation, rather than revoke its charter, in order to allow for the implementation of a remedial plan approved by the Board. If after 60 days, or such longer period as the Board may specify, said plan is unsuccessful in remedying the problem or alleviating the causes of the probation, the Board may summarily revoke the charter.

(5) The Department may also impose certain conditions on a school's charter for violations of law or failure to comply with the terms of the school's charter.

(6) The Board may withhold payments to any charter school placed on probation or whose charter has been suspended, revoked, or not renewed or that has failed to comply with conditions imposed by law or under 603 CMR

1.13(5).

(7) Charter schools must comply with the closing procedures established by the Department.

(8) Upon the revocation, non-renewal, or voluntary return of a Commonwealth charter, title to all of the property of the charter school shall immediately vest in the Commonwealth, subject to the rights of any secured party holding a perfected security interest in the property of such charter school. Any funds remaining after the satisfaction of the charter school's obligations shall be deposited in the General Fund. 603 CMR 1.13(6) shall not apply to the extent the charter school or any other interested party demonstrates that charter school property was purchased solely by, or solely with funds paid to the school by, persons or entities other than the Commonwealth, in which case ownership of the property shall be transferred to such persons or entities, unless otherwise voted by the board of trustees.

(9) Upon the revocation, non-renewal, or voluntary return of a Horace Mann charter, title to all of the property of the charter school shall immediately vest in the school district in which the school is located, subject to the rights of any secured party holding a perfected security interest in the property of such charter school. This regulation shall not apply to the extent the charter school or any other interested party demonstrates that charter school property was purchased solely by, or solely with funds paid to the school by, persons or entities other than the district or Commonwealth, in which case ownership of the property shall be transferred to such persons or entities, unless otherwise voted by the board of trustees.

1.14: Severability Clause

If any section or portion of a section of 603 CMR 1.00, or the applicability of 603 CMR 1.00 to any person, entity or circumstance is held invalid by a court, the remainder of 603 CMR 1.00 or the applicability of such provisions to other persons, entities or circumstances shall not be affected thereby.

Regulatory Authority:
603 CMR 1.00: M.G.L. c. 69, § 1B; c. 71, § 89.

last updated: December 29, 2009

Appendix F3: State Legislation Regarding Innovation Schools

AN ACT RELATIVE TO THE ACHIEVEMENT GAP

SENATE NO. 2247

PASSED BY THE MASSACHUSETTS LEGISLATURE (GREAT AND GENERAL COURT), JANUARY 14, 2010

EXCERPT RELATING TO INNOVATION SCHOOLS

SECTION 8. Said chapter 71 is hereby further amended by adding the following section:-

Section 92. (a) An Innovation School shall be a public school, operating within a public school district, that is established for the purpose of improving school performance and student achievement through increased autonomy and flexibility. An Innovation School may be established as a new public school or as a conversion of an existing public school. A student who is enrolled in a school at the time it is established as an Innovation School shall retain the ability to remain enrolled in the school if the student chooses to do so.

(b) An Innovation School may establish an advisory board of trustees. An Innovation School shall have increased autonomy and flexibility in 1 or more of the following areas: (i) curriculum; (ii) budget; (iii) school schedule and calendar; (iv) staffing policies and procedures, including waivers from or modifications to, contracts or collective bargaining agreements; (v) school district policies and procedures; and (vi) professional development. An Innovation School shall receive each school year from the school committee the same per pupil allocation as any other district school receives. An Innovation School may retain any unused funds and use the funds in subsequent school years. An Innovation School may establish a non-profit organization that may, among other things, assist the school with fundraising. A district shall not reduce its funding to an Innovation School as a result of the school's fundraising activities.

(c) An Innovation School established under this section shall be authorized by the local school committee and shall operate according to an innovation plan, which shall articulate the areas of autonomy and flexibility under subsection (b). To the extent practicable, the innovation plan shall be based on student outcome data, including, but not limited to: (i) student achievement on the Massachusetts Comprehensive Assessment System; (ii) other measures of student achievement, approved by the commissioner, as appropriate; (iii) student promotion, graduation rates and dropout rates; (iv) achievement data for different subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; and (v) student attendance, dismissal rates and exclusion rates.

An Innovation School shall operate in accordance with the law regulating other public schools, except as the law conflicts with this section or any innovation plans created thereunder.

(d) An Innovation School is a school in which: (i) faculty and leadership are primarily responsible for developing the innovation plan under which the school operates and leadership is responsible for meeting the terms of the innovation plan; or (ii) an external partner is primarily responsible for developing the innovation plan under which the school operates and the external partner is responsible for meeting the terms of the innovation plan.

(e) Nothing in this section shall be construed to prohibit: (i) the establishment of an Innovation School as an academy within an existing public school; (ii) the establishment of an Innovation School serving students from 2 or more school districts; provided, however, that all of the provisions of this section are met by each school district; (iii) the simultaneous establishment of 2 or more Innovation Schools as an Innovation Schools Zone within a school district; or (iv) the establishment of an Innovation School as a virtual public school that provides instruction to

students through distance learning, including online learning programs and courses, subject to regulations adopted by the board of elementary and secondary education.

(f) The following shall be eligible applicants for the purposes of establishing an Innovation School: (i) parents; (ii) teachers; (iii) parent-teacher organizations; (iv) principals; (v) superintendents; (vi) school committees; (vii) teacher unions; (viii) colleges and universities; (ix) non-profit community-based organizations; (x) non-profit business or corporate entities; (xi) non-profit charter school operators; (xii) non-profit education management organizations; (xii) educational collaboratives; (xiv) consortia of these groups; and (xv) non-profit entities authorized by the commissioner. Private and parochial schools shall not be eligible to operate an Innovation School.

(g) The local school committee, local teacher's union and superintendent of the district shall follow a process, consistent with this subsection and subsections (h) to (o), inclusive, for which an existing district school may be converted to an Innovation School or by which a new Innovation School may be established within the district. This process shall require that an eligible applicant proposing to establish an Innovation School prepare a prospectus regarding the proposed school. The prospectus shall include, but not be limited to, a description of: (i) whether the school will be a new school or a conversion of an existing school; (ii) if the school is a new school, the proposed location of the school; (iii) if the school is a conversion of an existing school, the school that is being proposed for conversion; (iv) the external partners, if any, that will be involved in the school; (v) the number of students the school is anticipated to serve and the number of staff expected to be employed at the school; (vi) the overall vision for the school, including improving school performance and student achievement; (vii) specific needs or challenges the school shall be designed to address; (viii) a preliminary assessment of the autonomy and flexibility under subsection (b) that the school will seek; (ix) why such flexibility is desirable to carry out the objectives of the school; (x) anticipated components of the school's

innovation plan; (xi) a preliminary description of the process that shall be used to involve appropriate stakeholders in the development of the innovation plan; and (xii) a proposed timetable for development and establishment of the proposed school.

(h) Upon completion of the prospectus under subsection (g), an eligible applicant shall submit the prospectus to the superintendent, who shall within 30 days convene a screening committee consisting of the superintendent or a designee, a school committee member or a designee selected by the school committee and a representative from the leadership of the local teacher's union.

The screening committee shall review the prospectus for the purpose of determining whether the prospectus: (i) presents a sound and coherent plan for improving school performance and student achievement; (ii) supports or enhances existing educational efforts in the district; and (iii) reasonably can be expanded into a comprehensive innovation plan. In the case of a new school, the committee will prepare an impact statement describing how the new school will affect the children and faculty in the district. Within 30 days of receiving a prospectus, the screening committee shall decide, on the basis of a two-thirds vote, to accept or reject the prospectus, or return the prospectus to the eligible applicant for revisions. If a prospectus is rejected or returned, the screening committee shall submit a detailed explanation for the decision to the applicant. A prospectus that is rejected or returned may be revised and resubmitted for subsequent consideration.

(i) Upon the acceptance of a prospectus by the screening committee under subsection (h), the applicant shall form an innovation plan committee of not more than 11 individuals within 30 days. The purpose of the innovation plan committee shall be to: (i) develop the innovation plan described in subsection (c); (ii) assure that appropriate stakeholders are represented in the development of the proposed Innovation School; and (iii) provide meaningful opportunities for

the stakeholders to contribute to the development of such school. The size and composition of the innovation plan committee shall be determined by the applicant; provided, however, that the committee shall include: (i) the applicant; (ii) the superintendent or a designee; (iii) a school committee member or a designee; (iv) a parent who has 1 or more children enrolled in the school, or in the case of a new school, from the district; (v) a principal employed by the district; and (vi) 2 teachers employed by the district. The applicant shall select the parent from among nominees submitted by parent-teacher organizations in the district. If the district does not contain a parent-teacher organization or if the organization does not submit nominees, the applicant shall select the parent from among volunteers in the area or community the proposed school is expected to serve. The applicant shall select the principal and 1 teacher from among volunteers in the district and 1 teacher from among nominees submitted by the local teacher's union.

(j) Upon the formation of the innovation plan committee in subsection (i), the committee shall develop the innovation plan for the proposed Innovation School. The purpose of the innovation plan shall be to comprehensively articulate the areas of autonomy and flexibility under subsection (b) that the proposed school will use. The innovation plan shall include, but not be limited to: (i) a curriculum plan, which shall include a detailed description of the curriculum and related programs for the proposed school and how the curriculum is expected to improve school performance and student achievement; (ii) a budget plan, which shall include a detailed description of how funds shall be used differently in the proposed school to support school performance and student achievement; (iii) a school schedule plan, which shall include a detailed description of the ways, if any, the program or calendar of the proposed school will be enhanced or expanded; (iv) a staffing plan, which shall include a detailed description of how the school principal, administrators, faculty and staff will be recruited, employed, evaluated and compensated in the proposed school and any proposed waivers or modifications of collective bargaining agreements; (v) a policy and procedures plan, which shall include a detailed

description of the unique operational policies and procedures to be used by the proposed school and how the procedures shall support school performance and student achievement; and (vi) a professional development plan, which shall include a detailed description of how the school may provide high-quality professional development to its administrators, teachers and staff.

In order to assess the proposed school across multiple measures of school performance and student success, the innovation plan shall include measurable annual goals including, but not limited to, the following: (i) student attendance; (ii) student safety and discipline; (iii) student promotion and graduation and dropout rates; (iv) student achievement on the Massachusetts Comprehensive Assessment System; (v) progress in areas of academic underperformance; and (vi) progress among subgroups of students, including low-income students as defined by chapter 70, limited English-proficient students and students receiving special education; (7) reduction of achievement gaps among different groups of students.

A majority vote of the innovation plan committee shall be required for approval of the innovation plan.

(k) The provisions of the collective bargaining agreements applicable to the administrators, teachers and staff in the school shall be considered to be in operation at an Innovation School, except to the extent the provisions are waived or modified under the innovation plan and such waivers or modifications are approved under subsections (l) and (m).

(l) In the case of a school conversion, upon completion of the innovation plan in subsection (j), , the applicant shall submit the innovation plan to teachers in the school that is proposed for conversion for approval by secret ballot within 30 days. A two-thirds vote of the teachers shall be required to approve the plan. Upon approval of an innovation plan by the applicable union members the plan shall, within 7 days, be submitted to the schoolcommittee. If

a two-thirds vote is not achieved, the innovation plan committee may revise the innovation plan as necessary and submit the revised plan to the teachers for a subsequent vote.

In the case of a new school, upon the completion of the innovation plan in subsection (j), the applicant, a local union and the superintendent shall negotiate waivers or modifications to the applicable collective bargaining agreement necessary for the school to implement the innovation plan. Upon the conclusion of the negotiations, the innovation plan shall be submitted immediately to the school committee. If the negotiations have not resulted in an agreement within 40 days, either party may petition the division of labor relations for the selection of an arbitrator. The division shall select an arbitrator within 3 days of the petition from a list submitted by the parties. The arbitrator shall conduct a hearing within 14 days of the arbitrator's selection. The arbitrator shall consider the parties' positions and the needs of the students in the district. The arbitrator's decision shall be consistent with the contents of the innovation plan developed by the applicant. The arbitrator shall, within 14 days of the close of the hearing, submit a decision which shall be final and binding on the parties.

(m) Upon receipt of an innovation plan regarding an Innovation School, a school committee shall hold at least 1 public hearing on the innovation plan. After the public hearing, but not later than 60 days after the receipt of the innovation plan, the school committee shall, on the basis of the quality of the plan and in consideration of comments submitted by the public, undertake a final vote to authorize the Innovation School for a period of not more than 5 years, subject to subsection (n). Approval of the majority of the school committee as fully constituted shall be required to authorize an Innovation School. If the approval is not obtained, an innovation plan committee may revise the innovation plan and: (i) in the case of a new school, submit the revised plan to the school committee for a subsequent vote; or (ii) in the case of a conversion, submit the revised plan to the teachers in the school that is proposed for conversion for a vote, pursuant to subsection (l); provided, however, that the plan meets the requirements for approval

under subsection (l), submit the revised plan to the school committee for a subsequent vote. A school committee shall vote on a revised plan submitted pursuant to this subsection within 60 days of the receipt of such plan and contract.

(n) All Innovation Schools authorized under subsection (m) shall be evaluated by the superintendent at least annually. The superintendent shall transmit the evaluation to the school committee and the commissioner of elementary and secondary education. The purpose of the evaluation shall be to determine whether the school has met the annual goals in its innovation plan and assess the implementation of the innovation plan at the school. If the school committee determines, on the advice of the superintendent, that the school has not met 1 or more goals in the innovation plan and that the failure to meet the goals may be corrected through reasonable modification of the plan, the school committee may amend the innovation plan as necessary. After the superintendent assesses the implementation of the innovation plan at the school, the school committee may, on the advice of the superintendent, amend the plan if the school committee determines that the amendment is necessary in view of subsequent changes in the district that affect 1 or more components of the plan, including, but not limited to, changes to contracts, collective bargaining agreements or school district policies; provided, however, that an amendment involving a subsequent change to a teacher contract shall first be approved by teachers at the school under the procedures in subsection (l).

If the school committee determines, on the advice of the superintendent, that the school has substantially failed to meet multiple goals in the innovation plan, the school committee may: (i) limit 1 or more components of the innovation plan; (ii) suspend 1 or more components of the innovation plan; or (iii) terminate the authorization of the school; provided, however, that the limitation or suspension shall not take place before the completion of the second full year of the operation of the school and the termination shall not take place before the completion of the third full year of the operation of the school.

(o) At the end of the period of authorization of an Innovation School approved under subsection (m), the leadership of the school may petition the school committee to extend the authorization of the school for an additional period of not more than 5 years. Before submitting the petition, the leadership of the school shall convene a selection of school stakeholders, including, but not limited to, administrators, teachers, other school staff, parents and external partners, as applicable, to discuss whether the innovation plan at the school requires revision and to solicit recommendations as to the potential revisions. After considering the recommendations of the stakeholder group, the leadership of the school and the applicable superintendent shall jointly update the innovation plan as necessary; provided, however, that a proposal regarding a new waiver or exemption from the local teacher's union contract shall be approved by teachers at the school, under subsection (l). Approval of the majority of the school committee as fully constituted shall be required to extend the period of authorization of an Innovation School. If the approval is not obtained, the leadership of the school and superintendent may jointly revise the innovation plan and submit the revised plan to the school committee for a subsequent vote. If the school committee does not extend the authorization of the school, the leadership of the school may seek the authorization from the board of elementary and secondary education. The board shall vote on the requested extension within 60 days of its receipt for approval of such extension.

(p) The commissioner of elementary and secondary education shall, to the extent practicable, be responsible for the following: (i) the provision of planning and implementation grants to eligible applicants to establish Innovation Schools; (ii) provision of technical assistance and support to eligible applicants; (iii) the collection and publication of data and research related to the Innovation Schools initiative; (iv) the collection and publication of data and research related to successful programs serving limited English-proficient students attending Innovation Schools; and (v) the collection and dissemination of best practices in Innovation Schools that may be adopted by other public schools. The board of elementary and secondary education shall

promulgate regulations necessary to carry out this section. Annually, the commissioner shall report to the joint committee on education, the house and senate committees on ways and means, the speaker of the house of representatives and the senate president on the implementation and fiscal impact of this section.

OTHER LAWS REFERENCED IN SECTION F:

STATE FUNDING FOR EDUCATIONAL INNOVATION AND IMPROVEMENT

Section 137 of Chapter 27 of the Acts of 2009 – Authorizing the Massachusetts School Building Authority to oversee ARRA Qualified School Construction Bonds

SECTION 137. Notwithstanding any general or special law to the contrary, the commonwealth hereby designates the Massachusetts School Building Authority, established in section 1A of chapter 70B of the General Laws, to allocate to governmental issuers of bonds within the commonwealth, pursuant to section 54F(d)(1) of the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, including to said authority, the limitation amount allocated to the commonwealth by the United States Department of the Treasury, but not including the amount allocated to large local educational agencies pursuant to section 54F(d)(2) of said act except to the extent that any such large local educational agency reallocates amounts to the commonwealth pursuant to said section 54F(d)(2), in which case such reallocated amounts shall also be allocated by said authority. Notwithstanding section 89 of chapter 71 of the General Laws, or any other general or special law to the contrary, the Massachusetts School Building Authority may, in its discretion, distribute to charter schools proceeds from bonds authorized under section 54F(d)(1) of the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, or make a portion of the allocation available to other issuers on behalf of charter schools.

Chapter 27 of the Acts of 2009 – Expanded Learning Time (7061-9412)

7061-9412 For grants to cities, towns, and regional school districts for the purpose of planning for and implementing expanded learning time in the form of longer school days or school years at selected schools; provided, that implementation grants shall only be provided under this item to schools and districts which submitted qualifying applications which were approved by the department in fiscal year 2009 and which include a minimum of an additional 300 hours on a mandatory basis for all children attending that school; provided further, that in approving expanded learning time implementation grant applications, preference shall be given to districts with high poverty rates or a high percentage of students scoring in levels I or II on the Massachusetts comprehensive assessment system, those districts with proposals that have the greatest potential for district-wide impact, those districts that plan to utilize partnerships with community-based organizations and institutions of higher education, and those districts with proposals that include a comprehensive restructuring of the entire school day and/or year to maximize the use of the additional learning time; provided further, that the department shall approve implementation proposals that include an appropriate mix of additional time spent on core academics, additional time spent on enrichment opportunities such as

small group tutoring, homework help, music, arts, sports, physical activity, health and wellness programs, project-based experiential learning and additional time for teacher preparation and/or professional development; provided further, that the department shall only approve implementation proposals that assume not more than $1,300 per pupil per year in future state appropriations of expanded learning time implementation funds; provided further, that in extraordinary cases the department may exceed the $1,300 per pupil per year limit; provided further, that the department shall review all qualified proposals and award approved grants not later than August 14, 2009; provided further, that in carrying out the provisions of this item, funds may be expended by the department to evaluate the impact and effectiveness of the program; provided further, that the department shall issue an annual report, not later than February 2, 2010, on the implementation of plans in all participating districts; provided further, that said report shall include, but not be limited to the names of schools and school districts participating, the number of students attending these schools and the nature and type of changes made in participating schools as a result of this program; provided further, that the report shall also include an anticipated budget for this program for the next fiscal year and a breakdown of the distribution of the $1,300 per student by school; provided further, that said report shall be provided to the secretary of administration and finance, the senate president, the speaker of the house, the chairs of the house and senate committees on ways and means and the house and senate chairs of the joint committee on education; provided further, that for this item, appropriated funds may be expended through August 31, 2010, to allow for planning and implementation during the summer months; provided further, that any grant funds distributed from this item to a city, town, or regional school district shall be deposited with the treasurer of such city, town, or regional school district and held in a separate account and shall be expended by the school committee of such city, town or regional school district without further appropriation, notwithstanding any general or special law to the contrary; and provided further, that no funds shall be expended for personnel costs at the department of elementary and secondary education $15,672,375

Chapter 27 of the Acts of 2009 – After School and Out-of-School Time Grant

7061-9611 For grants or subsidies for after-school and out-of-school programs; provided, that preference shall be given to after-school proposals developed collaboratively by public and non-public schools and private community based programs; provided further, that the department shall fund only those applications which contain accountability systems and measurable outcomes, under guidelines to be determined by the department in consultation with the department of early education and care; provided further, that applicants shall detail funds received from all public sources for existing after-school and out-of-school programs and the types of programs and type of students served by said funds; provided further, that funds may be directed to increase comprehensive after-school and out-of-school time programming to school age children and youth during the school year and the summer, including but not limited to 21st century community learning centers programs; provided further, that funds from this item

may be used for a variety of activities, including but not limited to: (1) academic tutoring and homework centers where content is linked to and based on the curriculum guidelines promulgated by said department, (2) programs which improve the health of students, including physical activities, athletics, nutrition and health education, and exercise, (3) art, theater, and music programs developed in collaboration with the Massachusetts cultural council, local cultural councils, or cultural organizations in the Commonwealth funded by the Massachusetts cultural council, (4) enrichment activities not otherwise provided during the school day, (5) advanced study for the gifted and talented, and (6) community service programs; provided further, that funds shall be expended for services that actively include children with disabilities in after-school programs that also serve non-disabled children and services that include children where English is a second language, including but not limited to: increased per-child reimbursement rates, additional staff, technical assistance, training, and transportation; provided further, that the department of elementary and secondary education shall consult the executive office of health and human services and the department of early education and care to maximize the provision of wrap-around services and to coordinate programs and services for children and youth during after-school and out-of-school time programs; provided further, that the department shall select grant recipients not later than September 30, 2009, and shall report on the preliminary results of said grants not later than February 15, 2010, to the secretary of administration and finance, the house and senate chairs of the joint committee on education, and the chairs of the house and senate committees on ways and means; provided further, that for the purpose of this item, appropriated funds may be expended through August 31, 2010, to allow for implementation of said programs during the summer months; and provided further, funds shall be expended to convene regional networks, to work with the department of elementary and secondary education and the department of early education and care to support the implementation of school-community partnerships and to submit a report by October 15, 2009, to the general court and the administration making recommendations on how to enhance school-community partnerships and positive outcomes for children and youth through funding as provided in this item $2,000,000

Chapter 27 of the Acts of 2009 – MCAS Remediation

7061-9404 For grants to cities, towns and regional school districts to provide targeted remediation programs for students in the classes of 2003 to 2014, inclusive, scoring in level 1 or 2 on the Massachusetts comprehensive assessment system (MCAS) exam established by the board of elementary and secondary education pursuant to the provisions of sections 1D and 1I of said chapter 69 of the General Laws; provided, that the department and districts shall ensure that services are available to students with disabilities; provided further, that in awarding remediation funds, preference may be given to schools and districts at risk of or determined to be under-performing in accordance with said sections 1J and 1K of said chapter 69; provided further, that the purpose of this program shall be to improve students' performance on the MCAS exam through replication of services and educational strategies with proven results as determined by the department of elementary and secondary education; provided further, that such programs shall supplement currently funded local, state, and federal programs at the school or district; provided further, that funds shall be expended for a competitive

grant program to fund academic support and college transition services to be implemented in fiscal year 2010, and operated by public institutions of higher learning or by public-private partnerships in the commonwealth, for students in the graduating classes of 2003 to 2010, inclusive, who have completed high school but have not yet obtained a competency determination as defined in section 1D of chapter 69 as measured by the MCAS assessment instrument authorized by said section 1I of said chapter 69, but who are working to pass the English and math MCAS tests, obtain a competency determination, and earn a high school diploma; provided further, that for the purpose of the programs, appropriated funds may be expended through August 31, 2010, to allow for summer remediation programs; provided further, that funds shall be expended for a competitive grant program to fund Pathways programs targeting eleventh and twelfth graders, instituted by local school districts, public institutions of higher education and qualified public and private educational services organizations and One Stop Career Centers including, but not limited to, school-to-work connecting activities, creating worksite learning experiences for students as an extension of the classroom, outreach programs for students who will need post-twelfth grade remediation to attain the skills necessary to pass MCAS, and counseling programs to educate parents and high school students on post-twelfth grade remediation options; provided further, that funds shall be expended for a competitive grant program, guidelines for which shall be developed by the department of elementary and secondary education, for intensive remediation programs in communities with students in the graduating classes of 2003 to 2014, inclusive, who have not obtained a competency determination or have scored in levels 1 or 2 on either the English or math MCAS exams; provided further, that the department of elementary and secondary education may give preference for such assistance to those districts with a high percentage of high school students scoring in level 1 on the MCAS exam in English and math; provided further, that eligible applicants shall include individual high schools, and those institutions which shall have partnered with a high school or group of high schools; provided further, that no district shall receive a grant from this appropriation until said district submits to the department of elementary and secondary education a comprehensive district plan pursuant to the provisions of section 1I of chapter 69, to improve performance of all student populations including, but not limited to, students with disabilities; provided further, that any evaluation will examine the likelihood and efficiency of replication of these programs and practices in school districts with a large percentage of English language learners; provided further, that these funds may be expended for professional development related to these programs; provided further, that the department shall issue a report not later than February 2, 2010, and annually thereafter as a condition of continued funding under this account, in collaboration with the department of higher education, describing MCAS support programs for the graduating classes of 2003 to 2014, inclusive, funded by items 7061-9404 and 7027-0019, school to work accounts, institutions of public higher education, and other sources, including federal sources; provided further, that such report shall include, but not be limited to, the number of students eligible to participate in such programs, the number of students participating in such programs, the number of students who have passed the MCAS assessment and obtained a competency determination through these programs but not met local graduation requirements, and the number of students who have passed the MCAS assessment and obtained a competency determination through these programs and

met local graduation requirements; provided further, that said report shall be provided to the chairs of the house and senate ways and means committees and the house and senate chairs of the joint committee on education; provided further, that any grant funds distributed from this item to a city, town or regional school district shall be deposited with the treasurer of such city, town, or regional school district and held in a separate account and shall be expended by the school committee of such city, town, or regional school district without further appropriation, notwithstanding any general or special law to the contrary; provided further, that funds may be expended to continue mentoring initiatives that combat the chronic dropout of at-risk youths that were funded in item 7030-1003 of section 2 of chapter 182 of the acts of 2008; and provided further, that no costs shall be expended for personnel costs $9,294,804

Chapter 27 of the Acts of 2009 – Connecting Activities

7027-0019 For school-to-career connecting activities; provided, that notwithstanding any general or special law to the contrary, the board of elementary and secondary education, in cooperation with the department of workforce development and the state workforce investment board, may establish and support a public-private partnership to link high school students with economic and learning opportunities on the job as part of the school-to-work transition program; provided further, that such program may include the award of matching grants to workforce investment boards or other local public-private partnerships involving local community job commitments and work site learning opportunities for students; provided further, that the grants shall require at least a 200 per cent match in wages for the students from private sector participants; provided further, that the program shall include, but not be limited to, a provision that business leaders commit resources to pay salaries, to provide mentoring and instruction on the job and to work closely with teachers; provided further, that public funds shall assume the costs of connecting schools and businesses to ensure that students serve productively on the job; and provided further, that no funds shall be expended for personnel costs $2,000,000

Chapter 27 of the Acts of 2009 - Worcester Polytechnic Institute School of Excellence

7061-9612 For the school of excellence program at the Worcester Polytechnic Institute; provided, that every effort shall be made to recruit and serve equal numbers of male and female students; provided further, that sending districts of students attending the Institute shall not be required to expend any funds for the cost of these students while in attendance at the Institute; provided further, that the Massachusetts Academy of Mathematics and Science shall provide professional development activities at the school located at Worcester Polytechnic Institute, including salary and benefits for master teachers and visiting scholars; provided further, that the academy shall file a report with the joint committee on education and the house and senate committees on ways and means no later than February 1, 2010, detailing the professional development activities; and provided further, that the department of elementary and secondary education shall provide a subsidy to the Worcester Polytechnic Institute to operate a school of excellence in mathematics and science $1,300,000

Chapter 27 of the Acts of 2009 – Youth Build
7061-9626 For grants and contracts with youth-build programs for the purposes of providing comprehensive youth-build services $1,500,000

Chapter 27 of the Acts of 2009 – Full-day Kindergarten
7030-1002 For kindergarten development grants to provide ongoing grant awards to continue quality enhancement of existing full-day kindergarten classrooms; provided, that the department shall administer a grant program to encourage the voluntary expansion of high quality, full-day kindergarten education throughout the commonwealth; provided further, that grants funded through this appropriation shall not annualize to more than $18,000 per classroom in subsequent fiscal years; provided further, that preference shall be given to grant applicants with high percentages of students scoring in levels 1 or 2 on the Massachusetts comprehensive assessment system exam, as determined by the department based on available data; provided further, that any grant funds distributed from this item shall be deposited with the treasurer of such city, town or regional school district and held in a separate account and shall be expended by the school committee of such city, town or regional school district without further appropriation, notwithstanding any general or special law to the contrary; provided further, that such program shall supplement and shall not supplant currently funded local, state and federal programs at the school or district; provided further, that not later than January 15, 2010, the department shall report to the house and senate committees on ways and means on the total number of grants requested and awarded; provided further, that the report shall detail common factors associated with both successful and unsuccessful applications and shall include the total number of full-day and half-day kindergarten classrooms projected to be in operation in public schools in fiscal year 2011; provided further, that all kindergarten programs previously funded through community partnership councils at the department of early education and care shall receive grants from this item in amounts equal to the amounts they received in fiscal year 2009, reduced in proportion to the overall reduction of this item from fiscal year 2009 to fiscal year 2010; and provided further, that no funds shall be expended for personnel costs..... 25,955,624

Chapter 27 of the Acts of 2009 – Early Literacy Programs
7010-0033 For literacy and early literacy programs including, but not limited to, the Bay State Reading Institute program, the John Silber early literacy program, and the Reading Recovery program; provided, that said programs shall provide ongoing evaluation of the outcomes thereof and shall document said outcomes annually to the department and to the house and senate committees on ways and means; provided further, that the Bay State Reading Institute may be administered under contract to Middlesex Community College in programmatic collaboration with Framingham State College and Fitchburg State College..... $4,175,489