XVIII. APPENDIX TABLE OF CONTENTS

The Table of Contents below organizes the Appendices that support Kentucky's Race to the Top Application. Each Appendix is referenced in the narrative text and is provided as a separate file labeled as described below with Kentucky's application.

Attachment Title and Number		Relevant Selection Criterion
A	Appendix A: February Joint Meeting of Key State Agencies agenda	(A)(1) Additional
B	Appendix B: Prichard Committee Op-Ed	(A)(1) Additional
C	Appendix C: Kentucky Learning Framework	(A)(1) Additional
D	Appendix D: Detailed Table with Participating LEAs	(A)(1)(ii) and (A)(1)(iii) Evidence
E	Appendix E: Kentucky Race to the Top MOU	(A)(1)(ii) Evidence
F	Appendix F: Student Achievement Target Detail	(A)(1)(iii) Evidence
G	Appendix G: Kentucky Race to the Top Budget Proposal	(A)(2)(i)(d) Evidence
H	Appendix H: Commissioner statement on HB 176 Passage	(A)(1) Additional
I	Appendix I: Kentucky Advisory Council Members and Support	(A)(2)(ii) Evidence
J	Appendix J: The Next Era in Kentucky Educational Progress	(A)(3) Additional
K	Appendix K: NAEP Exclusion Rate Information	(A)(3) Evidence
L	Appendix L: KY Cohort Graduation Rate Final	(A)(3) Additional
M	Appendix M: KDE Waiver Letter to USED for Graduation Rate	(A)(3) Additional
N	Appendix N: USED Response to Kentucky Waiver Request for Graduation Rate	(A)(3) Additional
O	Appendix O: Student achievement historical detail	(A)(3)(ii) Evidence

Attachment Title and Number		Relevant Selection Criterion
P	Appendix P: Common Core Standards Consortium MOA	(B)(1)(i) Evidence
Q	Appendix Q: NGA News Release with List of the Participating States	(B)(1)(i) Evidence
R	Appendix R: Common Core Standards for ELA Grades K-8, Working Draft Jan 13 2010	(B)(1)(i) Evidence
S	Appendix S: Common Core State Standards for Mathematics, Working Draft Jan 13 2010	(B)(1)(i) Evidence
T	Appendix T: Common Core State Literacy Standards, Working Draft Jan 13 2010	(B)(1)(i) Evidence
U	Appendix U: Common Core Standards ELA Exemplars K-5	(B)(1)(i) Evidence
V	Appendix V: Common Core Standards ELA Exemplars 6-12	(B)(1)(i) Evidence
W	Appendix W: Email with Common Core Standards Completion Timeline	(B)(1)(i) Evidence
X	Appendix X: Kentucky's timeline & process for adopting Common Core	(B)(1)(ii) Evidence
Y	Appendix Y: Consortium Developing Balanced Assessments MOU	(B)(2) Evidence
Z	Appendix Z: Consortium Developing Balanced Assessments - List of States	(B)(2) Evidence
AA	Appendix AA: SMARTER Assessment Consortium MOU	(B)(2) Evidence
BB	Appendix BB: SMARTER Assessment Consortium - List of Participating States	(B)(2) Evidence
CC	Appendix CC: MOSAIC MOU	(B)(2) Evidence
DD	Appendix DD: MOSAIC - List of Participating States	(B)(2) Evidence
EE	Appendix EE: Race to the Top Common Assessment Consortium MOA	(B)(2) Evidence
FF	Appendix FF: RTTT Common Assessment Consortium - List of States	(B)(2) Evidence

Attachment Title and Number		Relevant Selection Criterion
GG	Appendix GG: SB1 Standards Roll-out and Professional Development Plan Final	(B)(3) Additional
HH	Appendix HH: SB1 deployment work group	(B)(3) Additional
II	Appendix II: Math & English-Language Arts Common Core Standards Work Teams	(B)(3) Additional
JJ	Appendix JJ: Proposed Changes to Professional Development Statutes	(B)(3) Additional
KK	Appendix KK: AdvanceKentucky & Race to the Top	(B)(3) Additional
LL	Appendix LL: Project Lead The Way & Race to the Top	(B)(3) Additional
MM	Appendix MM: SREB Research Report on Project Lead The Way	(B)(3) Additional
NN	Appendix NN: Documentation of America COMPETES Act Elements Overview	(C)(1) Evidence
OO	Appendix OO: Comparison to DQC elements	(C)(1) Evidence
PP	Appendix PP: P-20 Data Collaborative MOA	(C)(1) Evidence
QQ	Appendix QQ: P-20 Data Collaborative	(C)(1) Evidence
RR	Appendix RR: ILP for Parents overview	(C)(1) Evidence
SS	Appendix SS: Data Quality Issue resolution sample	(C)(1) Evidence
TT	Appendix TT: KSLDS Report ESS Progress Towards Proficiency sample	(C)(1) Evidence
UU	Appendix UU: High School Feedback report sample	(C)(1) Evidence
VV	Appendix VV: KDE Web High School Transcript directive	(C)(1) Evidence
WW	Appendix WW: Roles and Responsibilities of Data Stewards and Data Managers	(C)(2) Additional
XX	Appendix XX: Kentucky's ARRA SLDS Grant Proposal	(C)(2) Additional
YY	Appendix YY: Kentucky Alternative Certification Legislation	(D)(1)(i) Evidence

Attachment Title and Number		Relevant Selection Criterion
ZZ	Appendix ZZ: Alternative Certification Statute KRS 161.028	(D)(1)(i) Evidence
AAA	Appendix AAA: Kentucky Alternative Route Statistics for Teachers and Principals	(D)(1)(ii) Evidence
BBB	Appendix BBB: Kentucky Teacher Standards	(D)(2) Additional
CCC	Appendix CCC: Kentucky Teacher Quality, Diversity and Equity plan	(D)(3) Additional
DDD	Appendix DDD: Education Trust Funding Gaps 2006 Report	(D)(3) Additional
EEE	Appendix EEE: Poverty and Minority Level Determination Procedures	(D)(3)(i) Evidence
FFF	Appendix FFF: Kentucky Report on Teacher Compensation	(D)(3) Additional
GGG	Appendix GGG: Teach For America and Race to the Top Proposal	(D)(3) Additional
HHH	Appendix HHH: Press Release on Improving Educator Quality Grant	(D)(3) Additional
III	Appendix III: KEPP Report Card History and Sample	(D)(4) Additional
JJJ	Appendix JJJ: Preparation Program Indices Overview	(D)(4) Additional
KKK	Appendix KKK: Professional Learning in Regional Networks	(D)(5) Additional
LLL	Appendix LLL: High Quality Teaching and Learning Overview Guide	(D)(5) Additional
MMM	Appendix MMM: KDE Staff Note On PD Statutory Revisions	(D)(5) Additional
NNN	Appendix NNN: Kirkpatrick four-level evaluation model	(D)(5) Additional
OOO	Appendix OOO: Legislation KRS 158.780	(E)(1) Evidence
PPP	Appendix PPP: Legislation KRS 158.785	(E)(1) Evidence
QQQ	Appendix QQQ: Legislation KRS 160.346	(E)(1) Evidence

Attachment Title and Number		Relevant Selection Criterion
RRR	Appendix RRR: House Bill 176	(E)(1) Evidence
SSS	Appendix SSS: 703 KAR 5 180E Intervention system	(E)(1) Evidence
TTT	Appendix TTT: ASSIST Team Explanation	(E)(2) Additional
UUU	Appendix UUU: The VPAT Story	(E)(2) Additional
VVV	Appendix VVV: Highly Skilled Educators Program	(E)(2) Additional
WWW	Appendix WWW: The Missing Piece of the Proficiency Puzzle Report	(E)(2) Additional
XXX	Appendix XXX: Audit Recovery Process and Flowchart	(E)(2) Additional
YYY	Appendix YYY: School Intervention Options for Turnarounds	(E)(2) Additional
ZZZ	Appendix ZZZ: HSTW & MMGW program overview	(E)(2) Additional
AAAA	Appendix AAAA: Save the Children and Race to the Top Literacy Memo	(E)(2) Additional
BBBB	Appendix BBBB: Gateway to College Description	(E)(2) Additional
CCCC	Appendix CCCC: School Administrative Manager Program History and Detail	(E)(2) Additional
DDDD	Appendix DDDD: Comparison of SEEK in Three Districts	(F)(1)(ii) Evidence
EEEE	Appendix EEEE: Education Watch State Reports – Kentucky	(F)(1)(ii) Evidence
FFFF	Appendix FFFF: SBDM legislation (KRS 160.345)	(F)(2)(v) Evidence
GGGG	Appendix GGGG: Kentucky's STEM Imperative	STEM Additional
HHHH	Appendix HHHH: Board of Education 2010 Legislative Agenda	Early Learning Additional
IIII	Appendix IIII: KIDS NOW Initiatives	Early Learning Additional
JJJJ	Appendix JJJJ: Early Childhood Task Force Executive Order	Early Learning Additional

AGENDA

Joint Meeting

Kentucky Board of Education
Council on Postsecondary Education
Education Professional Standards Board

February 10, 2010
5:30 p.m.
Kentucky Community and Technical College Central Office
300 North Main Street, Versailles, KY

1. Welcome, Mike McCall, KCTCS President

2. Call to Order and Roll Call
   Joe Brothers, KBE Chair
   Paul E. Patton, CPE Chair
   Lorraine Williams, EPSB Chair

3. Remarks by Governor Steven L. Beshear (invited)

4. Remarks by U.S. Secretary of Education Arne Duncan and/or Gene Wilhoit (invited)

5. Joint Presentation Regarding New Common Learning Standards
   Terry Holliday, Commissioner of Education
   Robert L. King, CPE President
   Phillip Rogers, EPSB Executive Director

6. Action: Passage of Joint Resolution by KBE, CPE, and EPSB Boards

7. Adjournment

Agenda materials are available online at http://www.cpe.ky.gov/about/cpe/meetings/2010/ (insert KBE and EPSB web sites).

OPINION PIECE ON KENTUCKY OPPORTUNITY

Key developments show promise for improving Kentucky schools
PADUCAH SUN
September 28, 2009
By Sam Corbett

As we begin a new school year, it is time for fresh excitement about Kentucky education. In just the past few months, key developments have positioned Kentucky for more rapid improvement than we've seen at any time since the early 1990s. Here's a quick summary of what's happened and why it matters.

First, Kentucky is developing new academic standards that will be shorter, clearer and better aligned with college readiness and global competition. Senate Bill 1, passed this spring, commits us to that major revision and to matching tests that will start in 2012.

Second, national developments will strengthen our SB 1 work. Forty-six states have committed voluntarily to develop Common Core standards in mathematics and language arts with Kentucky poised to be one of the very first to apply those expectations in our teaching, our testing and our accountability process. Kentucky will also benefit from the federal Department of Education's commitment of $350 million to develop robust testing based on the Common Core approach.

Third, state leadership is now unified on education in a way we have rarely seen. Leaders in both parties and both houses of the legislature backed SB 1, and they and Gov. Steve Beshear intend to see it succeed. Terry Holliday, our new commissioner of education, is off to a great start, as is Bob King, the new president of the Council on Postsecondary Education. Together, Commissioner Holliday and President King have already launched major collaborations, including a longitudinal student data system to track students' progress from pre-k to college and beyond.

Fourth, we have growing clarity about a central fact: standards, tests, data systems and state political commitments will only yield higher achievement if they are implemented well in classrooms. At this spring's Prichard Committee meeting, Sir Michael Barbour identified teaching quality as the essential factor in the success of top-performing school systems around the world. In his words, "The only way to improve outcomes is to improve instruction."

Barbour, a partner of McKinsey & Company and a former official in the administration of British Prime Minister Tony Blair, made a compelling case for four main strategies that work to build consistently effective teaching for all students:

- Recruiting and training strong candidates to enter the education profession.
- Strengthening current teaching through collaborative professional development that changes classroom practice.
- Using data from tests and school inspection systems to measure progress and to intervene when progress is too slow.
- Developing school leadership able to forge those three elements—new teachers, support for current teachers, and data on results—into schools that deliver rapid achievement growth for all students.

In hindsight, it is easy to see that our 1990 reform often fell short on the teaching quality front. We offered rewards for success and consequences for failure, and we assumed our educators were already equipped to respond to those incentives. In reality, they needed more direct and robust support—just as athletes reaching for a major prize need sustained coaching to deliver their best performance.

Teaching quality work could be the Achilles' heel of our new efforts as well. Senate Bill 1 did call for new attention to effective instruction, directing the state department to ensure training for current educators on implementing the new standards and directing the Education Professional

Standards Board to ensure that teacher preparation programs do the same thing for teacher candidates. Unfortunately, those two agencies have endured a decade of funding cuts. Stripped to the bare bones, they will be very hard pressed to implement robust new learning activities with their current funding.

That makes the fifth and final reason for new excitement especially important. The federal government is offering $4 billion in competitive “Race to the Top” grants for states that can show the best records of past reform and the best new plans to push those reforms further. Commissioner Holliday has already mobilized his staff and an impressively representative advisory board to draft a strong Kentucky application.

Together, these developments offer Kentucky a great opportunity. If we seize the day, working together with great energy in the coming months, we can ensure that our new standards translate into new teaching strength in every classroom and new levels of achievement for all our children.

Sam Corbett is chair of the Prichard Committee for Academic Excellence.

The Learning Framework –
A Vision for Kentucky's System of Education

The Learning Framework

The Learning Framework is the foundation for the state's system for public education.
This framework is a learner-centric, 21st Century vision. At the center are the students, with clear knowledge of what they will need to be ready for college and career. Supporting those students are their teachers, effective and able to provide high-quality learning opportunities to all students. Those teachers are in turn supported by their schools, engaged communities and school leaders, who provide guidance to continually improve the quality of learning occurring in the classroom. Schools are nested within districts, providing supports and connections to best practices. Finally, the state sets the context for all, holding a high bar for success and enabling each district, school, teacher, and student to succeed.
It is organized around four key elements:

Highly Effective Teachers and Leaders and Equitable Teacher Distribution

The foundation of the framework involves a strategic effort to assist school districts in managing their human resources to ensure that every student learns under the guidance of a highly effective teacher, each school is lead by a highly effective principal, and each district by a highly effective superintendent. More specifically:

- All students learn under the guidance of a highly effective teacher who has been assigned to them based on the teacher's ability to address their learning styles. All teachers possess the skills to differentiate instruction to meet the needs of students who need additional intervention or who need accelerated opportunities to learn.
- All teachers receive continuous opportunities to improve their practice. The majority of those opportunities occur in small teams of grade level or content area groups of teachers. A support system is in place for all teachers to receive feedback, engage in personal reflection about the quality of their practice and the learning results of their students, and to receive coaching and mentoring to assist in that growth.
- All schools and school districts ensure, through a continuous review of student data and classroom observation, that the right teacher is with the right students, and that each school and the school district has highly effective leadership. Schools and school districts engage the entire community to provide the necessary supports to all teachers to ensure that each and every student masters the content and skills necessary to take advantage of 21st-century postsecondary opportunities.
- All stakeholders involved in the preparation and development of teachers and administrators provide support, assistance and policies to ensure that every student and teacher is provided with essential learning opportunities. In addition, the state advocates to ensure that funding is made available to allow teachers who have shown the greatest effectiveness working with underserved populations are provided incentives to meet the needs of those populations.

Focused Standards and a High-Quality Assessment System

The effectiveness of teachers is enhanced by the implementation of a single set of mathematics and English/language arts curriculum standards that is both the standards to be mastered at all of our high schools and the readiness standards for our postsecondary institutions. This single set of standards serve as the guide for Kentucky's revision of its content standards at all grade levels

making them clearer and more focused which will, in turn, make our state assessments even stronger. This creates an assessment system with the following elements:

- Every student is effectively engaged with challenging content reflecting career and college-ready expectations. All students demonstrate mastery of all the standards, not just a few. Students are involved in determining how their learning will be assessed (formative, interim and summative assessment), so performance expectations are clear and lead to improved student learning. Classroom assessments are tightly aligned to standards so that classroom learning experiences lead to success on all other assessment measures.
- Every teacher has the knowledge and skills necessary to support the learning of all students. Teachers have high learning expectations for all students and provide the quality of instruction necessary for all students to achieve at high levels. Teachers engage students in determining performance expectations. Teachers use formative, interim and summative assessment to determine the progress students are making toward meeting standards and provide targeted instruction based on the needs of students.
- Every school and district administrator shares a vision for high expectations for learning that is shared with all members of the school community. This vision relies on evidence of student learning to best target resources and ensure staff and resources are properly allocated so that all students have access to content and opportunities to learn.
- The state engages education stakeholders in setting content standards that are challenging, focused, clear and internationally benchmarked. Ongoing professional learning experiences (e.g. teacher networks, virtual learning, CEO-Superintendent Network) are provided to assist students, teachers and school and district administrators in the implementation and assessment of content standards. The state has developed an accountability system anchored to the standards that provides data around student strengths and weaknesses so that student intervention and acceleration can occur.

<u>A Continuum of Interventions that form a System of Support to Low-Performing Schools</u>

The framework uses an intervention system that customizes the support based on the needs of each struggling school and/or school district. The key element of this intervention model is a design that builds the capacity of the administrators and staff in the school district to lead this highly effective learning culture. This model supports each stakeholder group in specific ways:

- The intervention model is designed to provide support to schools to ensure that every student is provided instructional services by a teacher who has proven to be effective in working with students with like needs.
- All teachers are supported with high-quality, aligned instructional resources designed to reduce and not increase barriers to learning. Teachers are provided with additional support for problems of practice that they might encounter and additional time to improve their instructional practices.
- All schools and school districts support teachers and other staff by building a learning culture of clear, high and accountable expectations for all. Additional resources and greater community engagement ensure staffs develop the skills necessary to properly function in this highly effective learning culture.
- All state agencies collaboratively provide support and assistance through an intervention system that supports the development of highly effective learning cultures. In this model, the system of interventions is customized to the needs of the school district and is

designed to build the capacity of the administrators and staff in the school district to lead this highly effective learning culture.

A Comprehensive Data System to Improve Learning

Kentucky's Statewide Longitudinal Data System specifically supports the needs and goals of each of the other three elements for students, teachers, schools, communities and school districts, along with the KDE and other state agencies. The data system provides timely information about what is effective, where it is effective and for whom so that the education and workforce communities can shift from "autopsy" data use to preventive data use. In this data system environment the following strategies are evident:

- Data decisions related to student learning are made with an accessible and longitudinal view of each student's progress and mastery of standards through the P-20 educational environment. These decisions include identification and monitoring students' needs for intervention or acceleration over time. They include established linkages between each student and school, district and state resources that have been deployed or are available. Finally, there is a clear roadmap to success with resources to guide each student in the most efficient manner to reach his or her educational and career goals.
- Data decisions to enhance teacher effectiveness are made by connecting student information with teacher preparation and certification, instructional practices, professional development and working conditions. Professional growth plans are based on evidence showing areas of actual need and desired growth based on student learning. Each professional learning opportunity is evaluated using student assessment data to ensure that the opportunities are meeting the needs of Kentucky educators.
- Data decisions to improve the delivery of services by every school and district are made using information about reporting burdens imposed on schools and districts so that those burdens can be reduced. The data system provides information about the skills of each teacher so that placement of teachers can be based on skills matched to need. The system provides the ability to analyze the impact of interventions over time, leading to targeted assistance and efficient use of state, district and school resources. The system provides both longitudinal interim performance data for early identification of learning gaps and quick intervention, as well as longitudinal summative performance data for evaluation of school curricula and assessment alignment with evolving standards.
- Data decisions to improve delivery of service by the state are made by analyzing the impact of programs over time, allowing for progress monitoring, diagnosis and prescription, internal and external benchmarking, predictive analysis and evaluation. . Using the SLDS in this way leads to more efficient and less burdensome reporting requirements from all levels to meet state and federal demands. The system eliminates the need for each district to create and maintain its own data system in order to perform analyses needed for local data-informed decisions. . Most importantly, the data system uses efficient programs proven to be effective and flexible enough to meet the needs of all students.

Detailed Table for (A)(1)
This table provides detailed information on the participation of each participating LEA (as defined in this notice). States should use this table to complete the Summary Tables above. (Note: If the State has a large number of participating LEAs (as defined in this notice), it may move this table to an appendix. States should provide in their narrative a clear reference to the appendix that contains the table.)

	LEA Demographics			Signatures on MOUs			MOU Terms	Preliminary Scope of Work – Participation in each applicable Plan Criterion															
Participating LEAs	# of Schools	# of K-12 Students	# of K-12 Students in Poverty	LEA Supt. (or equivalent)	President of local school board (if applicable)	President of Local Teachers Union (if applicable)	Uses Standard Terms & Conditions?	(B)(3)	(C)(3)(i)	(C)(3)(ii)	(C)(3) (iii)	(D)(2) (i)	(D)(2) (ii)	(D)(2) (iii)	(D)(2)(iv)(a)	(D)(2)(iv)(b)	(D)(2)(iv)(c)	(D)(2) (iv)(d)	(D)(3)(i)	(D)(3)(ii)	(D)(5)(i)	(D)(5)(ii)	(E)(2)
Name of LEA here				Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Yes/ No	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA	Y/ N/ NA
ADAIR COUNTY SCHOOLS	5	2,504	840	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ALLEN COUNTY SCHOOLS	4	2,883	788	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ANCHORAGE INDEPENDENT SCHOOLS	1	371	18	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ANDERSON COUNTY SCHOOLS	6	3,862	404	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ASHLAND INDEPENDENT	9	3,137	851	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
AUGUSTA INDEPENDENT SCHOOLS	1	288	72	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BALLARD COUNTY SCHOOLS	4	1,339	274	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BARBOURVILLE INDEPENDENT SCHOOLS	1	631	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BARDSTOWN INDEPENDENT SCHOOLS	5	2,416	493	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BARREN COUNTY SCHOOLS	9	4,552	847	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BATH COUNTY SCHOOLS	4	2,002	656	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BEECHWOOD INDEPENDENT SCHOOLS	2	1,096	93	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BELL COUNTY SCHOOLS	7	2,959	990	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BELLEVUE INDEPENDENT SCHOOLS	2	753	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BEREA INDEPENDENT SCHOOLS	3	1,057	242	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

BOONE COUNTY SCHOOLS	21	18,785	1,636	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BOURBON COUNTY SCHOOLS	6	2,588	428	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BOWLING GREEN INDEPENDENT SCHOOLS	7	3,821	1,129	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BOYD COUNTY SCHOOLS	9	3,269	597	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BOYLE COUNTY SCHOOLS	5	2,663	376	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BRACKEN COUNTY SCHOOLS	3	1,206	211	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BREATHITT COUNTY SCHOOLS	6	2,150	976	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BRECKINRIDGE COUNTY SCHOOLS	6	2,665	640	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BULLITT COUNTY SCHOOLS	21	12,593	1,592	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BURGIN INDEPENDENT SCHOOLS	2	447	43	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BUTLER COUNTY SCHOOLS	4	2,084	506	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

CALDWELL COUNTY SCHOOLS	4	1,980	451	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CALLOWAY COUNTY SCHOOLS	6	3,118	661	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CAMPBELL COUNTY SCHOOLS	7	4,782	449	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CAMPBELLSVILLE INDEPENDENT SCHOOLS	3	1,083	397	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARLISLE COUNTY SCHOOLS	3	795	166	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARROLL COUNTY SCHOOLS	4	1,903	382	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CARTER COUNTY SCHOOLS	11	4,760	1,337	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CASEY COUNTY SCHOOLS	5	2,304	866	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CAVERNA INDEPENDENT SCHOOLS	3	736	272	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CHRISTIAN COUNTY SCHOOLS	15	8,870	3,044	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

CLARK COUNTY SCHOOLS	12	5,476	1,040	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CLAY COUNTY SCHOOLS	9	3,498	1,784	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CLINTON COUNTY SCHOOLS	4	1,714	492	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CLOVERPORT INDEPENDENT SCHOOLS	3	316	61	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CORBIN INDEPENDENT SCHOOLS	6	2,681	463	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
COVINGTON INDEPENDENT SCHOOLS	8	3,572	1,967	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CRITTENDEN COUNTY SCHOOLS	3	1,285	406	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CUMBERLAND COUNTY SCHOOLS	3	997	362	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DANVILLE INDEPENDENT SCHOOLS	5	1,726	458	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DAVIESS COUNTY SCHOOLS	17	10,828	1,735	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DAWSON SPRINGS INDEPENDENT	2	665	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
DAYTON INDEPENDENT SCHOOLS	2	880	231	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EAST BERNSTADT INDEPENDENT SCHOOLS	1	519	59	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EDMONSON COUNTY SCHOOLS	5	1,961	469	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ELIZABETHTOWN INDEPENDENT SCHOOLS	4	2,242	361	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ELLIOTT COUNTY SCHOOLS	4	1,113	378	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
EMINENCE INDEPENDENT SCHOOLS	2	651	115	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ERLANGER-ELSMERE INDEPENDENT SCHOOLS	6	2,298	566	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ESTILL COUNTY SCHOOLS	5	2,450	829	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FAIRVIEW INDEPENDENT SCHOOLS	2	784	128	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FAYETTE COUNTY	54	36,168	7,210	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
FLEMING COUNTY SCHOOLS	6	2,364	615	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FLOYD COUNTY SCHOOLS	15	6,153	2,735	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FORT THOMAS INDEPENDENT SCHOOLS	5	2,540	146	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FRANKFORT INDEPENDENT SCHOOLS	2	769	179	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FRANKLIN COUNTY SCHOOLS	12	5,989	996	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FULTON COUNTY SCHOOLS	2	536	226	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FULTON INDEPENDENT SCHOOLS	1	411	180	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GALLATIN COUNTY SCHOOLS	4	1,576	343	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GARRARD COUNTY SCHOOLS	5	2,510	631	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GLASGOW INDEPENDENT SCHOOLS	4	1,942	550	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

GRANT COUNTY SCHOOLS	6	3,826	815	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GRAVES COUNTY SCHOOLS	10	4,574	916	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GRAYSON COUNTY SCHOOLS	6	4,219	1,018	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GREEN COUNTY SCHOOLS	4	1,703	424	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GREENUP COUNTY SCHOOLS	7	2,993	768	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HANCOCK COUNTY SCHOOLS	4	1,635	244	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HARDIN COUNTY SCHOOLS	20	14,000	2,110	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HARLAN COUNTY SCHOOLS	9	4,121	1,743	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HARLAN INDEPENDENT SCHOOLS	3	845	164	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HARRISON COUNTY SCHOOLS	6	3,112	548	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HART COUNTY SCHOOLS	6	2,279	784	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

HAZARD INDEPENDENT SCHOOLS	3	926	342	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HENDERSON COUNTY SCHOOLS	11	6,987	1,324	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HENRY COUNTY SCHOOLS	5	2,172	367	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HICKMAN COUNTY SCHOOLS	2	726	179	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HOPKINS COUNTY SCHOOLS	13	6,835	1,695	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JACKSON COUNTY SCHOOLS	5	2,200	880	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JACKSON INDEPENDENT SCHOOLS	1	398	51	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JEFFERSON COUNTY SCHOOLS	145	94,578	23,091	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JENKINS INDEPENDENT SCHOOLS	1	591	206	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JESSAMINE COUNTY SCHOOLS	11	7,473	1,357	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

JOHNSON COUNTY SCHOOLS	8	3,717	952	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
KENTON COUNTY SCHOOLS	19	13,889	1,557	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
KNOTT COUNTY SCHOOLS	7	2,473	884	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
KNOX COUNTY SCHOOLS	10	4,649	2,103	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LARUE COUNTY SCHOOLS	4	2,352	492	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LAUREL COUNTY SCHOOLS	15	9,308	2,656	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LAWRENCE COUNTY SCHOOLS	7	2,395	815	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LEE COUNTY SCHOOLS	4	1,116	446	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LESLIE COUNTY SCHOOLS	6	1,793	646	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LETCHER COUNTY SCHOOLS	9	3,224	1,025	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LEWIS COUNTY SCHOOLS	6	2,330	844	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LINCOLN COUNTY	9	4,038	1,136	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
LIVINGSTON COUNTY SCHOOLS	4	1,250	249	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LOGAN COUNTY SCHOOLS	6	3,513	598	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LUDLOW INDEPENDENT SCHOOLS	2	874	212	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LYON COUNTY SCHOOLS	3	867	150	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MADISON COUNTY SCHOOLS	19	10,732	2,246	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MAGOFFIN COUNTY SCHOOLS	5	2,261	915	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MARION COUNTY SCHOOLS	7	3,184	668	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MARSHALL COUNTY SCHOOLS	11	4,731	681	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MARTIN COUNTY SCHOOLS	7	2,121	868	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MASON COUNTY SCHOOLS	4	2,764	712	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MAYFIELD INDEPENDENT	3	1,473	508	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
MCCRACKEN COUNTY SCHOOLS	12	7,021	1,073	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MCCREARY COUNTY SCHOOLS	6	3,042	1,493	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MCLEAN COUNTY SCHOOLS	5	1,624	332	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MEADE COUNTY SCHOOLS	10	4,942	689	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MENIFEE COUNTY SCHOOLS	3	1,160	353	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MERCER COUNTY SCHOOLS	5	3,111	608	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
METCALFE COUNTY SCHOOLS	6	1,677	562	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MIDDLESBORO INDEPENDENT SCHOOLS	4	1,503	534	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MONROE COUNTY SCHOOLS	5	1,920	590	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MONTGOMERY COUNTY SCHOOLS	6	4,535	869	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MONTICELLO INDEPENDENT	3	840	314	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
MORGAN COUNTY SCHOOLS	6	2,102	655	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MUHLENBERG COUNTY SCHOOLS	9	5,054	1,177	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MURRAY INDEPENDENT SCHOOLS	4	1,393	255	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NELSON COUNTY SCHOOLS	9	4,694	566	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NEWPORT INDEPENDENT SCHOOLS	5	1,878	723	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NICHOLAS COUNTY SCHOOLS	2	1,172	234	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OHIO COUNTY SCHOOLS	8	3,803	1,036	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OLDHAM COUNTY SCHOOLS	19	11,720	451	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OWEN COUNTY SCHOOLS	4	1,866	381	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OWENSBORO INDEPENDENT SCHOOLS	9	4,032	1,540	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

OWSLEY COUNTY SCHOOLS	2	773	391	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PADUCAH INDEPENDENT SCHOOLS	6	2,706	1,171	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PAINTSVILLE INDEPENDENT SCHOOLS	2	803	201	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PARIS INDEPENDENT SCHOOLS	4	758	237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PENDLETON COUNTY SCHOOLS	4	2,598	475	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PERRY COUNTY SCHOOLS	12	4,194	1,691	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIKE COUNTY SCHOOLS	22	9,654	2,296	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PIKEVILLE INDEPENDENT SCHOOLS	2	1,189	244	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PINEVILLE INDEPENDENT SCHOOLS	2	541	138	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
POWELL COUNTY SCHOOLS	5	2,491	806	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PULASKI COUNTY SCHOOLS	13	7,971	2,290	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

RACELAND INDEPENDENT SCHOOLS	3	1,037	117	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ROBERTSON COUNTY SCHOOLS	2	355	91	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ROCKCASTLE COUNTY SCHOOLS	5	2,895	814	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ROWAN COUNTY SCHOOLS	7	3,169	762	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
RUSSELL COUNTY SCHOOLS	6	2,921	785	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
RUSSELL INDEPENDENT SCHOOLS	4	2,226	308	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
RUSSELLVILLE INDEPENDENT SCHOOLS	2	1,027	333	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SCIENCE HILL INDEPENDENT SCHOOLS	1	453	56	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SCOTT COUNTY SCHOOLS	13	7,956	880	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SHELBY COUNTY SCHOOLS	10	6,492	946	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SILVER GROVE INDEPENDENT	1	215	30	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SCHOOLS																							
SIMPSON COUNTY SCHOOLS	5	2,981	526	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SOMERSET INDEPENDENT SCHOOLS	3	1,435	445	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SOUTHGATE INDEPENDENT SCHOOLS	1	215	39	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SPENCER COUNTY SCHOOLS	5	2,770	300	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TAYLOR COUNTY SCHOOLS	3	2,648	454	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TODD COUNTY SCHOOLS	4	1,985	595	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TRIGG COUNTY SCHOOLS	4	2,038	441	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TRIMBLE COUNTY SCHOOLS	4	1,516	280	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
UNION COUNTY SCHOOLS	5	2,247	473	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WALTON VERONA INDEPENDENT SCHOOLS	3	1,477	111	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WARREN COUNTY SCHOOLS	19	13,136	2,497	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

WASHINGTON COUNTY SCHOOLS	4	1,659	340	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WAYNE COUNTY SCHOOLS	6	2,454	907	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WEBSTER COUNTY SCHOOLS	6	2,144	405	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WEST POINT INDEPENDENT SCHOOLS	1	99	39	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WHITLEY COUNTY SCHOOLS	9	4,521	1,748	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WILLIAMSBURG INDEPENDENT SCHOOLS	1	741	345	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WILLIAMSTOWN INDEPENDENT SCHOOLS	3	890	103	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WOLFE COUNTY SCHOOLS	5	1,287	697	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WOODFORD COUNTY SCHOOLS	7	4,002	488	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Kentucky Race to the Top Participating School District Memorandum of Understanding

This Memorandum of Understanding ("MOU") is entered into by and between the Kentucky Department of Education (KDE) and the _____ School District ("Participating School District"). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of Kentucky's implementation of an approved Race to the Top grant project. This MOU was approved at a meeting of the _____Board of Education on _____. The approval is contained in the board minutes that are available for review at the district's central office. All pertinent information related to this MOU is available for review at the district's central office.

I. SCOPE OF WORK

Exhibit I, the Preliminary Scope of Work, indicates which portions of Kentucky's proposed reform plans ("Kentucky's Race to the Top Plan") the Participating School District is agreeing to implement. (Note that, in order to be a Participating School district, the district must agree to implement all of "Exhibit I: Preliminary Scope of Work".)

II. PROJECT ADMINISTRATION

A. PARTICIPATING SCHOOL DISTRICT RESPONSIBILITIES

In assisting KDE in implementing the tasks and activities described in Kentucky's Race to the Top application, the Participating School District subgrantee will:

1) implement the district plan as identified in Exhibit I (Preliminary Scope of Work) and Exhibit II (the final scope of work) of this agreement;
2) actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by KDE or by the U.S. Department of Education ("USED");
3) in a timely manner, post to any Website specified by KDE or USED, all non-proprietary products and lessons learned using funds associated with the Race to the Top grant;
4) participate, as requested, in any evaluations of this grant conducted by the KDE or USED;
5) be responsive to KDE or USED requests for information including the status of the project, project implementation, outcomes, and any problems anticipated or encountered; and
6) participate in meetings and telephone conferences with the KDE 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
   (d) other matters related to the Race to the Top grant and associated plans

B. KDE RESPONSIBILITIES

In assisting Participating School Districts in implementing their tasks and activities described in the Kentucky's Race to the Top application, the KDE will:

1) work collaboratively with, and support the Participating School District in carrying out the school district plan as identified in Exhibits I and II of this agreement;

2) timely distribute the school district's portion of Race to the Top grant funds during the course of the project period and in accordance with the school district Plan identified in Exhibit II;
3) provide feedback on the school district'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) KDE and the Participating School District will each appoint a contact person for the Race to the Top grant.
2) These contact persons from KDE and the Participating School District will maintain frequent communication to facilitate cooperation under this MOU.
3) KDE and Participating School District grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.
4) KDE and Participating School District grant personnel will negotiate in good faith to continue to achieve the overall goals of Kentucky's Race to the Top grant, even when Kentucky's Race to the Top Plan requires modifications that affect the Participating School District, or when the district plan requires modifications.

D. KDE RECOURSE FOR SCHOOL DISTRICT NON-PERFORMANCE

If KDE determines that the Participating School District is not meeting its goals, timelines, budget or annual targets or is not fulfilling other applicable requirements, KDE will take appropriate enforcement action, which could include a collaborative process between KDE and the school district, or any of the enforcement measures that are detailed in 34 CFR Section 80.43, including placing the school district on reimbursement payment status, temporarily withholding funds or disallowing costs.

III. ASSURANCES

The Participating School District hereby certifies and represents that it:
1) has all requisite power and authority to execute this MOU;
2) is familiar with the concepts in Kentucky's Race to the Top grant proposal and is supportive of and committed to working on Kentucky's entire Race to the Top Plan;
3) agrees to be a Participating School District and will implement those portions of Kentucky's Race to the Top Plan indicated in Exhibit I, if Kentucky's application is funded;
4) will provide a Final Scope of Work to be attached to this MOU as Exhibit II only if Kentucky's application is funded; will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe in Exhibit II the district's specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures ("School District Plan ") in a manner that is consistent with the Preliminary Scope of Work (Exhibit I) and with Kentucky's Race to the Top Plan; and
5) will comply with all of the terms of the Race to the Top grant, Kentucky's subgrant, and all applicable federal and state laws and regulations, including laws and regulations applicable to the Program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

IV. MODIFICATIONS

This Memorandum of Understanding may be amended only by written agreement signed by an authorized KDE official and the Participating School District, and in consultation with USED.

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

School District Superintendent (or equivalent authorized signatory):

_____

Signature/Date

_____

Print Name

Chairperson of Local District's Board of Education:

_____

Signature/Date

_____

Print Name

Local Education/Teacher Association Leader:

_____

Signature/Date

_____

Print Name

Commissioner, Kentucky Department of Education, Commonwealth of Kentucky – required:
By the signature below, KDE hereby accepts the school district as a Participating School District.

_____

Signature/Date

Terry Holliday, EdD
Commissioner of Education

A. EXHIBIT I – PARTICIPATING SCHOOL DISTRICT PRELIMINARY SCOPE OF WORK

Elements of Kentucky's Reform Plans
B. Standards and Assessments
• Participate in professional learning to ensure standards are taught to mastery in every classroom for every child • Provide resources to regional educational cooperatives and other providers to support coordination and provision of professional learning opportunities • Deploy high-quality, on-line instructional tools to assist in the implementation of new standards and assessments
C. Data Systems to Support Instruction
• Provide high-quality data to state, to ensure that the system delivers data of value to districts • Commit to increased use of Kentucky Statewide Longitudinal Data System • Deploy the state's online instructional improvement system to provide access to resources from across the state and beyond • Deliver targeted professional learning opportunities to teachers and principals to increase usage
D. Great Teachers and Leaders
• Implement teacher and principal growth models for all schools in the districts • Implement state's teacher and principal evaluation systems to increase effectiveness of teaching • Alter approaches to professional learning, compensation, and / or career paths to cultivate and retain effective teachers • Act on information to increase equity of access to effective teachers • Commit to participate in successful strategies for equitable distribution • Use measures of program effectiveness to focus recruitment efforts on most effective teacher and principal preparation programs • Deploy the state's online instructional improvement system to provide access to resources from across state and beyond • Reinforce and support the state approach to professional learning
E. Turning Around the Lowest-Achieving Schools (The Bottom 5%)
• If applicable, commit to implementing one of the four identified methods for turning around the lowest achieving schools • If applicable, partner with state, school support organizations, and others to effectively turnaround schools

For the _____School District :

_____
Superintendent Signature/Date

For the Ky. Department of Education:

_____
Terry Holliday, EdD
Commissioner of Education

Print Name

Student achievement– future targets

For reform criterion (A)(1)

(A)(1)(ii)(a) Student achievement in reading / language arts and mathematics

Demographic category	Demographic group	Baseline / most recent year	2014	2020
Reading - NAEP, 4th grade				
	ALL students	33%	43%	60%
By race / ethnicity				
	White	36%	44%	60%
	Black	14%	27%	50%
By socioeconomic status				
	Eligible for Natl School Lunch Program	21%	31%	50%
	Not eligible for Natl School Lunch Program	46%	51%	60%
By gender				
	Male	30%	40%	60%
	Female	37%	45%	60%
By disability status				
	Student disability	18%	29%	50%
	Not student disability	35%	44%	60%
Reading - NAEP, 8th grade				
	ALL students	28%	37%	55%
By race / ethnicity				
	White	30%	38%	55%
	Black	14%	25%	45%
By socioeconomic status				
	Eligible for Natl School Lunch Program	17%	27%	45%
	Not eligible for Natl School Lunch Program	38%	44%	55%
By gender				
	Male	23%	31%	45%
	Female	37%	43%	55%
By disability status				
	Student disability	7%	20%	45%
	Not student disability	29%	38%	55%

Note: Kentucky does not have a statistically significant percentage of other minority groups nor of English Language Learners on the above assessments

Note: ESEA assessments are under revision due to recent passage of Senate Bill 1. Once they are implemented in 2011-12, their targets will be determined consistent with the above projected student growth

(A)(1)(ii)(a) Student achievement in reading / language arts and mathematics

Demographic category	Demographic group	Baseline / most recent year	2014	2020
Mathematics - NAEP, 4th grade				
	ALL students	37%	46%	65%
By race / ethnicity				
	White	39%	50%	65%
	Black	14%	30%	55%
By socioeconomic status				
	Eligible for Natl School Lunch Program	21%	35%	55%
	Not eligible for Natl School Lunch Program	53%	58%	65%
By gender				
	Male	39%	49%	65%
	Female	34%	46%	65%
By disability status				
	Student disability	21%	35%	55%
	Not student disability	39%	49%	65%
Mathematics - NAEP, 8th grade				
	ALL students	27%	38%	55%
By race / ethnicity				
	White	29%	39%	55%
	Black	8%	23%	45%
By socioeconomic status				
	Eligible for Natl School Lunch Program	15%	27%	45%
	Not eligible for Natl School Lunch Program	38%	45%	55%
By gender				
	Male	30%	40%	55%
	Female	25%	37%	55%
By disability status				
	Student disability	7%	22%	45%
	Not student disability	29%	39%	55%

Note: Kentucky does not have a statistically significant percentage of other minority groups nor of English Language Learners on the above assessments

Note: ESEA assessments are under revision due to recent passage of Senate Bill 1. Once they are implemented in 2011-12, their targets will be determined consistent with the above projected student growth

(A)(1)(ii)(b) Achievement gaps in reading / language arts and mathematics

Demographic category	Demographic group	Baseline / most recent year	2014	2020
Reading - NAEP, 4th grade				
By race				
	Gap - Black and White	21	17	8
By socioeconomic status				
	Gap - Eligible and Not eligible	25	20	10
By gender				
	Gap - Male and Female	8	5	0
By disability status				
	Gap - Disability and Not disability	17	15	10
Reading - NAEP, 8th grade				
By race				
	Gap - Black and White	16	13	8
By socioeconomic status				
	Gap - Eligible and Not eligible	21	17	10
By gender				
	Gap - Male and Female	14	11	5
By disability status				
	Gap - Disability and Not disability	22	18	10

Note: Kentucky does not have a statistically significant percentage of other minority groups nor of English Language Learners on the above assessments

Note: ESEA assessments are under revision due to recent passage of Senate Bill 1. Once they are implemented in 2011-12, their targets will be determined consistent with the above projected student growth

(A)(1)(ii)(b) Achievement gaps in reading / language arts and mathematics

Demographic category	Demographic group	Baseline / most recent year	2014	2020
Mathematics - NAEP, 4th grade				
By race				
	Gap - Black and White	25	19	8
By socioeconomic status				
	Gap - Eligible and Not eligible	31	24	10
By gender				
	Gap - Male and Female	(5)	(3)	0
By disability status				
	Gap - Disability and Not disability	18	15	10
Mathematics - NAEP, 8th grade				
By race				
	Gap - Black and White	21	16	8
By socioeconomic status				
	Gap - Eligible and Not eligible	24	19	10
By gender				
	Gap - Male and Female	(5)	(4)	0
By disability status				
	Gap - Disability and Not disability	21	17	10

Note: Kentucky does not have a statistically significant percentage of other minority groups nor of English Language Learners on the above assessments

Note: ESEA assessments are under revision due to recent passage of Senate Bill 1. Once they are implemented in 2011-12, their targets will be determined consistent with the above projected student growth

(A)(1)(ii)(c) and (A)(1)(ii)(c) High school graduation and college enrollment and persistence

Demographic category	Demographic group	Baseline / most recent year	2014	2020
High school graduation (Averaged Freshman Graduation Rate)				
	ALL students	75%	80%	85%
College entrance				
	ALL students	55%	70%	80%
College persistence for one year				
	ALL students	71%	75%	85%
Percentage decrease in college remediation rates for freshmen				
	ALL students	N/A	50%	75%

Note: Kentucky is transitioning to the cohort graduation rate as described in more detail in criteria (A)(3). Kentucky does not currently have the capacity to disaggregate graduation rate by student subgroup and has a plan in place to address this, approved by USED.

Kentucky Race to the Top budgets and budget narratives

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Budget Summary Table and Narrative

Budget Part I: Budget Summary 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	$2,991,500	$2,992,420	$2,993,349	$2,899,500	$11,876,769
2. Fringe Benefits	$897,450	$897,726	$898,005	$869,850	$3,563,031
3. Travel	$311,050	$59,100	$59,100	$44,100	$473,350
4. Equipment	$492,648	$787,250	$0	$0	$1,279,897
5. Supplies	$466,000	$3,376,000	$2,301,000	$2,000	$6,145,000
6. Contractual	$24,789,250	$14,665,580	$16,019,410	$6,636,490	$62,110,730
7. Training Stipends	$0	$12,000	$12,000	$0	$24,000
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$29,947,898	$22,790,076	$22,282,864	$10,451,940	$85,472,777
10. Indirect Costs*	$657,906	$1,032,860	$881,455	$537,978	$3,110,199
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$5,985,000	$1,825,000	$1,825,000	$1,825,000	$11,460,000
13. Total Costs (lines 9-12)	$36,590,804	$25,647,935	$24,989,319	$12,814,918	$100,042,976
14. Funding Subgranted to Participating LEAs (50% of Total Grant)	$36,590,804	$25,647,935	$24,989,319	$12,814,918	$100,042,976
15. Total Budget (lines 13-14)	$73,181,607	$51,295,870	$49,978,638	$25,629,837	$200,085,952

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Budget Summary Narrative

Kentucky's reform plans are bold and aggressive, and will require significant investments of time, resources, and funding to ensure success. The Commonwealth is committed to implementing all of the plans described in this application. A Race to the Top grant award would enable the State to accelerate this work and complete all necessary reforms to lead to dramatic changes in student outcomes statewide. In addition to a Race to the Top grant award, Kentucky will leverage other sources of federal, state, local, and philanthropic funding to support the reform plans as noted within the project-level budget explanations below.

Given Kentucky's rural nature, and the fact that all of Kentucky's LEAs have fully signed on as participants in the Race to the Top implementation, the plans are such that the State is taking on a significant portion of the work to design and develop tools to support LEAs with implementation. The approach to creating the project-level budgets involved determining detailed estimates of the costs for the State's activities within each of the reform plans. The total budget to implement the plans detailed in this Race to the Top application is $200,085,952, including the 50% share for Participating LEAs.

Overview of project-level budgets

Kentucky has organized its reform plans and project management into the following seven projects:

- Project 1: Professional learning for teachers and principals
- Project 2: Statewide longitudinal data system
- Project 3: Continuous instructional improvement technology system
- Project 4: Effective teachers and leaders
- Project 5: Effectiveness of teacher and principal preparation programs
- Project 6: Educational Recovery for the lowest-achieving schools
- Project 7: Race to the Top project management

Project 1: Professional learning for teachers and principals

This project is associated with criteria (B)(3) and (D)(5) and outlines Kentucky's approach to professional learning through the development of professional networks, firstly to facilitate the transition to the new standards and assessments, and on an ongoing basis as a statewide infrastructure for rolling out statewide initiatives, sharing promising practices, and improving access to expertise for more remote regions. The costs of this work to the State that would be covered by a Race to the Top grant award are ~$32.8M.

The following activities are the primary cost drivers within this project:

- Building networks for professional learning for all educators, including postsecondary education faculty, that are firstly focused on deconstructing the new standards
- Engaging parents and community members through a broad-based public awareness campaign
- Increasing access to challenging coursework and STEM subject areas by expanding initiatives like AdvanceKentucky and Project Lead The Way
- Piloting a residency model for aspiring teachers

It is the State's expectation that a large portion of Participating LEAs' subgrants will be utilized for the activities included in this project. In particular, LEAs will cover the costs associated with sending representatives to network meetings, establishing strong professional learning teams at every school, providing ongoing, effective teacher and principal professional learning, and increasing access to challenging STEM courses through AdvanceKentucky and Project Lead The Way.

Project 2: Statewide longitudinal data system

This budget includes the costs associated with the expansion of the Kentucky Statewide Longitudinal Data System (KY SLDS) and access to and use of KY SLDS data, as described in the reform plan in section (C)(2). Kentucky submitted an application for the ARRA SLDS grant in December 2009. Given the highly competitive nature of the ARRA SLDS grant, following guidance from USED as relayed in the Race to the Top FAQ item M-4, Kentucky has included

the work and costs from the ARRA SLDS grant proposal in the Project 2 budget. All costs for this project are described in detail below, totaling ~$19.7M.

The following activities are the primary cost drivers within this project:

- Expanding the Kentucky Statewide Longitudinal Data System to include data from the Council on Postsecondary Education and the Education Professional Standards Board, early childhood data, and student financial aid and workforce data, as well ensuring effective data governance and data quality
- Improving accessibility to longitudinal data by providing role-based access to all stakeholders and improving the reports the Kentucky Department of Education produces
- Developing and implementing high-quality professional learning opportunities for stakeholders around how to access and use longitudinal data to improve student outcomes

The State plans to fund this work over the next four years with its portion of the Race to the Top award and the ARRA SLDS award should Kentucky be awarded those grants. Kentucky does not expect Participating LEAs to fund the statewide longitudinal data system development; however, Participating LEAs may augment State-provided training with additional local training related to data access and use.

Project 3: Continuous instructional improvement technology system

This project is associated with criteria (C)(3) and outlines Kentucky's approach to developing a continuous instructional improvement system (CIITS) available to teachers and principals online. Through the CIITS, every teacher and principal will have access to data on their students' learning and achievement, data on their own professional growth, and a variety of resources for curriculum, assessments, instruction, professional learning, and school improvement at their fingertips. The costs of this work to the State that would be covered by a Race to the Top grant award are ~$8.3M.

The following activities are the primary cost drivers within this project:

- Developing the CIITS infrastructure and the content to be integrated into the system (e.g., resources to deconstruct the standards)

- Developing professional learning opportunities / content for teachers and principals in accessing and using the CIITS and providing personnel at the regional networks to lead the implementation of this work
- Funding researchers / evaluators to access and use data from the CIITS and KY SLDS to identify effective practices in educating all of our students

It is the State's expectation that a large portion of Participating LEAs' subgrants will be utilized for the activities included in this project. In particular, LEAs will be responsible for using their subgrants to pay for their licenses to use the CIITS system once it is developed. Furthermore, LEAs will cover the costs associated with sending representatives to network meetings, establishing strong professional learning teams at every school, and providing ongoing, effective teacher and principal professional learning.

Project 4: Effective teachers and principals

This project is associated with criteria (D)(2) and (D)(3) and outlines Kentucky's approach to developing statewide evaluation systems for teachers and principals based on growth models that include multiple measures of effectiveness. The Wallace Foundation has supported this work, which was launched in 2009, and will continue to support Kentucky with the development of the teacher and principal growth models. Additional sources of funding for this work include Title II funding and Teacher Incentive Fund grants. The costs of this work to the State that would be covered by a Race to the Top grant award are ~$18.8M.

The following activities are the primary cost drivers within this project:

- Developing and implementing the growth models and accompanying evaluation system statewide
- Piloting innovative equitable distribution models in select districts
- Introducing the Teach For America program into Kentucky
- Increasing the quantity and quality of data collected in teachers' and principals' critical internship year

It is the State's expectation that a large portion of Participating LEAs' subgrants will be utilized for the activities included in this project. In particular, LEAs will cover the costs associated with the professional learning necessitated by the new statewide approach to evaluation (e.g., training for teacher and principal evaluators). Additionally, LEAs will cover the costs associated the implementing decision-making processes based on the new evaluation system and growth models. This will mean repurposing existing funding and allocating a portion of the Race to the Top subgrant.

Project 5: Effectiveness of teacher and principal preparation programs

This project is associated with criterion (D)(4) and outlines Kentucky's approach to developing the Effective Educator Preparation Index (EEPI) and the Effective Principal Preparation Index (EPPI) which measure and report the effectiveness of teacher and principal preparation programs, respectively. The costs of this work to the State that would be covered by a Race to the Top grant award are ~$3.9M.

The primary cost driver within this project is the development of the Indices, which utilize multiple measures to evaluate and report out on the effectiveness of Kentucky's teacher and principal preparation programs.

Project 6: Educational Recovery for the lowest-achieving schools

This project is associated with criterion (E)(2) and outlines Kentucky's approach to turning around the lowest-achieving schools in the Commonwealth. The majority of the costs of this project will be covered by federal School Improvement Grants and State School Improvement funds. The costs to the State that would be covered by a Race to the Top grant award are ~$7.2M.

The following activities are the primary cost drivers within this project:

- Creating Centers for Learning Excellence that facilitate and support Educational Recovery schools
- Developing and launching Educational Recovery Specialist and Leader endorsement programs

Project 7: Race to the Top project management

This project is associated with criterion (A)(2) and outlines Kentucky's approach to overall Race to the Top project leadership and management of the grant as detailed in section (A)(2). To ensure sufficient capacity at all levels of the education system, this project also includes funding to supplement Participating LEAs for whom the Title I formula may result in insufficient funding to fully implement Kentucky's Race to the Top plans. Furthermore, given Kentucky's focus on fostering innovation, Project 7 includes an "Innovation Fund" from which competitive grants will be awarded to LEAs who propose new, innovative projects with the aims of increasing student learning in their districts, as detailed in (A)(2). The costs of this work to the State that would be covered by a Race to the Top grant award are $9.4M.

The following activities are the primary cost drivers within this project:

- Creating a Race to the Top project management and facilitation role at the Kentucky Department of Education
- Developing and implementing project management processes to monitor the Race to the Top grant work
- Providing supplemental funding for LEAs that would need additional resources (beyond their share of the 50% subgrant) to fully implement all Race to the Top plans
- Providing additional innovation funding for LEAs that submit proposals detailing specific innovative projects

Approach to Participating LEAs with insufficient Title I shares

As noted in Project 7, due to the Title I funding formula method of subgranting 50% of a potential Race to the Top award to LEAs, the State will provide supplementary grants to Participating LEAs who have Race to the Top subgrants deemed insufficient to implement the Race to the Top plans as codified in the Memorandum of Understanding. Preliminary estimates identify approximately 30 LEAs in this category. In total, approximately $5,000,000 is required to ensure such LEAs have the estimated minimum funding level to fully implement the Race to the Top initiatives.

In addition, the Department intends to cultivate "bottom up" innovation that will advance the Commonwealth's reform plan by inviting interested LEAs to propose additional innovations that they would like to pursue under the aegis of Race to the Top in the scopes of work that the LEAs will be developing for review and approval by the Department *(see section (A)(2) for further detail)*. The Department recognizes that some LEAs will need to devote all of their Race to the Top allocations to carrying out the baseline expectations of the Commonwealth's reform plan. To ensure that all Participating LEAs who propose compelling and competitive innovations along the lines described above will be able to carry them out, the Department is budgeting a special fund of $2,500,000 within the State budget and will make it available to those LEAs who propose especially promising innovations but are not able to fund them out of their initial allocations due to the work they must do to meet the reform plan's universal expectations.

Approach to Participating LEAs with substantial Title I shares

As it is the Title I formula that is used to allocate the LEA subgrants across Participating LEAs, some Participating LEAs will have more than the projected amount of money to fully implement Race to the Top plans. LEAs that have substantial additional funds will work in partnership with the Kentucky Department of Education to craft a scope of work that directs these funds towards high-impact activities in the four assurance areas. This may include:

- Piloting innovative ideas that are described in the reform plans in this Race to the Top application at the district level
- Piloting innovative ideas developed at the district level above and beyond those already specified in the reform plans in the four assurance areas *(see (A)(2) for potential examples)*
- Creating infrastructure to appropriately link locally-developed approaches with statewide systems (for example, linking a district-developed formative assessment system into the CIITS described in (C)(3))

For LEAs with struggling schools, and Educational Recovery schools in particular, extra funding will be focused on school improvement and turnaround.

Project #1: Professional Learning for Teachers and Principals

Budget Part II: Project-Level Budget Table
Project Name: Professional Learning for Teachers and Principals
Associated with Criteria: (B)(3) & (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	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$5,400,000
2. Fringe Benefits	$405,000	$405,000	$405,000	$405,000	$1,620,000
3. Travel	$132,300	$44,100	$44,100	$44,100	$264,600
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$15,891,250	$2,012,500	$3,856,250	$2,366,250	$24,126,250
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$17,778,550	$3,811,600	$5,655,350	$4,165,350	$31,410,850
10. Indirect Costs*	$266,109	$253,673	$253,673	$253,673	$1,027,129
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$360,000	$0	$0	$0	$360,000
13. Total Costs (lines 9-12)	$18,404,659	$4,065,273	$5,909,023	$4,419,023	$32,797,979

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #1: Professional Learning for Teachers and Principals

This budget includes the costs associated with Kentucky's plans for professional learning to increase the effectiveness of all teachers and principals. Given the Commonwealth's focus on student learning, this work begins with the transition to the new standards and assessments as described in section (B)(3). While implementing the new standards and assessments is the leading edge of Kentucky's hybrid approach to professional learning (building professional networks and utilizing technology systems), this approach will be the statewide model on an ongoing basis, as described in section (D)(5). The total for the State's budget for Project 1 is ~$32.8M, with a detailed cost breakdown below.

All direct costs for this project fall under one of the following categories: "Personnel," "Fringe benefits," "Travel," and "Contractual," with the remaining costs falling within "Indirect Costs" and "Supplemental Funding for Participating LEAs." The costs described in detail below explain the portions of the State's work that the Race to the Top grant award would fund. However, much of the professional learning work going forward will be covered by LEAs' existing funds allocated toward professional learning and other training programs, as well as the LEAs' Race to the Top subgrant. Furthermore, the legislative changes affecting Kentucky's approach to professional learning will enable greater flexibility with teacher and principal time, enabling the provision of more efficient and effective professional learning experiences.

Line item 1: Personnel

Implementation Coordinators

- Purpose: The two Implementation Coordinators in each region will be staff of the Kentucky Department of Education and will lead, in partnership with Educational Cooperative staff, postsecondary education faculty, and content area experts, the network-based implementation of the transition to the new standards and assessments.
- The base salary for this position is $75,000, and there will be two Implementation Coordinators in each of the nine networks, or 18 Implementation Coordinators total. These are four-year positions, totaling $5,400,000 that will be charged to a potential Race to the Top grant award.

Line item 2: Fringe benefits

Implementation Coordinators

- The fringe benefit percentage is 30% to cover employee benefits. Applied to the total salary costs for 18 Implementation Coordinators for four-year terms as noted above, the total fringe benefit cost is $1,620,000 that will be charged to the potential Race to the Top grant award.

Line item 3: Travel

Core Oversight Team

- Purpose of travel: To provide technical assistance to 49 networks (there will be more networks over time for additional subject areas, but these will not be funded by the potential Race to the Top grant award.) The Core Oversight Team will provide training and support for facilitators and on-site Department staff leading networks on a monthly basis.
- Cost detail:

Travel costs include the average mile reimbursements of $100 per person and a per diem of $25 per person	*# of Trips*	*$ per Trip*	*Annual total*
During Year 1, three members of the Core Oversight Team will travel for in-person technical assistance sessions with network leaders monthly for 6 months. They will be on-site for 2 days.	3 members of the Core Oversight Team x 49 networks x 6 trips	$150	$132,300 for Year 1
During Years 2, 3, and 4, three members of the Core Oversight Team will travel for in-person technical assistance sessions with network leaders at two different times during the year. They will be on-site for 2 days	3 members of the Core Oversight Team x 49 networks x 2 trips	$150	$44,100 for Years 2, 3, 4

- The annual totals included above will apply for Project Years 1 through 4, totaling $264,600 that will be charged to a Race to the Top grant award. In the fourth year, this type of technical assistance will be assessed, and if still warranted, will be funded by the Kentucky Department of Education's budget for ongoing Senate Bill 1 implementation.

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Assessment literacy training series

- Purpose: The Kentucky Department of Education will hire contractors to provide training to every District Assessment Coordinator through face-to-face meetings and webinars as described in section (B)(3)
- Products and professional services included in this procurement: Development and facilitation of training sessions on new balanced assessment system (both in-person and via webinar) for all District Assessment Coordinators statewide
- Cost per procurement and time to be devoted to this project: $25,000 over four years ($10,000 in Year 1, $5,000 in Years 2, 3, and 4)

Unbridled Learning Summit

- Purpose: Governor Beshear, Robert King (Executive Director of the Council on Postsecondary Education), Commissioner Holliday of the Kentucky Department of Education and other leaders will hold joint keynotes during a media event tied to the Transforming Education in Kentucky initiative
- Products and professional services included in this procurement: Venue to hold conference, including necessary technology and equipment
- Cost: $50,000 for one-time conference

Educators' Online Learning Series

- Purpose: The Kentucky Department of Education will hire a contractor to develop online courses for educators to access during Summer 2010, e.g., "Introduction to KY's New Math and English/Language Arts Standards," "Deconstructing the New Standards," "Assessment Literacy," and "Interactive Teaching and Learning"
- Products and professional services included in this procurement: Development of online courses for educators
- Cost per procurement and time to be devoted to this project: $20,000

Refocus Instructional Support Network

- Purpose: The Kentucky Department of Education will hire a contractor to facilitate the refocusing of the existing Instructional Support Network so that it includes all P-16 instructional leaders (i.e., university staff, Educational Cooperatives, and other partners)
- Products and professional services included in this procurement:
    - Review of current Instructional Support Network infrastructure
    - Plan for expansion and refocusing of this Network
- Cost per procurement and time to be devoted to this project: $50,000 for a short-term project (likely 1 month)

Professional learning for postsecondary education faculty

- Purpose: The Council for Postsecondary Education will facilitate professional learning for postsecondary education faculty to ensure all understand the new standards and assessments.
- Products and professional services included in this procurement:
    - Development and facilitation of professional learning for postsecondary education faculty on the new standards and assessments
- Cost per procurement and time to be devoted to this project: $5,000,000

Evaluation of the network approach to professional learning

- Purpose: The Kentucky Department of Education will hire an external researcher to evaluate the effectiveness of the network approach to professional learning
- Products and professional services included in this procurement: Robust evaluation of new network-based approach to professional learning
- Cost per procurement and time to be devoted to this project: $300,000 over three years (Project Years 2-4)

Public engagement

- Purpose: The Prichard Committee will undertake a broad-based public awareness and engagement effort, including parent and community engagement around Senate Bill 1

- Products and professional services included in this procurement: Campaign may include:
  - Informational advertisements (paid, as opposed to public service announcements) for commercial and cable broadcast
  - Information distribution via social media
  - Meeting and conference presentations
  - One-day workshops
  - Intensive leadership training institutes for parents
  - Advocacy training for teachers
  - Dedicated Web sites
  - Print advertisements for statewide distribution
  - Print materials
  - Public appearances
  - Outreach to new and traditional media
- Cost per procurement: $3,500,000

AdvanceKentucky

- Purpose: The Kentucky Department of Education will work with the AdvanceKentucky program to expand its current program by about 20 schools each year
- Products and professional services included in this procurement:
  - Expansion of program to additional schools each year
  - Partnership with local districts and schools where program is implemented
  - Measurement of program's success in terms of student outcomes
  - See the (B)(3) reform plan for more detail on AdvanceKentucky
- Cost per procurement and time to be devoted to this project:
  - Year 1: $493,750
  - Year 2: $837,500
  - Year 3: $1,181,250
  - Year 4: $2,031,250
  - Annual amounts listed above are estimates of what the Race to the Top award would cover (a total of $4,543,750 over four years, which is approximately 50% of total costs of this program); all additional costs of this program will be covered

by grants from LEAs' subgrants, philanthropy, local district funding, and other sources of existing or repurposed funding

Project Lead The Way

- Purpose: The Kentucky Department of Education will work with the Project Lead The Way program to expand its current program by about 125 schools each year
- Products and professional services included in this procurement:
    - Expansion of program to additional schools each year
    - Partnership with local districts and schools where program is implemented
    - Measurement of program's success in terms of student outcomes
    - See the (B)(3) reform plan for more detail on Project Lead The Way
- Cost per procurement and time to be devoted to this project: $6,437,500 over four years, which is 25% of total costs of this program; all additional costs of this program will be covered by grants from LEAs' subgrants, philanthropy, local district funding, and other sources of existing or repurposed funding

Kentucky Virtual School

- Purpose: The Kentucky Department of Education will increase the number of rigorous courses available through the Kentucky Virtual School by 6 courses each year for four years, adding an additional 24 courses by 2014
- Products and professional services included in this procurement:
    - Development of content for additional courses, collaborating with statewide networks that are working on deconstructing the new standards and developing instructional tools
    - Programming of the online courses
- Cost per procurement and time to be devoted to this project: $5000 for each new course, totaling $120,000 over four years
- The estimated cost for each additional course is based on the costs of the courses that have already been developed for the Kentucky Virtual School

Teacher residency model pilots

- Purpose: The Kentucky Department of Education and the Education Professional Standards Board will work together to facilitate a Request for Proposal to select three partnerships between institutions of higher education and local districts to develop and pilot teacher residency programs
- Products and professional services included in this procurement:
    - Strong partnership between institution of higher education and local district to develop Professional Learning Schools
    - Development of curriculum / tasks for residency model
    - Application process for residency model
    - Summer immersion program
    - Stipends for support teachers and students
    - Agency and university support staff
    - Evaluation of residency model as a means of preparing teachers to be more effective in impacting student learning
- Cost per procurement and time to be devoted to this project:
    - $270,000 across three years for Professional Learning School development
    - $340,000 across three years to pilot curriculum and summer immersion program
    - $3,770,000 across three years for stipends and support staff for pilots
    - $200,000 for evaluation
    - Total of $4,580,000 will be covered by the Race to the Top grant award, with ongoing maintenance and operations covered by participants' tuition, the institutions of higher education, and local district partners

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$1.0M in indirect costs

Line item 12: Supplemental Funding for Participating LEAs

Developing professional learning teams

- Purpose of supplemental funding: Because school-based professional learning teams are critical for the implementation of Kentucky's network-based approach to professional learning, the Kentucky Department of Education will select 60 districts to receive mini-grants to hire consultants to support implementation of local professional learning teams (likely facilitators who have been trained in the *Classroom Assessment for Student Learning* model described in (B)(3)
- Cost detail:

Activity	*Cost*	*# of LEAs*	*Annual total*
Additional training for school leaders (e.g., master teachers, principals, etc.) to implement professional learning teams at their schools	$6000	60	$360,000

- The costs described above are one-time allocations to the LEAs who will receive this award; the total of $360,000 will be charged to the Race to the Top grant in Year 1 and will be augmented by local district funding to support professional learning teams on an ongoing basis
- These cost estimates are based off of Kentucky's prior work to establish professional learning teams

Project #2: Statewide longitudinal data system

Budget Part II: Project-Level Budget Table
Project Name: Statewide longitudinal data system
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	$92,000	$92,920	$93,849	$0	$278,769
2. Fringe Benefits	$27,600	$27,876	$28,155	$0	$83,631
3. Travel	$10,000	$15,000	$15,000	$0	$40,000
4. Equipment	$262,417	$787,250	$0	$0	$1,049,666
5. Supplies	$464,000	$3,374,000	$2,299,000	$0	$6,137,000
6. Contractual	$2,150,000	$4,424,000	$4,541,000	$0	$11,115,000
7. Training Stipends	$0	$12,000	$12,000	$0	$24,000
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$3,006,017	$8,733,046	$6,989,004	$0	$18,728,066
10. Indirect Costs*	$83,698	$494,881	$343,477	$0	$922,055
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$3,089,714	$9,227,927	$7,332,481	$0	$19,650,121

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #2: Statewide longitudinal data system

This budget includes the costs associated with the expansion of the Kentucky Statewide Longitudinal Data System (KY SLDS) and access to and use of KY SLDS data, as described in the reform plan in section (C)(2). Kentucky submitted an application for the ARRA SLDS grant in December 2009. Given the highly competitive nature of the ARRA SLDS grant, following guidance from USED as relayed in the Race to the Top FAQ item M-4, Kentucky has included the work and costs from the ARRA SLDS grant proposal in the Project 2 budget. All costs for this project are described in detail below, totaling ~$19.7M.

The following activities are the primary cost drivers within this project:

- Expanding the Kentucky Statewide Longitudinal Data System to include data from the Council on Postsecondary Education and the Education Professional Standards Board, early childhood data, and student financial aid and workforce data, as well ensuring effective data governance and data quality
- Improving accessibility to longitudinal data by providing role-based access to all stakeholders and improving the reports the Kentucky Department of Education ("the Department") produces
- Developing and implementing high-quality professional learning opportunities for stakeholders around how to access and use longitudinal data to improve student outcomes

The State plans to fund this work over the next four years with its portion of the Race to the Top award and the ARRA SLDS award should Kentucky be awarded those grants. Kentucky does not expect Participating LEAs to fund the statewide longitudinal data system development; however, Participating LEAs may augment State-provided training with additional local training related to data access and use.

All direct costs for this project fall under one of the following categories: "Personnel," "Fringe benefits," "Travel," "Equipment," "Supplies," "Contractual," and "Training Stipends," with the remaining costs falling within "Indirect Costs." The costs described in detail below explain the portions of the State's work that the Race to the Top grant award would fund.

Line item 1: Personnel

SLDS Executive Director

- Purpose / description: An MOA will be written to hire an executive director for the project for a duration of 3 years at a cost of $92,000 per year plus fringe benefits and a 1% annual cost of living increase.
- Salary / time allocation: 100% of 1 FTE's time; total cost of $278,770

Line item 2: Fringe benefits

SLDS Executive Director

- Fringe benefits will apply to the executive director at a rate of 30% for a total three year amount of $83,631.00

Line item 3: Travel

General and administrative travel

- Purpose / description: Travel required by project staff to elicit and capture project requirements, facilitate and oversee project execution activities and to gather feedback from user communities for reporting purposes, and travel required to initiate an ongoing online training program by first holding face to face and training and community-building sessions within each of 8 regional centers. These initial trainings will be provided to 3 persons from each district.
- Costs: In year one $10,000 will be allocated for necessary travel expenses, and in years two and three this expense is estimated to increase to $15,000 per year to accommodate the increased travel requirements associated with marketing and training for partners and stakeholders. Total for three years is $40,000

Line item 4: Equipment

Note: All nonexpendable personal property items with an acquisition cost of $5,000 or more are classified as Equipment. So are tracked items with an acquisition cost under $5,000, such as personal computers; however, these are to be expensed at time of purchase.

Hardware

Equipment needs have been estimated based on the following six out of the nine workstreams which will need additional hardware: identity management, state data audit system, re-engineering existing feeder systems, new data and reports, user accessible metadata repository, and technical training. With regard to server costs specifically, all Department server estimates are based on IBM 3650's of varying configurations. Hardware needs total $1,049,666 are broken down as follows:

- Identity management – 26 servers; 3 direct attached storage devices, 1 router switch, and 1 load balancer totaling (Total $230,231)
- State Data Audit System – 7 servers (Total $37,001)
- Re-engineering Existing Feeder Systems – 39 servers and workstations, 2 direct attached storage devices, 3 blade enclosures, and other equipment (Total $ $576,757)
- New data and Reports – 19 servers, 1 direct attached storage device, 1 router switch, and 1 load balancer (Total $161,430)
- Metadata Repository – 5 servers (Total $25,099)
- Technical training – 4 servers (Total $19,148)

In year one 25% of hardware budget will be expended with the remainder being expended in year two.

Line item 5: Supplies / software

General administrative supplies

- Purpose / description: General and administrative supplies are estimated to be $4,000 per year and will be prorated among the participating agencies depending upon the need for additional resources to support the project.
- An additional $10,000 in year one, and $20,000 in each of the remaining two years of the project will be used for the production and printing of training materials and information packets.
- Cost: $62,000

Data model software modified/purchased/built

- Purpose / description: In the first year of the project the data model software will be modified, purchased or built to include the new data sources, estimated to cost $250,000 the first year and $150,000 in each of the final two years with Kentucky absorbing 50% of the cost of year three ($75,000)
- Cost: $250,000 in Year 1, $150,000 in Year 2, and $75,000 in Year 3 for a total of $475,000

Additional software licenses for partners (e.g., the Council on Postsecondary Education and the Education Professional Standards Board)

- Purpose / description: Additional software licenses; including the business intelligence software, will be required as new partners are incorporated into the Collaborative. $100,000 in y ear one and $200,000 in year two and three
- Cost: $500,000

Application level software

- Purpose / description: It is estimated that in year one $100,000 will be spent on application level software including, but not limited to, applications such as SQL Server, ASP, IIS, etc. Associated costs for identity management software in year two is estimated to be $3 million and in year three $2 million.
- Cost: $5.1M

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

The total amount requested for contractual expenditures is $11,115,000. Of this total, $2,150,000 is estimated to be expended in year one, $4,424,000 in year two, and $4,541,000 in year three. Contractual costs are made up of two general areas: contractual 3rd party vendor costs, and contractual personnel costs. For contractual 3rd party vendor needs, vendors will be engaged to develop the focus groups, professional services for the data audit and governance review,

training development and delivery, and physical hosting services provided by the Commonwealth Office of Technology or similar entity. Additionally, research vendors will be utilized as needed to provide conceptual and methodological assistance in the combining of data and the generating reports. These costs are estimated to total $2,370,000. For contractual personnel needs, Kentucky will contract with technical resource personnel as necessary for implementing the various work streams described in the project narrative. Care has been taken to budget for these FTEs only when their work is actually anticipated as reflected in the yearly budget figures. Estimates for 3rd party vendor services are based on a time and materials model and include roles at a fully burdened contractor rate of $120,000 per year. These costs are estimated to total $8,745,000.

Project Manager (5)

- The scope of the effort will require multiple Project Managers. The Project Manager's responsibilities will include overseeing and helping to ensure that the activities associated with the portion of the project they are assigned to are completed on time within budget and adhere to high quality standards that meet the Commonwealth's expectations.
- The initial Project Manager will be responsible for overseeing the advance planning and focus group design and implementation in year one and will shift to overseeing the re-engineering and updating of existing feeder systems. Duties will also include responsibility for enhancement of the KY KSLDS and user accessible data dictionary.
- The second and third Project Managers will be hired in the 3rd quarter of the first year. The second Project Manager will be directly responsible for the identity management design and implementation workstream and will remain assigned to this work stream through to the end of the project. The third Project Manager will initially concentrate on the state data audit system, and then transition to the development and implementation of the comprehensive training capability and will remain assigned to this work stream through to the end of the project. It is likely that the second and third Project Managers will be personnel provided by the vendors as part of the contracts secured.
- The fourth and fifth Project Managers will be hired during the 2nd quarter of year one and will be housed at Education Professional Standards Board and the Council on Postsecondary Education respectively to oversee the feeder system re-engineering at each

respective agency and will remain assigned to those respective work streams through to the end of the project.

- The total amount requested for project management expenditures is $1,470,000. Of this total, $300,000 is estimated to be expended in year one, $600,000 in year two, and $570,000 in year three.

Business Analysts (5)

- As with the Project Management need, the scope of the effort will require multiple Business Analysts to effectively elicit, capture, and verify the business, functional, and technical requirements related to the work streams that make up the project.
- The initial Business Analyst will be hired at the beginning of year one and will help elicit capture and analyze business requirements from focus group sessions in order to complete the initial advance planning phase of the project. This individual will then begin working with agency-focused Business Analysts to carry out the modification of existing feeder systems work and later the addition of new data sources work.
- The second Business Analyst will be assigned to the identity management work stream and will be hired in the 3rd quarter of year one.
- The third business analyst will also be hired in the 3rd quarter of year one and work specifically with the one-time data audit and then later, focus on the establishment of the state data audit system.
- The fourth and fifth Business Analysts will be hired during the 2nd quarter of year one and will be housed at the Education Professional Standards Board and the Council on Postsecondary Education respectively to focus on the feeder system re-engineering efforts at each respective agency and will continue through to the end of the project.
- The total amount requested for business analysis expenditures is $1,500,000. Of this total, $300,000 is estimated to be expended in year one, $600,000 in year two, and $600,000 in year three.

Data Analysts (3)

- At the beginning of year one of the project one Data Analyst will be hired to work specifically with the planning and focus group processes and then shift focus to the re-

engineering and new data reports work streams of the project. This individual will become a permanent member of the KY SLDS staff and Kentucky will absorb 25% of this individual's salary in the third year of the grant

- A second Data Analyst will be brought on board in the 3rd quarter of the first year to specifically address the one time data audit and establishment of the state data audit system. This individual will also become a permanent member of the KY SLDS and Kentucky will absorb 25% of the salary in year three.
- The third data analyst will be hired for years two and three and will work specifically with the metadata repository.
- Year one costs $150,000; Year two costs $360,000; Year three costs $300,000.

Database Administrator (3)

- In the 1st quarter of year two a database administrator will be hired to work on the re-engineering of feeder systems and the creation of new data reports.
- In the 2nd quarter of year two a second database administrator will be brought on board to work specifically on the state data audit system.
- A third database administrator will come on board at the beginning of the project with CPE to assist with the internal re-alignment and consolidation of CPE and KYAE's databases.
- Year one costs $120,000; Year two costs $330,000; Year three costs $360,000.

Application Developers (4)

- Four application developers are needed to help re-engineer data collection at each agency in order to prepare the additional feeder systems and incorporate the data into the KY SLDS. These positions will begin during the 3rd quarter of year one and be held for years 2 and 3 of the grant.
- Year one costs $240,000. Year two costs $480,000. Year three costs $480,000.

Report Developers (3)

- Two report developers will be needed beginning in year two to address reports for the new data being collected within the KY SLDS. A third report developer will be hired in the 3rd quarter of year two to work specifically with the state data audit system.
- Year one costs $0; Year two costs $330,000; Year three costs $360,000.

Trainers (2)

- A training coordinator will be hired, at a rate of $75,000 per year, in year two to lead the comprehensive KY SLDS training which will be developed by an outside vendor. The training coordinator will be responsible for providing comprehensive training to regional training facilitators *(see Training Stipends section)*
- In year two, a technical trainer, hired at a rate of $60,000 per year will also be needed to provide training for the ad hoc reporting tool and will also work with the outside vendor designing the training.
- Year one $0 Year two costs $135,000; Year three costs $135,000

Implementation Support (1)

- It is anticipated that a designated implementation support person will need to be available to assist with troubleshooting and leading test efforts on the project.
- Year one costs $60,000; Year two costs $60,000; Year three costs $60,000

Mainframe Developer (1)

- A mainframe developer is needed to write the interface of the Workforce Development's feeder systems and new data and report work and will be hired in the 3rd quarter of year one.
- Year one costs $30,000; Year two costs $120,000; Year three costs $120,000.

ETL Developer (4)

- Four ETL developers will be needed beginning in year two of the overall project. Two of these positions will support the extraction of new data and reports and two will be assigned to the state data audit system development and implementation. These latter two

ETL developers will become permanent KY SLDS staff and Kentucky will pay 25% of their salary in year three of the project.

- Year one costs $240,000; Year two costs $480,000; Year three costs $420,000.

Systems Analysts (2)

- The two systems analysts will be brought on board in the 3rd quarter of year one and will remain through the completion of the project. Their work will focus on updating and re-engineering of the feeder systems and the state data audit system.
- Year one costs $60,000. Year two costs $150,000. Year three costs $120,000.

Help Desk Personnel (1)

- The implementation of the electronic certification system will require a temporary increase in help desk personnel to assist educators with logins and other technical assistance. This position will be held in the third year of the grant.
- Year one costs $0. Year two costs $0. Year three costs $75,000.

Detailed table with contractual detail:

Contractor position	Details	Total Year 1	Total Year 2	Total Year 3	TOTAL
Project Manager 1	(Advance & overall Planning, Data Source re-engineering, New KSLDS Data & Rpts). Transition 25% of salary to operations in Year 3	$ 120,000	$ 120,000	$ 90,000	$330,000
Project Manager 2	(Begin Yr 1, Q3, Identity Mngt)	$ 30,000	$ 120,000	$ 120,000	$270,000
Project Manager 3	(Begin Yr 1, Q3, One Time Audit, then State Audit System along w/ Comprehensive KSLDS Training effort)	$ 30,000	$ 120,000	$ 120,000	$270,000
Project Manager 4	(EPSB Data Source Re-engineering)	$ 60,000	$ 120,000	$ 120,000	$300,000
Project Manager 5	(CPE Data Source Re-engineering)	$ 60,000	$ 120,000	$ 120,000	$300,000
BA 1	(Advance & overall Planning, Data Source re-engineering, New KSLDS Data & Rpts)	$ 120,000	$ 120,000	$ 120,000	$360,000
BA 2	(Begin Yr 1, Q3, Identity Mngt)	$ 30,000	$ 120,000	$ 120,000	$270,000
BA 3	(Begin Yr 1, Q3, One Time Data Audit, then, Data Audit QA system)	$ 30,000	$ 120,000	$ 120,000	$270,000
BA 4	(EPSB Data Source Re-engineering)	$ 60,000	$ 120,000	$ 120,000	$300,000
BA 5	(CPE Data Source Re-engineering)	$ 60,000	$ 120,000	$ 120,000	$300,000

Data Analyst 1	(Begin Yr 1, remain through project. Position initially focuses on planning and focus group requirements phase, then shifts to re-engineering of existing systems, and then shifts to the and new data and reports phase. Transition 25% of salary to operations in year 3.)	$ 120,000	$ 120,000	$ 90,000	$330,000
Data Analyst 2	(Begin Yr 1 Q3, remain through project. Position initially focuses on the one time audit of KSLDS processes and data, and then shifts to the ongoing data audit system work. Transition 25% of salary to operations in year 3.)	$ 30,000	$ 120,000	$ 90,000	$240,000
Data Analyst 3	(Begin Yr 2, remain through project. Position focuses soley on user accessible metadata repository work.)		$ 120,000	$ 120,000	$240,000
Database Administrator 1	(Work on reengineering of feeder systems – same person moves to new data reports work).		$ 120,000	$ 120,000	$240,000
Database Administrator 2	(State data audit system, begins year 2, second quarter)		$ 90,000	$ 120,000	$210,000
Database Administrator 3, (CPE)		$ 120,000	$ 120,000	$ 120,000	$360,000
Application Developer 1		$ 60,000	$ 120,000	$ 120,000	$300,000
Application Developer 2		$ 60,000	$ 120,000	$ 120,000	$300,000
Application Developer 3		$ 60,000	$ 120,000	$ 120,000	$300,000
Application Developer 4		$ 60,000	$ 120,000	$ 120,000	$300,000
Report Developer 1	(New Data and Reports, begins year 2)		$ 120,000	$ 120,000	$240,000
Report Developer 2	(New Data and Reports, begins year 2)		$ 120,000	$ 120,000	$240,000
Report Developer 3	New Data and Reports, (Focus on state data audit, begins year 2, Q2)		$ 90,000	$ 120,000	$210,000
Training Coordinator	(Focus on comprehensive training, begin Yr 2)		$ 75,000	$ 75,000	$150,000
Technical Trainer	(Technical training for ad hoc reporting tool – working with outside vendor who develops training. Begins Yr 2)		$ 60,000	$ 60,000	$120,000
Mainframe Developer	(Focus initially on re-engineering of existing feeder systems, then transition to new data and reports), Begin Yr 1, Q3, remain for rest of project)	$ 30,000	$ 120,000	$ 120,000	$270,000
ETL Developer 1	(Focus on new data and reports. Begin Yr 2)	$ 120,000	$ 120,000	$ 120,000	$360,000
ETL Developer 2	(Focus on new data and reports. Begin Yr 2)	$ 120,000	$ 120,000	$ 120,000	$360,000

ETL Developer 3	(Focus on state data audit system. Begin Yr 2). Transition 25% of salary to operations in year 3.	$ -	$ 120,000	$ 90,000	$210,000
ETL Developer 4	(Focus on state data audit system. Begin Yr 2). Transition 25% of salary to operations in year 3.	$ -	$ 120,000	$ 90,000	$210,000
Systems Analyst 1	(Initially focuses on one time audit of data and processes, then transitions to state data audit system work. Begins Yr 1 Q3).	$ 30,000	$ 120,000	$ 120,000	$270,000
Systems Analyst 2	(Focuses only on re-engineering existing feeder systems. Begins Yr 1 Q3, works for 6 months through 1st quarter of Y2).	$ 30,000	$ 30,000		$60,000
Implementation Support		$ 60,000	$ 60,000	$ 60,000	$180,000
Help Desk		$ -	$ -	$ 75,000	$75,000
Physical Hosting, Operating Systems, Patching, Monitoring		$ -	$ 204,000	$ 366,000	$570,000
Professional Services for Data Audit		$ 250,000			$250,000
Professional Services for Training Development		$ -	$ 375,000	$ 375,000	$750,000
Data Governance Contractual		$ 250,000	$ -	$ -	$250,000
Focus Group Contractual		$ 50,000	$ -	$ -	$50,000
Research Contractual	(Advance & overall Planning, Data Source re-engineering, New KSLDS Data & Rpts). Transition 25% of salary to operations in Year 3	$ 100,000	$ 200,000	$ 200,000	$500,000
TOTALS		$ 2,150,000	$ 4,424,000	$ 4,541,000	$11,115,000

Line item 7: Training Stipends

- Training on the local education association level on the use of the KY SLDS will be facilitated in year two and three by 10 independent trainers located within the districts and universities. These trainers will conduct up to 4 face-to-face or on-line training sessions for district technology coordinators and school administrators during years two and three of the grant at a cost of $24,000 based on a rate of $300 per day.

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$0.9M in indirect costs

Project #3: Continuous instructional improvement technology system

Budget Part II: Project-Level Budget Table **Project Name:** Continuous Instructional Improvement Technology System (CIITS) **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	$724,500	$724,500	$724,500	$724,500	$2,898,000
2. Fringe Benefits	$217,350	$217,350	$217,350	$217,350	$869,400
3. Travel	$168,750	$0	$0	$0	$168,750
4. Equipment	$230,231	$0	$0	$0	$230,231
5. Supplies	$2,000	$2,000	$2,000	$2,000	$8,000
6. Contractual	$1,003,000	$1,066,000	$836,000	$686,000	$3,591,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$2,345,831	$2,009,850	$1,779,850	$1,629,850	$7,765,381
10. Indirect Costs*	$156,877	$133,083	$133,083	$133,083	$556,125
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)	$2,502,708	$2,142,933	$1,912,933	$1,762,933	$8,321,506
Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.					

Project #3: Continuous instructional improvement technology system

This budget includes the costs associated with the development and implementation of the Continuous Instructional Improvement Technology System (CIITS), as described in the reform plans in section (C)(3) *(with relevant additional description in (B)(3) and (C)(5))*. Through the CIITS every teacher and principal will have access to data on their students' learning and achievement, data on their own professional growth, and a variety of resources for curriculum, assessments, instruction, professional learning, and school improvement at their fingertips. The costs of this work to the State that would be covered by a Race to the Top grant award are ~$8.3M and are described below. The Kentucky Department of Education ("the Department") will use RTTT dollars to fund the development of the system and high-quality professional learning, and LEAs will use part of their allocations to implement the system across every classroom and school.

The following activities are the primary cost drivers within this project:

- Developing the Continuous Instructional Improvement Technology System infrastructure and the content to be integrated into the system (e.g., resources to deconstruct the standards)
- Developing professional learning opportunities / content for teachers and principals in accessing and using the CIITS and providing personnel at the regional networks to lead the implementation of this work
- Funding researchers / evaluators to access and use data from the CIITS and KY SLDS to identify effective practices in educating all of our students

It is the State's expectation that a large portion of Participating LEAs' subgrants will be utilized for the activities included in this project. In particular, LEAs will be responsible for using their subgrants to pay for their licenses to use the CIITS system once it is developed. Furthermore, LEAs will cover the costs associated with sending representatives to network meetings, establishing strong professional learning teams at every school, and providing ongoing, effective teacher and principal professional learning.

All direct costs for this project fall under one of the following categories: "Personnel," "Fringe benefits," "Travel," "Equipment," "Supplies," and "Contractual," with the remaining costs falling within "Indirect Costs." The costs described in detail below explain the portions of the State's work that the Race to the Top grant award would fund.

Line item 1: Personnel

Project sponsor

- Purpose / description: the Project Sponsor will be the principal director for the implementation of the continuous improvement system; accept and sign off on all project deliverables and reports; determine when business processes should change; have authority to enact required changes; determine whether the project implementation is meeting expectations.
- Salary / time allocation: 20% of 1 FTE's time with annual salary of $122,000 will cost $24,000 each year for four years totaling $96,000

Administrative assistant

- Purpose / description: the Administrative Assistant will help the project sponsor and the Department project team by maintaining schedules, setting up meetings, creating purchase requests, and other duties as assigned.
- Salary / time allocation: 50% of 1 FTE's time with annual salary of $51,000 will cost $25,500 each year for four years totaling $102,000

CIITS Implementation Coordinators

- Purpose / description: The Implementation Coordinator in each region will be staff of the Kentucky Department of Education and will lead, in partnership with Educational Cooperative staff, postsecondary education faculty, and content area experts, the network-based implementation of the CIITS
- The base salary for this position is $75,000, and there will be one Implementation Coordinator in each of the nine networks, or 9 Implementation Coordinators total. These are four-year positions, totaling $2,700,000 that will be charged to a potential Race to the Top grant award.

Line item 2: Fringe benefits

Project sponsor

- Project Sponsor fringe benefits – with a fringe benefit percentage of 30% this will cost $7,200 per year (30% of $24,000 annual cost) for four years totaling $28,800

Administrative assistant

- Administrative Assistant fringe benefits – with a fringe benefit percentage of 30% this will cost $7,650 per year (30% of $25,500 annual cost) for four years totaling $30,600

Implementation coordinator

- Implementation Coordinator fringe benefits – with a fringe benefit percentage of 30% applied to the salary costs for 9 Implementation Coordinators for four-year terms as noted above, the total fringe benefit cost is $810,000 that will be charged to the potential Race to the Top grant award.

Line item 3: Travel

Training

- Purpose / description: Travel provided to staff from 8 regional centers and Jefferson County Public Schools for initial face-to-face training on the Continuous Instructional Improvement Technology System. 5 staff from each will participate in an ongoing series of training in order to become proficient not just in using the system, but to use it in order to impact instruction and improvement at the student, educator, and administrator levels.
- Number of trips and costs: 25 x 45 people will attend; each trip will cost $150 totaling $168,750 during Year 1 only

Line item 4: Equipment

Note: All nonexpendable personal property items with an acquisition cost of $5,000 or more are classified as Equipment. So are tracked items with an acquisition cost under $5,000, such as personal computers; however, these are to be expensed at time of purchase.

Hardware

Hardware needs totaling $230,231 are broken down as follows:

- Servers required for Web, Application and Database - $6,000 per server for 26 servers totaling $156,910 in Year 1 only
- Load Balancers, Switch Router Cards - $25,621 in Year 1 only
- Direct Attached Storage Devices (250 GB HDD) - $15,900 per storage device for 3 storage devices totaling $47,400 in Year 1 only

Line item 5: Supplies

General administrative supplies

- Purpose / description: Includes office supplies such as pens, paper, binders, etc.
- Cost: Estimated to be in the amount of $2,000/year which may vary depending on the amount needed to support the project, for four years totaling $8,000

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Vendor Management and Oversight Services

- Products and professional services included in this procurement: Project Management; communication and client engagement including working with the Department project management and staff; business analysis
- Cost: $450,000 in Years 1 and 2, $300,000 in Year 3, and $150,000 in Year 4 totaling $1,350,000

Vendor Development Services

- Products and professional services included in this procurement: Integration services for system and data; product customization and/or new development
- Cost: $115,000 in Year 1, $100,000 in Year 2, and $20,000 in Years 3 and 4 totaling 255,000

Hosting

- Products and professional services included in this procurement: Physical hosting operations support and system software upgrades. 1st year represents half planned hardware.
- Cost: $78,000 in Year 1, then $156,000 in Years 2, 3, and 4 totaling $546,000

Kentucky Department of Education Project Manager

- Purpose / description: the Department project manager will represent KDE's interests; observe and maintain project schedule, budget, scope; interact with vendor project manager; ensure effective communication with Department leadership regarding project implementation; provide regular status reports; escalate issues
- Cost: $120,000 per year for four years totaling $480,000

Kentucky Department of Education Business Analyst

- Purpose / description: the Department business analyst will work with stakeholders to develop and finalize requirements and design; review and suggest new policies or updates to existing policies; coordinate stakeholder and content area involvement in all aspects of the project
- Cost: $120,000 per year for four years totaling $480,000

Kentucky Department of Education Project Manager

- Purpose / description: Day-to-day owner of non-IT aspects of the business program; primary spokesperson and communicator of the application business vision; advises project sponsor regarding acceptance and approval of project deliverables; determines business rules, functional requirements and system priorities
- Cost: $120,000 per year for four years totaling $480,000

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$0.6M in indirect costs

Project #4: Effective Teachers and Leaders

Budget Part II: Project-Level Budget Table
Project Name: Effective Teachers and Leaders
Associated with Criteria: (D)(2) & (D)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$675,000	$675,000	$675,000	$675,000	$2,700,000
2. Fringe Benefits	$202,500	$202,500	$202,500	$202,500	$810,000
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$485,000	$5,468,080	$2,241,160	$3,039,240	$11,233,480
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,362,500	$6,345,580	$3,118,660	$3,916,740	$14,743,480
10. Indirect Costs*	$123,728	$123,728	$123,728	$123,728	$494,910
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$1,200,000	$1,200,000	$1,200,000	$3,600,000
13. Total Costs (lines 9-12)	$1,486,228	$7,669,308	$4,442,388	$5,240,468	$18,838,390

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #4: Effective Teachers and Leaders

This budget includes the costs associated with Kentucky's plans to increase the effectiveness of teachers and principals statewide, including the development and implementation of new teacher and principal evaluation systems based on growth models that include multiple measures of effectiveness. With the generous support of the Wallace Foundation, Kentucky's work in this area has already begun. The Race to the Top grant award will accelerate this work and enable Kentucky to make significant progress with the plans described in sections (D)(2) and (D)(3). The State's total budget for Project 4 is ~$18.8M, comprised of the costs detailed below.

All direct costs for this project fall under the "Personnel," "Fringe Benefits," and "Contractual" categories, with the remaining cost falling within "Indirect Costs" and "Supplemental Funding for Participating LEAs." The costs described in detail below explain the portions of this work that the Race to the Top grant award would fund. These are primarily for the development and initial trials and rollout of the growth models and evaluation systems. However, much of the local professional learning work described in the plans will be covered by LEAs' existing funds allocated toward professional learning and teacher and principal evaluation.

Line item 1: Personnel

Teacher and principal effectiveness Implementation Coordinators

- Purpose: The Implementation Coordinator in each region will be staff of the Kentucky Department of Education and will lead, in partnership with Educational Cooperative staff, postsecondary education faculty, and content area experts, the network-based implementation of the new teacher and principal effectiveness initiatives.
- The base salary for this position is $75,000, and there will be one Implementation Coordinators in each of the nine networks, or 9 Implementation Coordinators total. These are four-year positions, totaling $2,700,000 that will be charged to a potential Race to the Top grant award.

Line item 2: Fringe benefits

Implementation Coordinators

- The fringe benefit percentage is 30% to cover employee benefits. Applied to the total salary costs for 9 Implementation Coordinators for four-year terms as noted above, the total fringe benefit cost is $810,000 that will be charged to the potential Race to the Top grant award.

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Creating teacher and principal indices

- Purpose: The Kentucky Department of Education will hire contractors to develop the teacher and principal indices (i.e., creating the formulaic approach to rolling up the multiple measures into indices and four rating categories)
- Products and professional services included in this procurement:
    - Teacher indices / rubrics that show how multiple performance measures map to each of four rating categories
    - Principal indices / rubrics that show how multiple performance measures map to each of four rating categories
- Cost per procurement and time to be devoted to this project: $100,000 in Year 1

Scoring of teacher evaluations

- Purpose: The Kentucky Department of Education will hire a contractor to conduct the scoring of the teacher evaluations. This contractor will have expertise in teacher evaluation processes and analysis.
- Products and professional services included in this procurement:
    - Scoring of the evaluations for each teacher utilizing the formula described in the line item above ("teacher indices")
    - Advisory services to the vendor that develops the Continuous Instructional Improvement Technology System so that eventually all teacher evaluation data is available through that system

- Cost per procurement and time to be devoted to this project: $30 per teacher evaluated
    - Year 2: 15,000 teachers evaluated = $450,000
    - Year 3: 30,000 teachers evaluated = $900,000
    - Year 4: 45,000 teachers evaluated = $1,350,000
    - Total of $2,700,000 for teacher evaluation scoring during the developmental and rollout phases of this work to be covered by a Race to the Top award grant; ongoing costs of evaluation will be covered by local district and state funding for teacher effectiveness
- The estimate of $30 per teacher was developed based on current estimates as part of the Wallace Foundation grant

Scoring of principal evaluations

- Purpose: The Kentucky Department of Education will hire a contractor to conduct the scoring of the principal evaluations. This contractor will have expertise in principal evaluation processes and analysis.
- Products and professional services included in this procurement:
    - Scoring of the evaluations for each principal utilizing the formula described in the line item above ("principal indices")
    - Advisory services to the vendor that develops the Continuous Instructional Improvement Technology System so that eventually all principal evaluation data is available through that system
- Cost per procurement and time to be devoted to this project: $360 per principal evaluated
    - Year 2: 412 principals evaluated = $148,080
    - Year 3: 824 principals evaluated = $296,160
    - Year 4: 1,234 principals evaluated = $444,240
    - Total of $888,480 for principal evaluation scoring during the developmental and rollout phases of this work to be covered by a Race to the Top award grant; ongoing costs of evaluation will be covered by local district and state funding for principal effectiveness
- The estimate of $360 per principal was developed based on current estimates as part of the Wallace Foundation grant

Teach For America

- Purpose: The Kentucky Department of Education will partner with Teach For America to expand alternative pathways into teaching in the hard to staff areas in rural Eastern Kentucky and in Jefferson County
- Products and professional services included in this procurement:
    - Beginning in 2011, 30 additional teachers each year for hard to staff positions in rural Eastern Kentucky
    - Beginning in 2012, 30 additional teachers each year for hard to staff positions in Jefferson County
- Cost per procurement and time to be devoted to this project:
    - Year 1: $385,000
    - Year 2: $520,000
    - Year 3: $1,045,000
    - Year 4: $1,245,000
    - Total of $3,195,000 to be covered by Race to the Top grant award to launch the program; ongoing costs will be covered by local district and state funding
- Please see the (D)(3) reform plan narrative for more detail on the plan for Kentucky's partnership with Teach For America

Redevelop and reconstruct the Intern Management System

- Purpose: The Education Professional Standards Board will hire a vendor to redevelop and reconstruct data collection on the Kentucky Teacher Intern Program and the Kentucky Principal Intern Program to inform future programmatic decisions. These data will be housed in the Intern Management System
- Products and professional services included in this procurement:
    - Purchasing of necessary hardware and software for the Intern Management System
    - Analysis of the new growth model evaluation system data available, and integration of these data into the Intern Management System
- Cost per procurement and time to be devoted to this project:

- $3,140,000 for both the teacher and principal intern data collection. This total will be covered by the Race to the Top grant award, with the minimal ongoing costs covered by existing funds in the Education Professional Standards Board's budget
- $1,210,000 to reconstruct the Intern Management System to streamline it with other data systems to be developed *(see (C)(2) and (C)(3) for more detail)*

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$0.5M in indirect costs

Line item 12: Supplemental Funding for Participating LEAs

Developing professional learning teams

- Purpose of supplemental funding: The Kentucky Department of Education will develop a competitive grant program for districts to develop pilots for equitable distribution of highly-effective and effective teachers and principals
- Cost detail:

Activity	*Cost*	*# of LEAs*	*Annual total*
Equitable distribution pilots (may include financial incentive programs, loan forgiveness, etc.)	$300,000 per year	4	$1,200,000

- The grants described above will be given for three years to selected Participating LEAs, totaling $3,600,000 that will be charged to the Race to the Top grant over Years 2, 3, and 4

Project #5: Effectiveness of teacher and principal preparation programs

Budget Part II: Project-Level Budget Table
Project Name: 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	$0	$0	$0	$0	$0
2. Fringe Benefits	$0	$0	$0	$0	$0
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$1,700,000	$1,150,000	$1,000,000	$0	$3,850,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,700,000	$1,150,000	$1,000,000	$0	$3,850,000
10. Indirect Costs*	$0	$0	$0	$0	$0
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$0	$0	$0	$0	$0
13. Total Costs (lines 9-12)	$1,700,000	$1,150,000	$1,000,000	$0	$3,850,000

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #5: Effectiveness of teacher and principal preparation programs

This budget includes the costs associated with the development of the Effective Educator Preparation Index (EEPI) and the Effective Principal Preparation Index (EPPI) for teacher and principal preparation programs, as described in the reform plans in section (D)(4). All costs for this project fall under the "Contractual" category, and are described in detail below. The Race to the Top grant award would fund the development and trial period of the tools described in (D)(4), with the ongoing costs covered by the Education Professional Standards Board's budget. The State's total budget for Project 5 to be covered by Race to the Top is ~$3.9M.

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Development of the Effective Educator Preparation Index for teacher preparation programs

- Purpose: Kentucky's Education Professional Standards Board will procure a vendor(s) to develop an Effective Educator Preparation Index that measures the effectiveness of teacher preparation programs as described in section (D)(4)
- Products and professional services included in this procurement:
    - Project management to serve as liaison with the Education Professional Standards Board and to facilitate development of the Effective Educator Preparation Index for teacher preparation programs
    - Required hardware and/or software for development of the Effective Educator Preparation Index for teacher preparation programs
    - Program developer(s) and data analyst(s)
    - Training for state-level and university staff on how to utilize the Effective Educator Preparation Index
- Cost per procurement and time to be devoted to this project: $500,000 per year for three consecutive years, totaling $1,500,000 to be charged to a potential Race to the Top award grant

Development of the Effective Principal Preparation Index for principal preparation programs

- Purpose: Kentucky's Education Professional Standards Board will procure a vendor(s) to develop a Effective Principal Preparation Index that measures the effectiveness of principal preparation programs as described in section (D)(4)
- Products and professional services included in this procurement (this list is not comprehensive, and will be tailored based on proposals from potential vendors):
    - Project management to serve as liaison with the Education Professional Standards Board and to facilitate development of the Effective Principal Preparation Index for principal preparation programs
    - Required hardware and/or software for development of Effective Principal Preparation Index for principal preparation programs
    - Program developer(s) and data analyst(s)
    - Training for state-level and university staff on how to utilize Effective Principal Preparation Index
- Cost per procurement and time to be devoted to this project: $500,000 per year for three consecutive years, totaling $1,500,000 to be charged to a potential Race to the Top award grant

Development of a survey application for new teachers and principals

- Purpose: Kentucky's Education Professional Standards Board will procure a vendor(s) to develop a survey for new teachers and a survey for new principals that will provide feedback on their preparation programs as an input into the Effective Educator and Principal Preparation Indices for teacher and principal preparation programs
- Products and professional services included in this procurement:
    - Development of software and hardware
    - Program developer and part-time business / data analyst
- Cost per procurement and time to be devoted to this project: This is a two-year project, with a total of $850,000 to be charged to a potential Race to the Top award grant

- Year 1: $550,000 for development of software and hardware, $120,000 for program developer and $30,000 for a part-time business / data analyst (Totaling $700,000 for Year 1)
- Year 2: $120,000 for program developer and $30,000 for a part-time business / data analyst (Totaling $150,000 for Year 2)

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- There are no indirect costs for this project as all costs fall under the Contractual category

Project #6: Educational Recovery for the lowest-achieving schools

Budget Part II: Project-Level Budget Table
Project Name: Educational Recovery for the lowest-achieving schools
Associated with Criteria: (E)(2)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$75,000	$75,000	$75,000	$75,000	$300,000
2. Fringe Benefits	$22,500	$22,500	$22,500	$22,500	$90,000
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$2,095,000	$545,000	$3,545,000	$545,000	$6,730,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$2,192,500	$642,500	$3,642,500	$642,500	$7,120,000
10. Indirect Costs*	$13,748	$13,748	$13,748	$13,748	$54,990
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)	$2,206,248	$656,248	$3,656,248	$656,248	$7,174,990

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #6: Educational Recovery for the lowest-achieving schools

This budget includes the costs associated with building Kentucky's new turnaround program. All direct costs for this project fall under one of the following categories: "Personnel," "Fringe Benefits," and "Contractual," and are described in detail below. Remaining costs are within "Indirect Costs." The majority of the costs for this work will be covered by School Improvement Grants / Title I funding and State School Improvement funding. The costs described in detail below explain the portions of this work that the Race to the Top grant award would fund, totaling ~$7.2M.

Line item 1: Personnel

Educational Recovery Project Manager

- The Kentucky Department of Education will create a new position, entitled the "Educational Recovery Project Manager," with the following key responsibilities:
    - Lead the Request for Proposal and selection process to establish the Centers for Learning Excellence, and build the regional Center for Learning Excellence networks
    - Establish formal and informal communication channels between Centers for Learning Excellence to facilitate knowledge sharing
    - Serve as the Kentucky Department of Education point person for all Centers for Learning Excellence, and Educational Recovery school and LEA personnel when necessary
- Annual base salary: $75,000
- Percentage of full-time equivalent: 100%
- The Race to the Top grant award would fund 4 years of this position, totaling $300,000. After four years, other sources of funding for turnaround work will fund this position should it still be considered necessary to facilitate ongoing Educational Recovery processes.

Line item 2: Fringe Benefits

Educational Recovery Project Manager

- The fringe benefit percentage for this position is 30% of base salary each year. 30% of the $75,000 base salary is $22,500 each year, totaling $90,000 over the four year period funded through Race to the Top.
- The fringe benefit percentage of 30% was estimated based on benchmarks from other similar positions at the Kentucky Department of Education.

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Establishment of Centers for Learning Excellence

- Purpose: The Kentucky Department of Education will utilize a Request for Proposal process to select organizations (i.e., vendors) to establish nine Centers for Learning Excellence as described in (E)(2)
- Products and professional services included in this procurement *(this is a partial list; see (E)(2) for more detail on the role of Centers for Learning Excellence)*:
    - Identification and coordination of supports for Educational Recovery Schools
    - Varied staff expertise in school turnaround
    - Utilizing the CIITS *(see section (C)(3) for more detail)* to ensure knowledge sharing platform / processes across Educational Recovery Schools
- Cost per procurement and time to be devoted to this project: $500,000 for each of three Centers for Learning Excellence to be established in Year 1, followed by $500,000 for each of six additional Centers for Learning Excellence to be established in Year 3, totaling $4,500,000 to be charged to a potential Race to the Top award grant
- The ongoing management costs of the Centers for Learning Excellence will be primarily covered by School Improvement Grants.

Educational Recovery Summits

- Purpose: The Kentucky Department of Education's District 180 will work with the Centers for Learning Excellence to hold three professional learning conferences each year to ensure knowledge sharing amongst Educational Recovery schools and districts.
- Products and professional services included in this procurement:
    - Conference facilitation fees, including venue
    - Note: does not include remuneration fees for travel and time off for participants, if application
- Cost detail: $15,000 for each convening. There will be 3 each year, totaling $45,000 each year, and $180,000 total to be charged to the Race to the Top grant award.

Consultant to assist with design of Educational Recovery Leader and Specialist programs

- Purpose: The Kentucky Department of Education and the Education Professional Standards Board will work with a consultant for 6 months to develop the curriculum, resource materials, and training modules to be used to build the Educational Recovery Leader cadre.
- Products and professional services included in this procurement:
    - Consulting services to assist with development of programs
- Cost detail: $50,000 in Year 1 for the consultant

Deployment of Educational Recovery Leader and Specialist training programs

- Purpose: Educational Recovery Leaders will participate in an intensive training program prior to entering the classroom as part of receiving the Educational Recovery Leader and Specialist endorsements.
- Products and professional services included in this procurement:
    - Vendor services to support development and facilitation of training programs for Educational Recovery Leaders and Specialists for four years
- Cost detail: $500,000 per year for four years, totaling $2,000,000 over four years
- The costs to run this program will covered by the Race to the Top award grant for Years 1 through 4, and will thereafter be covered by federal and state school improvement grant funding.

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$55,000 in indirect costs

Project #7: Race to the Top Project Management

Budget Part II: Project-Level Budget Table
Project Name: Race to the Top Project Management
Associated with Criteria: (A)(2)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$75,000	$75,000	$75,000	$75,000	$300,000
2. Fringe Benefits	$22,500	$22,500	$22,500	$22,500	$90,000
3. Travel	$0	$0	$0	$0	$0
4. Equipment	$0	$0	$0	$0	$0
5. Supplies	$0	$0	$0	$0	$0
6. Contractual	$1,465,000	$0	$0	$0	$1,465,000
7. Training Stipends	$0	$0	$0	$0	$0
8. Other	$0	$0	$0	$0	$0
9. Total Direct Costs (lines 1-8)	$1,562,500	$97,500	$97,500	$97,500	$1,855,000
10. Indirect Costs*	$13,748	$13,748	$13,748	$13,748	$54,990
11.Funding for Involved LEAs	$0	$0	$0	$0	$0
12. Supplemental Funding for Participating LEAs	$5,625,000	$625,000	$625,000	$625,000	$7,500,000
13. Total Costs (lines 9-12)	$7,201,248	$736,248	$736,248	$736,248	$9,409,990

Note: Calculations were conducted in a separate spreadsheet. Due to rounding, there may be small errors in the figures above.

Project #7: Race to the Top Project Management

This project is associated with criterion (A)(2) and outlines Kentucky's approach to overall Race to the Top project leadership and management of the grant as detailed in section (A)(2). To ensure sufficient capacity at all levels of the education system, this project also includes funding to supplement the potential underfunding of Participating LEAs for whom the Title 1 formula may result in insufficient funding to fully implement Kentucky's Race to the Top plans. Furthermore, given Kentucky's focus on fostering innovation, Project 7 includes an "Innovation fund" from which competitive grants will be awarded to LEAs who propose new, innovative projects with the aims of increasing student learning in their districts, as detailed in (A)(2). The costs of this work to the State that would be covered by a Race to the Top grant award are $9.4M.

All direct costs for this project fall under the "Personnel," "Fringe Benefits," and "Contractual" categories, with the remaining costs falling within "Indirect Costs" and "Supplemental Funding for Participating LEAs." The costs described in detail below explain the portions of this work that the Race to the Top grant award would fund.

Line item 1: Personnel

RTTT Director

- Purpose: The RTTT Director will be a new staff person at the Kentucky Department of Education who will lead the overall facilitation and implementation of the Race to the Top plans.
- The base salary for this position is $75,000. This is a four-year position, totaling $300,000 that will be charged to a potential Race to the Top grant award.

Line item 2: Fringe benefits

RTTT Director

- The fringe benefit percentage is 30% to cover employee benefits. Applied to the total salary costs for the RTTT Director's four-year term noted above, the total fringe benefit cost is $90,000 that will be charged to the potential Race to the Top grant award.

Line item 6: Contractual

Note: Kentucky has followed the procedures for procurement under 34 CFR Parts 74.40 - 74.48 and Part 80.36.

Change management and process design

- Purpose: Reorganization and change management in the Kentucky Department of Education and process design to figure out processes and work with districts
- Products and professional services included in this procurement:
    - Consulting services to analyze and determine reorganization of the Department and best processes to support and work with districts
- Cost per procurement and time to be devoted to this project: $500,000

Technology platforms to support ongoing RTTT management and monitoring

- Purpose: The Kentucky Department of Education will hire a contractor to assess and identify the necessary technology platforms to continuously manage and monitor the funding that is dispersed and the work that is being done.
- Products and professional services included in this procurement:
    - Consulting services, software required, and training to equip RTTT team to effectively manage the grant and implementation plans
    - Cost per procurement and time to be devoted to this project: $500,000

School improvement planning software

- Purpose: All schools and districts will use school improvement planning software as a necessary technology platform to manage planning and implementation of all school level projects and initiatives (as well as district-level views of project progress.)
- Products and professional services included in this procurement:
    - Professional team analyzes conditions, readiness, and transferability of data
    - MOA mutually developed
    - Training on system provided
    - On-going TA provided

  - Basic aggregate reports
- Cost per procurement and time to be devoted to this project: $465,000
- The total costs for this contract are estimated to be about $2.8M over three years. The following is the breakdown of how the full contract will be funded: $940,000 from School Improvement Grants; $930,000 from State School Improvement funding; $465,000 from the State's Race to the Top award, and $465,000 from the LEAs' 50% subgrant from Race to the Top.

Line item 10: Indirect Costs

- Kentucky's indirect cost rate, as stipulated in Kentucky's Indirect Cost Rate Agreement (approved by the U. S. Department of Education), is 14.1%
- This rate applied to the direct costs for Personnel, Fringe Benefits, Travel, and Supplies for this project comes to ~$55,000 in indirect costs

Line item 12: Supplemental Funding for Participating LEAs

Innovation Fund

- Purpose of supplemental funding: A $2.5M competitive fund will be established to provide additional funding to LEAs that submit proposals and are awarded subgrants for innovative projects and initiatives

LEAs whose Title I share is being supplemented by the State

- Purpose of supplemental funding: Based on their Title I share, 30 LEAs will likely require additional funding to fully implement the Race to the Top plans proposed.
- Cost detail: The total additional funding required across these 30 LEAs is estimated to be $5M, which will come from the State's portion of the Race to the Top award. These supplementary subgrants will range from $2,000 to $800,000 with an average of about $165,000.
- Because all 174 LEAs in Kentucky have signed on to participate in the Race to the Top initiatives, the final amounts for these supplemental subgrants will be determined during the scoping of work phase.

Steven L. Beshear
Governor

Terry Holliday, Ph.D.
Commissioner of Education

EDUCATION AND WORKFORCE DEVELOPMENT CABINET
DEPARTMENT OF EDUCATION

Capital Plaza Tower • 500 Mero Street • Frankfort, Kentucky 40601
Phone: (502) 564-4770 • www.education.ky.gov

To: All Kentucky Educators and Education Partners

Today, the Kentucky Senate unanimously passed House Bill 176, part of a historic process that will have resonating effects for years to come throughout the state's public school classrooms.

This vote is part of a fast-paced set of activities that began with the filing of HB 176 by Representatives Carl Rollins, Ted Edmonds, Jeff Greer, Tom Riner and Tommy Thompson. After much review and discussion, the bill was passed out of the House unanimously and delivered to the Senate, where it underwent further review and discussion in preparation for today's vote. The support of House Education Committee Chair Carl Rollins and Senate Education Committee Chair Ken Winters was crucial to their fellow legislators' understanding and willingness to move forward.

The actions by the House and Senate are unprecedented and show the deep commitment Kentucky's legislators have to the state's youngest citizens.

House Bill 176 will provide much-needed interventions in the state's lowest-performing schools and will strengthen Kentucky's application for funding through the federal Race to the Top program. Through HB 176, Kentucky will be able to offer school districts more options to help them improve – from selecting an education management organization to operate schools, to exercising more flexibility in staffing, to restructuring the existing management of those schools that are persistently low-performing.

The state's school districts have shown their support for these options as well – all 174 school district superintendents, local boards of education and teacher representatives have formally signed off on the memorandum of understanding for the Race to the Top application.

If the state's application is successful, funds from Race to the Top will enable us to move Kentucky forward in P-12 education, with student success as the centerpiece. Race to the Top demands that states focus their energies on student achievement and provide the highest-quality learning opportunities for all children.

Kentucky's path to accomplishing this vision requires concerted action to demonstrate that the state:

- expects that all students can and will learn at high levels, codified in internationally benchmarked standards
- creates great teachers, principals, superintendents and others supporting students, with each challenged to perform at a high level and supported to do so
- assesses performance of students, staff, schools and approaches, with access to information enabled by an easy-to-use data system
- provides needed assistance and/or interventions when schools and districts prove to persistently struggle to improve

Thanks to the actions of the House and Senate, and to the support of local school officials, school boards, teacher representatives and education partners across the state, Kentucky will lead the nation in the next wave of educational improvement. I applaud the members of the Kentucky General Assembly for their very public show of dedication to our state's public school students, teachers, administrators and parents, and all of the citizens of the Commonwealth.

In appreciation,

Terry Holliday, PhD
Commissioner

Appendix – Letters of Support

The Kentucky Race to the Top Advisory Council was comprised of key stakeholder organizations representing key state agencies; the states' teacher union; associations representing principals, superintendents, school boards, and school councils; and other State and local leaders, including parent, community, business, and civil rights groups. The specific organizations and individual(s) that participated are listed below.

Letters of support from each of these organizations on Kentucky's Race to the Top Advisory Council follow.

Organization	Individual(s) participating
Kentucky Department of Education (KDE)	Commissioner Terry Holliday
Kentucky Education and Workforce Development Cabinet	Secretary Helen Mountjoy Interim Secretary Joe Meyer
Council on Postsecondary Education (CPE)	President Bob King Aaron Thompson* Lee Nimocks*
Education Professional Standards Board (EPSB)	Executive Director Phil Rogers Robert Brown*
Kentucky Education Association (KEA)	Executive Director Mary Ann Blankenship President Sharron Oxendine
Kentucky Association of School Administrators (KASA)	Executive Director Wayne Young
Kentucky Association of School Superintendents (KASS)	Executive Director Wilson Sears
Kentucky School Boards Association (KSBA)	Executive Director Bill Scott David Baird*
Kentucky Association of Schools Councils (KASC)	Executive Director Ronda Harmon
Kentucky Association of Educational Cooperatives (KAEC)	Executive Director Liz Storey
Kentucky Parent-Teacher Association (KY-PTA)	President Sandy Rutledge
Prichard Committee for Academic Excellence	Associate Executive Director Cindy Heine
Partnership at NewCities	Executive Director Carolyn Witt-Jones
Kentucky Commission on Human Rights (KCHR)	Executive Director John Johnson

*Indicates individual who served as proxy or additional representative in addition to the head of the organization.

In addition to the support of the members of the Race to the Top Advisory Council, other organizations, including Kentucky's public universities have also been included.

Organization	Individual(s) participating
University of Kentucky	President Lee Todd
University of Louisville	President James Ramsey
Eastern Kentucky University	President Doug Whitlock
Kentucky State University	President Mary Evans Sias
Morehead State University	President Wayne Andrews
Murray State University	President Randy Dunn
Educational Testing Service	Senior Vice President Michael Nettles
National Math and Science Initiative	Chief Executive Officer Tom Luce
American Productivity and Quality Center	Chairman C. Jackson Grayson
Felix Martin Jr. Foundation	Secretary of Board of Directors Kathy Jacobi

EDUCATION and WORKFORCE DEVELOPMENT CABINET
OFFICE OF THE SECRETARY

Steven L. Beshear
Governor

Capital Plaza Tower, 3rd Floor
500 Mero Street
Frankfort, Kentucky 40601
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Joseph U. Meyer
Acting Secretary

January 11, 2010

Dr. Terry Holliday
Commissioner
Department of Education
CPT 500 Mero Street 3rd Fl
Frankfort, KY 40601

Dear Commissioner Holliday:

The Education and Workforce Development Cabinet supports Kentucky's Race to the Top Application.

The initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course to realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools.

Effective implementation of the next generation of school reform in Kentucky requires the support of all stakeholder groups. The Education and Workforce Development Cabinet will support the initiatives in the

application by directing and encouraging all the agencies within the Cabinet, including such agencies as the Education Professional Standards Board (EPSB) and Kentucky Educational Television, to be full partners with the Department in its implementation of the Race to the Top commitments.

The Cabinet also chairs the P-20 Data Collaborative, currently comprised of the Council on Postsecondary Education, EPSB and the Department of Education. These partners are overseeing the development and enhancement of the data systems that will enable the appropriate and effective use of data to measure student success and inform teachers and principals how they can improve their practices.

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,

Joseph U Meyer

Joseph U. Meyer

Kentucky Council on Postsecondary Education

Steven L. Beshear
Governor

1024 Capital Center Drive, Suite 320
Frankfort, Kentucky 40601
Phone: 502-573-1555
Fax: 502-573-1535
http://www.cpe.ky.gov

Robert L. King
President

January 13, 2010

Terry Holliday
Commissioner
Kentucky Dept. of Education
Capital Plaza Tower, 1st floor
500 Mero Street
Frankfort, KY 40601

Dear Commissioner Holliday:

As a member of the Race to the Top Application Advisory Council, I am writing to pledge the Council on Postsecondary Education's support for Kentucky's Race to the Top application. We believe the initiatives described in the Kentucky proposal will set our education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, the Council pledges its support to fully integrating higher education into the P-12 experience; training teachers who will teach students so that they are college and career ready, raising all boats on the tide. We are committed to the four key elements of the Race to the Top reform agenda:

- Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace;
- Recruiting, developing, retaining, and rewarding effective teachers and principals;
- Building data systems that measure student success and inform teachers and principals how they can improve their practices;
- Turning around our lowest-achieving schools.

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all constituency groups to be effectively implemented.

It is with this commitment to Kentucky's education vision in mind that the Kentucky Council on Postsecondary Education, representing Kentucky's public postsecondary institutions including our research and regional universities and the Kentucky Community and Technical College System, is pleased to commit our support of Kentucky's Race to the Top application. In addition to our commitment to the application, our organization also commits to support the initiatives in the application by:

- Providing technical support for P-20 database systems;
- Providing research and programmatic support for professional development of pre-and in-service teachers and school leadership;
- Providing outstanding training programs for teachers and school leaders;
- Collaborating to build a supportive educational community that promotes college and career readiness;
- Linking the college readiness standards to introductory college coursework so that students experience a smooth transition from high school to postsecondary degree and workforce training programs.

We appreciate your leadership in this effort and the collaborative approach you have adopted to the preparation of this application. The last several months have seen remarkable growth in the relationship between our two agencies and the work we have done together has resulted in a very strong application that will changes lives in the Commonwealth. We look forward to supporting these efforts in every way possible.

Sincerely,

Robert L. King

EDUCATION PROFESSIONAL STANDARDS BOARD

Steven L. Beshear
Governor

100 Airport Road, 3rd Floor, Frankfort, Kentucky 40601
Phone: 502-564-4606 Fax: 502-564-7080
www.kyepsb.net

Phillip S. Rogers, Ed.D.
Executive Director

January 13, 2010

Commissioner Terry Holliday
Kentucky Department of Education
500 Mero Street
Frankfort, KY 40601

Dear Commissioner Holliday:

As a member of the Race to the Top Application Advisory Council, I am writing to pledge the support of the Education Professional Standards Board (EPSB) for Kentucky's Race to the Top Application. We believe that the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on course to realize the vision of a system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators, and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

To be effectively implemented, the reforms now needed in Kentucky education, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups. With this commitment to Kentucky's education vision in mind, the EPSB is pleased to support Kentucky's Race to the Top application.

We appreciate your leadership in this effort and know that it will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,

Lorraine Williams
EPSB Chair

ana

KEA
KENTUCKY EDUCATION ASSOCIATION

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COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

January 12, 2010

To Whom It May Concern:

The Kentucky Education Association represents more than 41,000 educators in Kentucky, from pre-service teachers through retired teachers and school support professionals. KEA is Kentucky's affiliate of the National Education Association and the state's only teachers union.

KEA applauds Kentucky Education Commissioner Terry Holliday and the Kentucky Department of Education for both the process used in creating Kentucky's Race to the Top application and for the substance of the application.

Commissioner Holliday was exceptionally inclusive in creating Kentucky's application. He solicited input from stakeholders and especially from classroom practitioners and their organization. Once he received input, he considered it thoughtfully and responded in depth, always working to reach agreement. The final application shows much evidence of the collaboration between the Kentucky Department of Education and KEA. KEA believes it is a much better application because of this collaboration, with KEA as well as with all other education stakeholders and their representatives.

This collaboration is especially remarkable on the part of Commissioner Holliday as he is new to Kentucky, having arrived after most other states had already begun their discussions of Race to the Top. From the onset of his tenure in Kentucky, Commissioner Holliday has been unfailingly responsive and collaborative.

This experience of collaboration has resulted in almost all of KEA's local affiliates signing a Memorandum of Understanding in support of their school district becoming a participating LEA. The Kentucky Department of Education and KEA have worked together to encourage local school superintendents and association presidents to collaborate as we collaborated at the state level.

As to the substance of the application, KEA believes that Kentucky needs federal assistance in implementing Senate Bill 1, which passed the Kentucky General Assembly early in 2009. This landmark legislation mandated revised standards, assessment, accountability and the professional development to support those revisions. In addition, KEA believes that the state and LEAs must do a better job helping our lowest performing schools improve. Finally, KEA believes that improvement is needed in teacher evaluation and compensation. KEA believes that Race to the Top funding will support all these important initiatives.

While KEA may have some concerns about specific aspects of both the federal requirements and Kentucky's application, we believe that our practice of collaboration – both recently and over the past twenty-five years – will allow us to work out those challenges as we create local and state plans to implement our Race to the Top grant.

Sincerely,

Sharron K. Oxendine
President

Mary Ann Blankenship
Executive Director

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Frankfort, KY 40601
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K A S A

Kentucky Association of School Administrators

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COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

January 5, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
Capital Plaza Tower, First Floor
500 Mero Street
Frankfort, Kentucky 40601

Dear Commissioner Holliday,

As a member of the Race to the Top Application Advisory Council, I am writing to pledge my organization's support for Kentucky's Race to the Top Application. We believe the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups to be effectively implemented.

It is with this commitment to Kentucky's education vision in mind that our organization is pleased to commit our support of Kentucky's Race to the Top application. In addition to our commitment to the application, our organization also commits to support the initiatives in the application by:

- Actively promoting the Race to the Top Initiatives among our more than 3000 members serving as school leaders across Kentucky;
- Encouraging school administrators to pursue innovative methods of accomplishing the bold initiatives of Race to the Top;
- Spotlighting the successes of Race to the Top initiatives by featuring the results in workshops, conferences, and training events throughout the state, and actively supporting their replication in all districts.

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,

V. Wayne Young

V. Wayne Young
Executive Director

Kentucky Association of School Superintendents

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COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

Dear Commissioner Holliday,

As a member of the Race to the Top Application Advisory Council, I am writing to pledge the Kentucky Association of School Superintendents' support for Kentucky's Race to the Top Application. We believe the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state- level partners. More specifically, we are committed to supporting the four key elements of the Race to the op reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups to be effectively implemented.

It is with this commitment to Kentucky's education vision in mind that the Superintendents of Kentucky are pleased to commit our support of Kentucky's Race to the Top application. In addition to our commitment to the application, KASS also commits to support the initiatives in the application by:

- A commitment to enhanced Professional Development for all Superintendents
- A commitment to an improved and comprehensive evaluation system at all levels
- Increased focus on student achievement generally and specifically in low performing schools

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,

Wilson Sears

WILSON SEARS
Executive Director
Mobile (606) 875-1771 • wilsonsears@gmail.com
101 Woodland Drive • Somerset, KY 42501-1351 • Office (606) 678-4860 • Fax (606) 678-4860

KENTUCKY SCHOOL BOARDS ASSOCIATION
"A brighter future through better public schools"

260 Democrat Drive
Frankfort, KY 40601
1-800-372-2962 • FAX (502) 695-5451
KSBA Website: www.ksba.org

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Dara Bass

January 4, 2010

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0107/002
JAN 7 2010
COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

Dr. Terry Holliday
Commissioner of Education
Kentucky Department of Education
Capitol Plaza Tower, 500 Mero Street
Frankfort, KY 40601

Dear Commissioner Holliday:

As a member of the Race to the Top Application Advisory Council, representing the Kentucky School Boards Association, I am writing to pledge my organization's support for Kentucky's Race to the Top Application. We believe the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups to be effectively implemented.

It is with this commitment to Kentucky's education vision in mind that our organization is pleased to commit our support of Kentucky's Race to the Top application. In particular, KSBA supports the following:

- *High-quality assessments that will measure student growth*
- *A principal and teacher evaluation system that measures student growth over time*
- *Changes to the teacher evaluation system that provide teachers with the support needed to become the best teacher possible and make tenure a meaningful milestone in their career*

- *Innovative models for turning around low-performing schools*
- *A differentiated compensation system designed and implemented at the local level, especially for additionally assigned duties*
- *Professional learning teams and job-embedded professional development*
- *A Continuous Instructional Improvement Technology System so instructional tools can be at the fingertips of every teacher*
- *Strong data support systems for P-20 to track student progress, school innovation, and teacher preparation program effectiveness*

In terms of specific actions by KSBA to support Kentucky's RTTT application:

- *We commit to provide training to the state's school board members to assist local school districts with the implementation of the grant*
- *We will promote and participate in the Voluntary Partnership Assistance Team or VPAT program (a multifaceted approach to building strong district leadership for school districts with persistently low-performing schools) and provide resources necessary for its expansion and implementation...*
- *The association will assist local school districts in drafting any necessary policy changes required by the RTTT initiatives*
- *We will communicate to school board teams the overarching principles of Kentucky's RTTT effort and also help explain its specifics*
- *KSBA will encourage school board members to conduct a comprehensive evaluation of the superintendent, including using the model we have developed for this purpose*

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely yours,

William G. Scott
Executive Director

/ka

KENTUCKY ASSOCIATION of SCHOOL COUNCILS

January 8, 2010

Dear Commissioner Holliday,

As a member of the Race to the Top Application Advisory Council, I am writing to pledge the Kentucky Association of School Councils' support for Kentucky's Race to the Top application.

We believe Kentucky is uniquely positioned to reach the challenging goals of the Race to the Top program. Kentucky has been a leader in education since 1990 when the Kentucky Education Reform Act was enacted. As in 1990, the reforms needed in Kentucky education now require the support of all stakeholder groups to be effectively implemented, and we are committed to Kentucky's vision.

We believe the initiatives laid out in Kentucky's application are the right initiatives to set our state education system on a course to realize the vision of a student-centric system where all pupils are supported in their learning by highly effective teachers, and where families and communities, school and district administrators, and state-level partners are fully engaged. More specifically, we are committed to supporting the four key elements of the Race to the Top agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals about how they can improve practices
- turning around our lowest-achieving schools

Our organization is pleased to commit its support of Kentucky's Race to the Top application and Kentucky's education vision. In addition, our organization fully commits to using school council leadership to help more schools innovate in ways that will make sure all students will be engaged learners.

We appreciate your leadership in this effort. Vision and leadership will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting these efforts in every way possible.

Sincerely,

Ronda Harmon

Ronda Harmon
Executive Director
Kentucky Association of School Councils

P.O. BOX 784
DANVILLE, KY 40423

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GRREC

Green River Regional Educational Cooperative, Inc.

Supporting High Quality Teaching and Learning

Scott Lewis
Board Chairman

Joe Tinius
Vice-Chairman

Barry Anderson
Past Chairman

Liz Storey
Executive Director

December 31, 2009

Dr. Terry Holliday, Commissioner
KY Department of Education
500 Mero Street, 1st Floor Capital Plaza Tower
Frankfort, KY 40601

Dear Dr. Holliday:

The Kentucky Association of Educational Cooperatives (KAEC), representing the eight regional services centers in the state, submits this letter to evidence our endorsement and support to the KY Department of Education in its application for funding through the USDOE's Race to the Top (RTTT) competition.

Regional educational cooperatives have existed in Kentucky for more than fifty years and have a rich history of effectively serving our respective member school districts, working productively with a large number of partners at the local, state and national levels. In regard to our state's plan for RTTT, we have been pleased to be at the planning table for the proposal development and to see the efforts included in the plan to capitalize on the already existing regional networks established by our agencies.

We are fully on board to be a key partner in the plans for spring and summer of 2010 to unpack the state's newly adopted standards and look forward to working with content specialists in our regions in this effort. This same type of work has already been occurring with existing standards and we believe critical groundwork has been laid for this transition. As the core service of our agencies is professional development, we are gearing up to assist with design and delivery of the training efforts that will be required as our state adopts new standards, a new assessment system, and a comprehensive and robust data system. We are very accustomed to the train-the-trainer, master practitioner, and professional learning community models and will continue to help identify and support initiatives utilizing these and other models that meet state and national standards for professional development.

Nothing could be closer to the core mission of the Cooperatives than helping identify, support and sustain great teachers and leaders. Therefore, for this particular pillar of the RTTT proposal, we feel we will be a critical partner. Kentucky's schools respect and feel affinity to our agencies and will be looking to us for leadership and resources as all stakeholders work together to achieve the goals of RTTT. Likewise, we'll be looking to the state for comparable leadership and resources in order to provide the best support possible to our schools.

Finally, in the area of turn-around schools, we are keenly interested in the Centers for Learning Excellence described in the proposal to support educational recovery for our lowest performing schools. Because we already have affiliations and strong collaborative relationships with our partner universities, we are optimistic that Partnership Centers can be established with these and perhaps several other agencies working jointly on behalf of these schools and their recovery.

To you, Dr. Holliday, and other friends and colleagues at the KY Department of Education, we congratulate you on your strong leadership over the past several months as this proposal has been developed. We look forward to receiving notice of funding and to working with you on bringing Kentucky's plans to fruition.

Sincerely,

(b)(6)

Liz Storey, Executive Director of the Green River Regional Educational Cooperation
On behalf of the KY Association of Educational Cooperatives

KENTUCKY PTA®
everychild.onevoice.®

SANDY RUTLEDGE
President

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January 6, 2010

Commissioner Terry Holliday
Kentucky Department of Education
500 Mero Street, Capital Plaza Tower, 1st Floor
Frankfort, KY 40601

Dear Commissioner Holliday,

As a member of the Race to the Top Application Advisory Council, I am writing as President of Kentucky PTA to pledge my organization's support for Kentucky's Race to the Top Application. We believe the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups to be effectively implemented.
It is this commitment to Kentucky's education vision that Kentucky PTA is pleased to commit our support of Kentucky's Race to the Top Application to support the initiatives by:

- *Support and plan panel discussions with members from school administration, PTAs, faculty, and community members to address issues, both financial and social, which affect your school's performance*
- *Hold town hall meetings to inform parents, and all who are interested in attending, about the necessity and importance of adopting standards and assessments for student success in the workplace and in continued education*
- *Through partnerships that Kentucky PTA has established, we will promote education opportunities for parents in the areas of parent and student rights and responsibilities targeting lowest achieving schools*

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,

(b)(6)

Sandy Rutledge

Making every child's potential a reality

PRICHARD COMMITTEE
FOR ACADEMIC EXCELLENCE

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Robert F. Sexton, Executive Director

January 6, 2010

RECEIVED
JAN 8 2010
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COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

Terry Holliday
Commissioner of Education
Kentucky Department of Education
500 Mero Street, 1st Floor
Frankfort, KY 40601

Dear Commissioner Holliday,

On behalf of the Prichard Committee for Academic Excellence, I pledge our enthusiastic support for Kentucky's Race to the Top application and plans. We appreciate the opportunity to participate in the plan's development, and we strongly endorse the proposal.

As a non-profit and independent organization of Kentucky citizens, the Prichard Committee has worked for more than 25 years to improve our schools and build public support for stronger educational results. We're proud of Kentucky's national leadership since 1990 on standards, assessment, accountability, educators' professional growth, and intervention to strengthen weak schools. We're also excited about our legislature's 2009 passage of Senate Bill 1, committing our state to upgrade all those efforts and become highly competitive in the national and global economy in the coming years.

With Race to the Top support, Kentucky can add new permanent capacity to our school system, building a new infrastructure for consistent, enduring, higher achievement. We are especially excited about the prospects for a grant that would enable Kentucky to:

- Equip all our teachers to analyze and implement our new academic standards well by tracking their students' progress throughout the year and adjusting instruction on an ongoing basis. That will move us far beyond annual accountability to a balanced assessment approach that can support much higher student achievement.

- Build new access to integrated data that educators will use to identify individual needs and schoolwide trends, creating a far more powerful tool from new and existing information that can be used for raising achievement.

www.prichardcommittee.org • P.O. Box 1658 • Lexington, KY 40588-1658 • (859) 233-9849 • FAX: (859) 233-0760

- Transform our teacher and leader preparation, evaluation, and professional development methods so that we put our full strength behind the collaborative, standards-based, data-driven education system that will do the most to enhance what our students know and are able to do.

- Implement new, intensive transformation strategies for the small group of schools that are chronically failing to deliver for Kentucky children. Our existing intervention strategies have worked for most schools that showed weak performance over the last two decades, but we know we need to do something far stronger for those that have not responded acceptably to our efforts to date.

Kentucky's history and energy make us fully ready to do this important work. We are the right state, right now, to demonstrate how to move American children into global academic leadership. Race to the Top funding will allow us to accelerate our in-state work and move with added speed to complete our development of an education system that delivers excellence for each and every Kentucky child.

The Prichard Committee will promote parent, business, and citizen understanding and support for the potent strategies laid out in Kentucky's Race to the Top application. We pledge our best efforts to support this important work and build statewide commitment to sustain it both during and after the grant period.

Sincerely,

(b)(6)

Robert F. Sexton
Executive Director

January 14, 2010

Dr. Terry Holliday
Commisioner of Education
500 Mero Street
Frankfort, KY 40601

Dear Commissioner Holliday:

I am writing to commit the support of the Partnership at NewCities for Kentucky's Race to the Top (RTTP) proposal. I have been fortunate to be a member of the RTTP Advisory Council and have therefore been able to participate in the excellent process developed by Kentucky leaders for creating this most innovative and results-based approach for moving Kentucky's education system forward.

Kentucky is privileged to have a rich history of education reform. The statewide leadership of the Partnership for Successful Schools (recently merged with the NewCities Institute) has invested heavily for more than seventeen years in strategies that aggressively engage all elements of Kentucky's communities in the work of improving P-20 education. We have worked shoulder to shoulder with the Kentucky Department of Education, the Council for Postsecondary Education, the Kentucky Community and Technical College system to leverage corporate and community leadership with the goal of more students reaching proficiency and beyond.

It has been quite apparent during the past twenty years that educators cannot carry all the responsibility for improving student learning. It is imperative that we spread the responsibility for improving the prosperity of our communities. In order to do that, education improvement must be seen in the broader context of workforce and economic development with local elected leadership calling for significantly higher levels of involvement throughout the community.

It is not enough to rely on the successes of the past. The Partnership leadership believes that this application fully describes how Kentucky can achieve the next level of education improvement, building on lessons learned since 1990. Supporting the four key elements of Race to the Top can provide the needed structure for what will produce the best results for our students, the schools they attend, and the communities within which they reside.

This application process has encouraged our legislators to allow school districts to close low-performing public schools and restart them under the management of a private or nonprofit operator known as an educational management organization. This legislation creates a new definition of low-performing schools, taking into account graduation rates and math and reading proficiency.

The Partnership at NewCities recommits its energy and commitment toward this next phase of education improvement in Kentucky through support of Kentucky's Race to the Top application. We commit our focus on involving the community in support of literacy and numeracy through our One to One initiatives and nationally acclaimed Kentucky Scholars program which encourages greater number of students to take a more rigorous course of study. We will continue to support quality teachers through our research and policy voice. In addition, we will use our public information campaigns and community development strategic planning efforts to educate and involve an ever increasing number of citizens in the communities with whom we work.

Thank you for inviting us to submit a letter of support. Your aggressive leadership as our Commissioner is appreciated. Your style of leading will be crucial as we work together to "raise the bar" in Kentucky for all students to be educated for success at the next level of education or work. We pledge to work with you to grow the work set forth in this proposal.

Sincerely,

(b)(6)

Carolyn Witt Jones
Partnership at NewCities

KENTUCKY COMMISSION ON HUMAN RIGHTS

Steven L. Beshear
Governor

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Louisville, Kentucky 40202
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(800) 292-5566
(502) 595-4801 - Fax
(502) 595-4084 - TDD
http://kchr.ky.gov

John J. Johnson
Executive Director

January 13, 2010

Terry Holliday, Commissioner
Kentucky Department of Education
Capital Plaza Tower
500 Mero Street, 1st Floor

Dear Commissioner Holliday,

As a member of the Race to the Top Application Advisory Council, I am writing to pledge the support of the Kentucky Commission on Human Rights for Kentucky's Race to the Top Application. We believe that the initiatives laid out in Kentucky's proposal are the right initiatives to set Kentucky's education system on a course that will help it realize its vision of a student-centric system where students are supported in their learning by highly effective teachers, families and communities, school and district administrators and state level partners. More specifically, we are committed to supporting the four key elements of the Race to the Top reform agenda:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

The reforms needed in Kentucky education now, as in 1990 with the Kentucky Education Reform Act, require the support of all stakeholder groups to be effectively implemented. We know that many improvements are needed in our educational systems, with a particular need to:

- Encourage equal opportunity in recruitment and promotion;
- Continuously be mindful of issues related to achievement gaps, the need for minority role models in educational institutions, and the guarantee that the voices

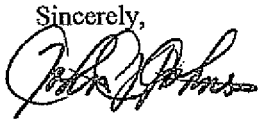
of citizens from all walks of life are considered in implementing future educational programs and processes.

It is with this commitment to Kentucky's education vision in mind that our organization is pleased to commit our support of Kentucky's Race to the Top application. In addition to our commitment to the application, our organization also commits to support the initiatives in the application by:

- Using our offices to help reach out to individuals who have historically been denied equal access in order to ensure that they understand the plan and can be an integral part of the continuing process;
- Making the resources of our offices available to assist the Department of Education in ensuring equal opportunity in all of our educational systems;
- Continuing to monitor and encourage Kentucky's school systems so that they will be mindful of reflecting the composition of the communities in which they are located; and
- Helping to ensure that all citizens, particularly those who fall within the protected classes (race, color, sex, disability, national origin, religion, and age over 40) are familiar with the plan and understand the value of its components.

We appreciate your leadership in this effort. It is that leadership that will be crucial as we work together to provide the young people of our state with the best education possible. We look forward to supporting your efforts in every way possible.

Sincerely,



John J. Johnson
Executive Director

JJJ/kcd

UNIVERSITY OF KENTUCKY

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January 4, 2010

Dr. Terry Holliday
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Commissioner Holliday:

The University of Kentucky (UK) strongly supports Kentucky's vision for our children's education, and specifically the state's application for *Race to the Top* funding. It is with this commitment to Kentucky's education vision and the opportunity to secure substantial funding for that vision in mind that we are pleased to commit our support for *Kentucky's Race to the Top* application in the following ways:

- UK will provide $1.5 million over three years to create the *Kentucky P20 Innovation Lab: A Partnership for Next Generation Learning* housed in the College of Education designed to (1) recruit and prepare highly effective and transformative teachers and school leaders; (2) provide ongoing, internationally-recognized best practices in professional development to existing teachers and school leaders with particular attention to educators in the lowest-achieving schools; (3) conduct innovative educational research; and (4) translate research findings into innovative educational practices emphasizing higher-order thinking and 21st century skills.
- Help develop and house the Kentucky P20 Data Base designed to measure individual student data tracked over time and to inform teachers and principals on how they can improve their practice.
- Continue support for the extensive network of partnerships built to improve science, technology, engineering, and mathematics (STEM) education through the campus-wide Partnership Institute for Mathematics and Science Educational Reform (PIMSER); Project Lead The Way, and the new STEM Education department in the College of Education. These partnerships are designed to substantially improve P-20 STEM education through federal, state, and foundation-funded programs that target teacher recruitment and preparation, statewide professional development and leadership training, and innovative engagement projects between higher education and P-12 faculty that address specific school and district-level educational needs.
- Support the nation's workforce and economic development efforts by leading the national science and mathematics teacher initiative (SMTI) of the Association of Public and Land-Grant Universities (APLU) whose goal is to greatly increase the number and quality of each

state's P-12 science and mathematics teachers. President Lee Todd was selected to lead this initiative within a newly created unit of the APLU.

We fully support the framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and careers. Nurturing those students are effective teachers, who are supported by engaged communities and school leaders. Those school communities are nested within districts, providing supports and connections to best practices. State level partners, including colleges and universities, stand ready to support these efforts to make sure that students in the state can meet the increasing demands of the global society in which they live.

We are also aware of your commitment to this vision as well as that of the General Assembly by virtue of the passage of Senate Bill 1 during the 2009 session.

We understand that the federal *Race to the Top* program can provide the funding necessary to ensure that this great vision for education can be accomplished by: (1) adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace; (2) recruiting, developing, retaining, and rewarding effective teachers and principals; (3) building data systems that measure student success and inform teachers and principals how they can improve their practices; and (4) turning around our lowest-achieving schools.

Thank you for your leadership in uniting Kentucky around a comprehensive vision to provide every child – from early childhood through adolescence - with the best education possible. We welcome the opportunity to collaborate and share resources to ensure success and sustainability of this vision.

Sincerely,

Lee T. Todd, Jr.
President

The **Courage** to Question Convention.
The **Passion** to Break New Ground.
The **Insight** to Champion Community.
The **Imagination** to Pursue the Undiscovered.
The **Will** to Achieve Greatness.
The **Promise** of a Limitless Future.
The **People** to Bring It to Life.
It's Happening Here.

January 12, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Commissioner Holliday:

The University of Louisville is writing to pledge its support to Kentucky's vision for education in the future, and specifically the state's application for Race to the Top funding. We believe this funding will ensure the vision is achieved.

We know that Kentucky has set forth a framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and career. Supporting those students are effective teachers, who are supported by engaged communities and school leaders. Those school communities are nested within districts, providing supports and connections to best practices. State level partners, including colleges and universities, stand ready to support these efforts to make sure that students in the state can meet the increasing demands of the global society in which they live.

We are also aware of your commitment and that of the General Assembly to this vision by virtue of the passage of Senate Bill 1 during the 2009 session.

The federal Race to the Top program then provides the funding necessary to ensure that this great vision for education can be accomplished by:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace;
- recruiting, developing, retaining, and rewarding effective teachers and principals;
- building data systems that measure student success and inform teachers and principals how they can improve their practices; and
- turning around our lowest-achieving schools.

With this commitment to Kentucky's education vision, and the opportunity to secure substantial funding for that vision, we are pleased to commit our support for Kentucky's Race to the Top application. In addition, to support the initiatives of the application we will also support the vision in

James R. Ramsey, President • University of Louisville • Louisville, KY 40292
Ph: 502.852.5417 **F:** 502.852.5682 **W:** louisville.edu

the following ways: a) through Race To The Top funding , the University of Louisville can provide professional development based upon the new core content standards; b) provide its expertise to improve principal and teacher effectiveness; and c) be an active partner in turning around low-performing schools.

Thank you for your leadership as we work to provide the young people of our state the best education possible. We look forward to our collaboration to meet the goals you have set forth.

Sincerely,

James R. Ramsey
President

EASTERN KENTUCKY UNIVERSITY

Serving Kentuckians Since 1906

Office of the President

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doug.whitlock@eku.edu

January 4, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Commissioner Holliday:

I am writing on behalf of Eastern Kentucky University to pledge our unqualified support to Kentucky's vision for the future of education in the Commonwealth, and specifically the state's application for Race to the Top funding. We believe this funding will ensure the vision is achieved.

We have watched and participated as Kentucky has advanced a framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and career. As a long-time member of the Madison County Board of Education and consultant with Kentucky school districts, I understand the role of each component required for achieving success in student achievement. These include effective teachers, building principals and superintendents who are educational leaders with high expectations, engaged parents and communities, and state level leadership Among those level partners are the Commonwealth's colleges and universities. Eastern Kentucky University, with its long tradition of teacher and school leader education, remains ready to support these efforts to make sure that students in the state can meet the increasing demands of the global society in which they live.

We also support your commitment and that of the General Assembly to this vision by virtue of the passage of Senate Bill 1 during the 2009 session.

Kentucky
UNBRIDLED SPIRIT

Eastern Kentucky University is an Equal Opportunity/Affirmative Action Employer and Educational Institution

The federal Race to the Top program then provides the funding necessary to ensure that this great vision for education can be accomplished by:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

It is with this commitment to Kentucky's education vision and the opportunity to secure substantial funding for that vision in mind that we are pleased to commit our support for Kentucky's Race to the Top application. Some of our current efforts fit well within the Race to the Top application's scope.

We believe that the initial success of our Math Transitions program indicates that it will be an important tool in helping incoming students meet college readiness standards. In fact, its success has encouraged our work to initiate a similar program for reading. I am excited about the professional learning community-like relationship this process is building between our faculty and their counterparts in the public schools. Also, the partnership being forged between Eastern Kentucky University, Morehead State University and the community and independent colleges in our two combined service regions is focusing its initial efforts on professional development for teachers.

Thank you for your leadership as we work to provide the young people of our state the best education possible. We look forward to our collaboration to meet the goals you have set forth.

Sincerely,

Doug Whitlock
President

Kentucky State University

Office of the President

January 6, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Commissioner Holliday:

As President of Kentucky State University, I am writing to pledge KSU's support to Kentucky's vision for education in the future, and specifically the state's application for "Race to the Top" funding. We believe this funding will ensure the vision is achieved.

We know that Kentucky has set forth a framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and career. Supporting those students are effective teachers, who are supported by engaged communities and school leaders. Those school communities are nested within districts, providing supports and connections to best practices. State level partners, including colleges and universities, stand ready to support these efforts to make sure that students in the state can meet the increasing demands of the global society in which they live.

We are also aware of your commitment and that of the General Assembly to this vision by virtue of the passage of Senate Bill 1 during the 2009 session.

The federal Race to the Top program then provides the funding necessary to ensure that this great vision for education can be accomplished by:

- adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- recruiting, developing, retaining, and rewarding effective teachers and principals
- building data systems that measure student success and inform teachers and principals how they can improve their practices
- turning around our lowest-achieving schools

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(502) 597-6260 www.kysu.edu

Kentucky State University is an Equal Educational and Employment Opportunity/Affirmative Action Institution.

It is with this commitment to Kentucky's education vision and the opportunity to secure substantial funding for that vision in mind that we are pleased to commit our support for Kentucky's Race to the Top application. In addition, to support the initiatives of the application we will also support the vision in the following ways:

- Continue to work with local schools to provide courses to help students be college ready;
- Provide "just-in-time" professional development training and information;
- Provide specialized feedback to schools on performance of students in specific college coursework; and,
- Partner with local school districts to work with college aspirations and preparation in their lowest-achieving schools.

Thank you for your leadership as we work to provide the young people of our state the best education possible. We look forward to our collaboration to meet the goals you have set forth.

Sincerely,

Mary Evans Sias, Ph.D.
President

OFFICE OF THE PRESIDENT

202 HOWELL-MCDOWELL AD. BLDG.
MOREHEAD, KENTUCKY 40351-1689
TELEPHONE: 606-783-2022
FAX: 606-783-2216

January 4, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Commissioner Holliday:

Morehead State University is writing to pledge its support to Kentucky's vision for education in the future, and specifically the state's application for Race to the Top funding. We believe this funding will ensure the vision is achieved.

We know that Kentucky has set forth a framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and career. Supporting those students are effective teachers, who are supported by engaged communities and school leaders. Those school communities are nested within districts, providing supports and connections to best practices. State-level partners, including colleges and universities, stand ready to support these efforts to make sure that students in the state can meet the increasing demands of the global society in which they live.

We are also aware of your commitment and that of the General Assembly to this vision by virtue of the passage of Senate Bill 1 during the 2009 session.

The federal Race to the Top program then provides the funding necessary to ensure that this great vision for education can be accomplished by:

- Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- Recruiting, developing, retaining, and rewarding effective teachers and principals
- Building data systems that measure student success and inform teachers and principals how they can improve their practices
- Turning around our lowest-achieving schools

It is with this commitment to Kentucky's education vision and the opportunity to secure substantial funding for that vision in mind that we are pleased to commit our support for Kentucky's Race to the Top application. In addition, to support the initiatives of the application, MoSU will also support the vision in the following ways:

- To coordinate with P-12 schools to address improving student achievement, MoSU's College of Education has developed a Regional Engagement Model which supports the vision of Race to the Top, provides co-planning so that teacher preparation programs at

the initial and advanced levels are field-based and center on the needs of K-12 students and their achievement.

- To improve teacher practice and student achievement, the MoSU Teacher Leader MA program is grounded in P-12 collaborations, with candidates, P-12 leaders, and university faculty co-developing individualized learning plans, providing job-embedded coursework and professional development based on student, classroom, and school data.
- To turn around our lowest-achieving schools and to improve teacher practice and student achievement, the College of Education has developed a unique practitioner Ed.D. program which is field based, individualized, and requires co-planning with the candidate's school leaders, Teacher Leader MA candidates, and university faculty.
- To turn around our lowest-achieving schools and to improve teacher practice and student achievement through the use of data systems, the College of Education has developed the 21st Century Education Enterprise, a not-for-profit professional development center that collaborates with Eastern Kentucky schools on strategic planning, data retreats, and professional development to address increasing student achievement.

Thank you for your leadership as we work to provide the young people of our state the best education possible. We look forward to our collaboration to meet the goals you have set forth.

Sincerely,

Wayne D. Andrews
President

MURRAY
STATE UNIVERSITY

Office of the President
218 Wells Hall
Murray, KY 42071-3318
270.809.3763
270.809.3413 fax

www.murraystate.edu

January 6, 2009

Commissioner Terry Holliday
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, KY 40601

Dear Commissioner Holliday:

Murray State University is pleased to support the application for the Commonwealth of Kentucky for *Race to the Top* funding.

Kentucky has set forth a framework that places students at the center and provides them with clear knowledge of the preparations necessary to succeed in college and in a career. Supporting those students locally are highly effective teachers, who are in turn supported by engaged communities and school leaders. As a public state university, Murray State wholeheartedly supports efforts to prepare all of Kentucky's students for the increasing demands of the global society.

Any opportunity for Kentucky to improve educational services offered to the students of the Commonwealth should be explored. For that reason, Murray State is proud to support Kentucky's *Race to the Top* application as one mechanism by which additional funding can be secured to support students.

Thank you for your leadership as we work at all educational levels to provide the young people of Kentucky with the best education possible.

Sincerely,

Randy J. Dunn

Randy J. Dunn
President

Equal education and employment opportunities M/F/D, AA employer

your world to explore

Listening. Learning. Leading.

Educational Testing Service
Policy Evaluation & Research Center
Rosedale Road - MS 19-R
Princeton, NJ 08541

Michael T. Nettles
Senior Vice President and Edmund W. Gordon Chair, Policy Evaluation and Research Center
Phone: (609) 734-1236
Fax: (609) 734-5960
Cell: (609) 439-6055
Email: mnettles@ets.org

January 12, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
500 Mero Street
1st Floor – Capital Plaza Tower
Frankfort, Kentucky 40601

Dear Dr. Holliday:

We are writing to express our enthusiastic support for the Kentucky Race to the Top proposal to the U.S. Department of Education.

ETS PERC would be interested in partnering with the Kentucky Department of Education to bring about needed improvements in the professional development of school teachers and leaders as it pertains to the use of formative assessment in the classroom and strengthening instruction in elementary and middle schools, with a particular focus on mathematics. The ultimate goals of our contribution are:

- Increasing student achievement in mathematics, as reported by the NAEP and the assessments required under the ESEA; and
- Decreasing achievement gaps between subgroups in mathematics, as reported by the NAEP and the assessments required under the ESEA.

ETS PERC proposes to actualize these goals by expansion of the SITES-M project beyond the current consortium. Specific elements include:

1. Creating a statewide umbrella organization whose focus is on identifying, sharing, and providing training in best practices on elementary and middle mathematics;
2. Collecting and analyzing data, and making recommendations for program modifications;
3. Hosting an annual two-week summer professional development institute for in-service teachers that focuses on strengthening content knowledge of mathematics as well as knowledge of mathematics for teaching;
4. Coordinating Saturday mathematics workshops which will serve to support teachers' efforts to improve instruction and reinforce the learning from the summer professional development institutes;
5. Training in and implementation of *Keeping Learning on Track* (KLT) assessments for learning, as well as implementing Teacher Learning Communities (TLCs);
6. Training in the use of Educational Testing Service's standardized observation protocols;
7. Creating Mathematics Challenges – age and grade-appropriate formative assessments for K-8 students, aligned with newly revised state mathematics standards; and

325 N. St Paul Street
Suite 2900
Dallas, Texas 75201
Telephone 214/665-2548
Facsimile 214/665-2525
nationalmathandscience.org

December 21, 2009

Dr. Terry Holliday
Commissioner of Education
Kentucky Department of Education
Office of Leadership and School Improvement
500 Mero Street
Capital Plaza Tower, 17th Floor
Frankfort, KY 40601

Dear Commissioner:

We are pleased to share our strong support for Kentucky's Race to the Top. The National Math and Science Initiative (NMSI) was founded in 2007 to scale up programs proven to show marked increases in rigorous student achievement in math and science. We recognize the many close connections of our Kentucky affiliate, AdvanceKentucky, to the priorities set out by the federal request for proposals.

Kentucky's outstanding, demonstrated leadership has proven its mettle by successfully establishing all systems needed to replicate the NMSI AP Teacher Training and Incentive Program (APTTIP). AdvanceKentucky has aggressively expanded the program in just two years to 28 schools currently serving nearly 6,000 student enrollments in Advanced Placement (AP) mathematics, science and English classes.

AdvanceKentucky has increased student performance on AP exams in math, science, and English among participating schools by 79 percent in just one year (from 2008 to 2009), which is 14 times the national rate of growth. In that same year Kentucky ranked second in the nation in percent growth in passing scores on national AP math, science and English Exams.

Especially with this proven performance, we enthusiastically applaud including in Kentucky's Race to the Top even more dramatic expansion of the number of schools participating in AdvanceKentucky. Moreover, we commit NMSI's continued support under our existing six-year award to AdvanceKentucky, an initiative of the non-profit Kentucky Science and Technology Corporation (KSTC). Our award to states stipulates a matching funds component that incents our partners to scale up while at the same time demonstrating high levels of student performance in STEM fields and English. Kentucky's Race to the Top STEM focus through AdvanceKentucky is a highly sustainable approach involving KSTC's vast experience and demonstrated success.

Our current relationship with KSTC epitomizes the top caliber of dynamic innovative partners that we sought in scaling up APTTIP under a national competition. They have executed flawlessly the academic program, accountability and financial systems expected by NMSI and our national board of directors and donors.

We stand as your partner in Kentucky's Race to the Top.

Sincerely,

(b)(6)

Tom Luce
Chief Executive Officer

John Winn
Chief Program Officer

8. Reviewing and strengthening of curricula and course requirements in colleges and universities that prepare pre-service teachers of elementary and middle school students.

We are committed to improving teaching and learning for all children in this nation and around the world. We look forward to working closely with the Kentucky Department of Education to achieve the Race to the Top goals in schools across the State.

We thank you for your consideration to be your partners in this significant enterprise, and we look forward to discussing your interest in our collaboration in the near future.

Sincerely,

Michael T. Nettles, PhD
Senior Vice President and Edmund W. Gordon Chair

APQC®
EDUCATION

RECEIVED
JAN 13 2010
01131003
COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

January 11, 2010

Terry Holliday, Ph.D.
Kentucky Commissioner of Education
Kentucky Department of Education
500 Mero Street – 1st Floor
Frankfort, Kentucky 40601

Dear Terry:

I have heard that the State of Kentucky will be submitting a proposal for one of the Race to the Top Grants.

If any state deserves an award, it's Kentucky. And why? Because Kentucky, under your leadership, will do something no other state plans to do or can do. And that's to use a methodology called "Process Management" to improve the efficiency and effectiveness of the Kentucky State Department of Education. And, to be sure that the K-12 districts in the nation are trained and coached to do the same.

I say this with a strong conviction for two reasons:

One: You led the Iredell-Statesville School District to win the Malcolm Baldrige National Quality Award, and there have been only 5 education institutions in the nation that have achieved this level of excellence. It wouldn't have happened had You not been the Superintendent.

Two: You and the Iredell-Statesville school district were one of the 8 school districts in the nation who participated in an APQC year-long pilot project to show that "Process Management" could produce results in a K-12 school district, and could achieve great improvements in both the curriculum and operations side.

You weren't a Superintendent that assigned this to others, and then walked away. You led the project personally, including spending time working on details with flip charts and action planning with your staff and with APQC. I saw that you were not only a leader, but one who rolled up his sleeves and helped execute.. I would say that you are as good a CEO as any leader in the business or education world.

In working with you, I have seen that when you have a passion about something, you get it done. That's why I know that, if Kentucky is awarded a grant, you will make it work. Kentucky would be the first state in the whole nation that would manage its own Department of Education efficiently and effectively, and I know you will see that the districts in the state are involved , trained, and coached.

I strongly support Kentucky's grant application for the Race to the Top.

Sincerely,

(b)(6)

C. Jackson Grayson, Jr.
Chairman

FELIX E. MARTIN JR.
FOUNDATION

RECEIVED
JAN 8 2010
01081003
COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

January 6, 2010

Dr. Terry Holliday, Commissioner
Kentucky Department of Education
100 Capital Plaza Tower
500 Mero Street
Frankfort, KY 40601

Dear Dr. Holliday:

As a member of the philanthropic community, I write on behalf of the Board of Directors of the Felix E.Martin, Jr. Foundation. We commend Kentucky on its efforts to lead the charge for education reform and pledge our support for education in the Commonwealth of Kentucky.

Our benefactor, the late Felix E. Martin, Jr., was the son of a former schoolteacher and librarian. Thus, he knew the value of a good education. Mr. Martin left specific instructions in his will to ensure that a significant portion of his $60 million estate would support education. Today, as he instructed, the Felix E. Martin, Jr. Foundation continues to work to meet the education, civic and cultural needs of Muhlenberg County, Kentucky.

In honor of Mr. Martin's wishes, his estate and the Foundation have made a significant effort to improve the quality of education that Muhlenberg County youth receive. Together, the estate and the Foundation have distributed almost $7 million in grants to the Muhlenberg County School District as well as higher education institutions like the University of Kentucky and Madisonville Community College.

We are aware that Kentucky has set forth a framework for the future of education in Kentucky that puts students at the center, with clear knowledge of what they will need to be ready for college and career. We are also aware of both your commitment and the General Assembly's commitment to this vision by virtue of the passage of Senate Bill 1 during the 2009 legislative session and Kentucky's pursuit of federal *Race to the Top* grants.

We commend you for your diligent efforts to continue to improve education in Kentucky, and we offer our support of these important programs. We will continue to focus on the importance of education while collaborating with other philanthropic entities to support education initiatives. We look forward to continuing to support your efforts to reform Kentucky's education system now and in the future.

Sincerely,

(b)(6)

Kathy Steward Jacobi
Secretary
Board of Directors

The Next Era in Kentucky Educational Progress

A position paper from the Kentucky Department of Education and the Kentucky Board of Education

Executive Summary

Kentucky's educational progress depends on a strong, valid and reliable system of assessment and accountability. The development of higher, clearer, fewer and narrower academic standards is just the first step in a process that will lead to a system that provides valuable, usable data for many stakeholders. A robust, viable system will maintain Kentucky's work to lead students to proficiency and beyond.

This position paper outlines the state's plan and vision for the next generation of assessment and accountability. It is a collaborative effort among many groups and individuals, and it contains input from many sources.

Five key principles guided the development of this document:

1. Development of standards must happen before the selection or creation of the assessment.
2. The annual state assessment system must provide diagnostic, longitudinal growth data and overall proficiency levels at the individual student level.
3. The annual state assessment must measure both the knowledge and higher-level thinking required by the standards.
4. The annual state assessment should be built to support interim and classroom assessments.
5. Accountability is necessary for ongoing educational improvement.

The goal of this document is to provide a framework upon which Kentucky's student, school and district assessment and accountability system can be designed.

This document was reviewed by and includes input from numerous education stakeholders.

A Call to Action

The world Kentucky students face when they leave our classrooms today is drastically different from the one high school graduates encountered nearly two decades ago when the state's 20th-century educational reforms were first enacted. It is time to make significant changes to the educational system to ensure that every Kentucky student acquires the skills required in the 21st century to be successful in the global economy.

A comprehensive and well-balanced assessment system that assures concrete knowledge, critical thinking, creativity, adaptability and initiative – skills that are crucial to today's success – can serve as the engine that drives progress into the next era. This assessment system must meet the many requirements outlined by state and federal law -- specifically, the federal No Child Left Behind (NCLB) Act of 2001, on which at least $214 million in federal funding hinges -- and provide balanced assessment and accountability. The work begins with a well-planned standards revision process followed immediately by teacher training and, ultimately, the revision of curriculum and instructional practices.

To that end, the Kentucky Department of Education (KDE) stands ready to meet these new challenges and design the next generation of standards, assessment and accountability.

Streamlined Educational Standards, Beginning with Mathematics

At the heart of the needed changes is a hard look at the curriculum standards that are currently in place. While these content standards were revised as recently as 2006, recent developments and research, especially in mathematics, call for immediate action.

The Kentucky Department of Education has been involved in various initiatives through several national organizations that have all led to the same definitive conclusion: ***Focus and improvement is needed in mathematics standards and assessments to better enable students to succeed in the international economy of the 21st century.***

KDE agrees with the assertion from recent publications, such as the National Council of Teachers of Mathematics' (NCTM) *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics*, that "lacking clear, consistent priorities and focus, teachers stretch to find the time to present important mathematical topics effectively and in depth." KDE contends that this is the case across all content areas, but agrees that mathematics is the area of most urgent concern and the place to begin standards revision.

KDE is working with a 15-state consortium facilitated by the Council of Chief State School Officers (CCSSO) to complete a ***fast-track revision process*** that will bring truly internationally benchmarked mathematics and language arts (reading and writing) standards to every Kentucky classroom. This provides Kentucky with the opportunity to have national and international comparisons of students' progress toward common standards.

This work will answer the call from Kentucky legislators and policymakers, the Kentucky Committee on Mathematics Achievement, the Commissioner's Task Force on Assessment and Accountability, Achieve, Inc., the American Diploma Project, NCTM, the National Mathematics Advisory Panel and others for more streamlined mathematics and language arts standards that can, in turn, be assessed authentically within a balanced assessment system.

This process will ensure that all content standards taught in Kentucky classrooms are:

- **Higher**
  - articulating what students need to know to be successful in college and career (beyond four years of college)
  - using national and international benchmarks so that citizens can compete in the global economy and educators can compare Kentucky students' performance to the world
  - including an analysis of the challenges and development of student thought processes during learning
- **Clearer**
  - communicating in a format teachers, students, families and citizens can understand
  - including learning targets and progressions, enabling teachers to know when students have achieved standards
- **Fewer/Narrower**
  - focusing main standards through a judicious process using research-based evidence
  - fitting within the instructional timeframe of Kentucky's school calendar and reducing testing time

The process will begin immediately with mathematics and language arts. Within 24 months, the necessary instructional resources and resulting assessments will be in place.

The Next Era in Kentucky Assessment and Accountability

In addition to the need for higher, clearer and fewer curriculum standards, KDE also understands that lessons learned in the area of testing clearly call upon Kentucky to rethink the state's assessment and accountability system. The Commonwealth Accountability Testing System (CATS), and the Kentucky Instructional Results Information System (KIRIS) before it, met the needs for school accountability during their times. It's now time for Kentucky to move toward a system that more clearly impacts daily classroom instruction, motivates students for individual success, provides longitudinal measures that give clear feedback to educators and families and also can supply the accountability measures taxpayers deserve and citizens expect.

Kentucky's opportunity to build the next generation of assessment must rely on five guiding principles.

1. **Development of standards must happen before the selection or creation of the assessment.**

A fundamental step in designing a state assessment system is to first develop the standards that need to be taught and mastered in each grade level and in each content area. In order to have a coherent statewide system, it is imperative that standards drive the choices made about testing and not vice versa. After standards are set, test questions specifically tied to those can be developed. The standards should be vertically aligned and developmental in nature to provide high-quality longitudinal growth data.

By developing standards first, the state clearly articulates the expectations that each student must meet. Once the standards are in place, the assessment system then measures how well students perform against its state standards. The main type of test used to measure standards must be a standards-based or criterion-referenced assessment. This type of assessment provides specific details about how students meet specific standards. A criterion-referenced/standards-based test is designed ultimately to allow all students to meet the criteria, unlike a norm-referenced assessment that is designed primarily to rank-order students.

2. **The annual state assessment system must provide diagnostic, longitudinal growth data and overall proficiency levels at the individual student level, as well as school and district accountability.**

The annual state assessment will provide scores that answer two questions:

1. How well does the student perform overall in a content area?
2. How well does the student perform on selected standards/objectives?

The proficiency-level score helps meet federal guidelines and provides information about how students perform on state goals. The diagnostic information is more useful at the classroom level to help teachers identify general areas of weakness and strength in their curricula. Also, it provides information for the student and family about areas of strength or weakness. Diagnostic information provides as many details as possible. For instance, diagnostic information may be able to provide summaries of the misconceptions students exhibit when they choose certain answers on the test. This type of information is useful to help teachers make instructional change in the classroom. Ideally, a significant number of items must be released to teachers and administrators each year so that they can use in-depth item analysis methodologies to further refine instruction and address the individual learning needs of students.

In order to provide both proficiency level and diagnostic scores, the state assessment system would need to be linked to a clear set of fewer and focused standards that could be measured in an end-of-year test. In addition, the test would need to use the same items for all students in order to determine the individual student level diagnostics. A single test for all students, rather than multiple forms, would be required.

3. **The annual state assessment must measure both the knowledge and higher-level thinking required by the standards.**

The state annual assessment must span the spectrum of thinking skills from knowledge retrieval to solving complex problems. The test must incorporate both multiple choice questions and constructed response items (short answer, extended answer, open response). Multiple choice questions are valuable for their ability to judge knowledge and comprehension. Constructed response items provide a way to measure higher levels of thinking.

KDE and KBE will investigate appropriate means of assessing content-area knowledge:

- using programmatic assessments for arts & humanities
- reviewing the practical living/vocational studies assessment
- reviewing assessments for children with disabilities (while meeting requirements of NCLB and IDEA)
- reconsidering the 4th-grade portfolio to determine if it is the best approach to measure writing instruction at the elementary level

4. **The annual state assessment should be built to support interim and classroom assessments.**

By creating an annual state assessment based on fewer, narrower and focused standards, the state system will help support the development of interim and classroom measures, resulting in a balanced assessment system that provides ongoing instructional information to teachers, principals, students and families.

An annual state assessment alone cannot provide the type of ongoing information needed by teachers to help students learn. Once-a-year results are important, but the most valuable assessments are those that occur more frequently. Two general types of assessment are needed:

- Interim assessments are formal tests, aligned with the defined standards, given throughout the year (two to four times) and help predict performance on the state's annual assessment and provide diagnostic information.
- Classroom assessments gather ongoing data and provide the frequent feedback critical to improving instruction and improving student achievement.

Interim and classroom assessments must be clearly linked to the state's educational standards and the annual assessment. By creating a balanced assessment system, classroom, district and state assessments are aligned and support each other. The interim and classroom assessments must be supported by the state through the creation of standards and resources to bolster instruction around those standards.

5. **Accountability is necessary for ongoing educational improvement.**

Accountability is an evolving experience that is aimed at improving learning and accelerating academic progress. Accountability has improved Kentucky's national educational standings. Prior to the accountability system in the 1990s, Kentucky was frequently cited as near last in academic achievement nationwide. During this 18-year effort to improve Kentucky's educational system, Kentucky has moved from last to middle of the pack. There is still a long way to go and much work to be done, but accountability did ignite change.

The next generation of assessment in Kentucky must include accountability to improve the achievement levels of every student. The fundamental principle of accountability is to motivate students, educators and the public to continually improve Kentucky's educational system. The accountability model should include both academic and nonacademic indicators (graduation, retention, dropout and other rates) and focus on school and student growth.

With the creation of more narrow and concise standards aligned across years, it will be possible to move Kentucky to a longitudinal growth model that looks at how much academic growth occurs for each student and then factors that growth into the accountability system. In this method, there is an incentive to improve every student's achievement level. A successful longitudinal system calls for the creation of a sound set of subject matter standards aligned vertically and running through courses from elementary to high school. By aligning the tests across years, student performance can be tracked over time.

Moving to the Next Generation

As we move to the next generation of standards and the resulting state assessment package, we must consider many dimensions. Decisions must take into account the need to meet federal guidelines concerning state assessments. Those guidelines require federal approval prior to a state receiving its Title I allocation, and the guidelines are not trivial.

The next generation of assessment and accountability must be a coherent, time-saving system that provides quick turnaround and balances:

- reading, mathematics tested once a year in grades 3–8 and once in high school (as required by NCLB)
- science, writing and social studies tested at least once each at elementary, middle and high school
- EXPLORE, PLAN and ACT in grades 8, 10 and 11 for college readiness and national comparison information

In addition, a realistic timeline is necessary to ensure success. KDE calls for work to begin immediately on mathematics standards that could be ready by January 2010 and a mathematics test ready for use by

spring 2011. Other content areas could begin work for phase-in beginning spring 2012. By phasing in different content areas, it may be possible to maintain the accountability trend line to meet the current requirements of NCLB by 2014.

Improvement in instruction does not happen through the revision to standards and assessment alone; it requires professional resources and training. An investment in teacher knowledge and expertise will produce positive change in student learning. The Kentucky Department of Education, in collaboration with educational cooperatives, postsecondary institutions and other networks, will make this investment through professional growth opportunities. Priority needs in the areas of assessment literacy and high-quality instruction will be addressed that enable Kentucky educators to effectively utilize Kentucky's new standards within a balanced assessment system.

Achieving the next era in Kentucky's educational progress will call for new funding allocations. Initially, the collaborative revision of mathematics and language arts standards will require KDE staff to attend the Council of Chief State School Officers' national meetings and to visit partnering states. Implementing the research that is necessary to evaluate instructional progress in Kentucky will require measures beyond state and national assessments; therefore, tools such as the national Survey of Enacted Curriculum will need to be implemented throughout the state in order to better measure the instructional progress that Kentucky teachers are making as they implement the new standards. Additional standards development in content areas beyond mathematics and language arts will require partnerships that extend beyond the CCSSO network. KDE must collaborate with other state departments of education and with international experts in standards development in the effort to focus instruction and balanced assessment on international standards.

The assessment development will be dependent on the standards and the ultimate test design. Some of the early work of a developer, if needed, will overlap the work of the current system of assessment, thus calling for temporary, additional money to fund the simultaneous efforts.

Conclusion

To ensure that Kentucky's assessment and accountability system provides valuable instructional information and reliable data, it must be refocused. The development of higher, clearer, fewer and narrower academic standards, starting with mathematics, will be the starting point.

Five principles should guide this process:

1. Development of standards must happen before the selection or creation of the assessment.
2. The annual state assessment system must provide diagnostic, longitudinal growth data and overall proficiency levels at the individual student level.
3. The annual state assessment must measure both the knowledge and higher-level thinking required by the standards.
4. The annual state assessment should be built to support interim and classroom assessments.
5. Accountability is necessary for ongoing educational improvement.

Kentucky is poised to move forward in the area of standards revision, particularly in the area of mathematics. This work must have one overriding goal – to ensure that the state's standards, assessment and accountability all focus on what is best for every child in the public school setting.

Kentucky NAEP exclusion data

NAEP Percentage of Total sample identified SD and ELL, and percentage of Total and of Identified students Excluded and Accommodated: 2003-2009 Grade 4 Reading										
	SD					ELL				
	Pct of total			Pct of SD		Pct of total			Pct of ELL	
Jurisdiction	ID	Excl	Accm	Excl	Accm	ID	Excl	Accm	Excl	Accm
Kentucky 2009	15	7	3	48	23	2	1	1	43	24
Kentucky 2007	15	7	3	48	19	2	1	0	46	6
Kentucky 2005	14	8	3	56	22	2	1	0		
Kentucky 2003	14	8	1	59	10	1	1	0		

NAEP Percentage of Total sample identified SD and ELL, and percentage of Total and of Identified students Excluded and Accommodated: 2003-2009 Grade 4 Math										
	SD					ELL				
	Pct of total			Pct of SD		Pct of total			Pct of ELL	
Jurisdiction	ID	Excl	Accm	Excl	Accm	ID	Excl	Accm	Excl	Accm
Kentucky 2009	15	3	7	19	49	2	0	1	13	53
Kentucky 2007	15	2	7	16	48	2	0	1	11	51
Kentucky 2005	14	2	9	16	61	1	0	1		
Kentucky 2003	13	3	7	21	50	2	1	0	31	20

NAEP Percentage of Total sample identified SD and ELL, and percentage of Total and of Identified students Excluded and Accommodated: 2003-2009 Grade 8 Reading										
	SD					ELL				
	Pct of total			Pct of SD		Pct of total			Pct of ELL	
Jurisdiction	ID	Excl	Accm	Excl	Accm	ID	Excl	Accm	Excl	Accm
Kentucky 2009	12	7	4	55	32	1	1	0	68	15
Kentucky 2007	13	7	3	58	27	1	0	0	35	26
Kentucky 2005	12	7	3	55	27	1	0	0		
Kentucky 2003	13	7	1	53	12	1	0	0		

NAEP Percentage of Total sample identified SD and ELL, and percentage of Total and of Identified students Excluded and Accommodated: 2003-2009 Grade 8 Math										
	SD					ELL				
	Pct of total			Pct of SD		Pct of total			Pct of ELL	
Jurisdiction	ID	Excl	Accm	Excl	Accm	ID	Excl	Accm	Excl	Accm
Kentucky 2009	12	4	6	37	51	1	0	1	36	44
Kentucky 2007	13	6	5	49	38	2	0	1		
Kentucky 2005	11	3	6	28	54	1	0	1		
Kentucky 2003	13	4	5	31	39	1	1	0		

Kentucky's Cohort Graduation Rate Plan

Graduation Rate - Data Collection and Reporting

- Kentucky will track first time 9th graders beginning with the 2009-10 cohort until they graduate four years later in 2013.
- Kentucky will collect 2013 graduate data in fall 2013 and report the 2013 four-year adjusted cohort graduation rate beginning in fall 2013.
- Kentucky will report the Averaged Freshman Graduation Rate (AFGR) as the transitional graduation rate from 2010 through 2012.

Graduation Rate - Data Collection and Reporting		
School Year	Graduation Rate Reported	Reporting Date
2008-09	2009 Leaver	Spring 2010
2009-10	2010 Leaver/AFGR	Fall 2010
2010-11	2011 AFGR	Fall 2011
2011-12	2012 AFGR	Fall 2012
2012-13	2013 Cohort	Fall 2013

Graduation Rate - NCLB Reporting for AYP

- Kentucky will include the 2013 four-year adjusted cohort graduation rate in AYP determinations in the aggregate and disaggregated by subgroups based on assessments administered in 2013-14.
- Kentucky will include the Averaged Freshman Graduation Rate (AFGR) in AYP determinations in the aggregate and disaggregated by subgroups based on assessments administered in 2011-12 and 2012-13.

Graduation Rate - NCLB Reporting for AYP (lagged data)		
School Year Assessments Administered	Graduation Rate Reported	Reporting Date
2009-10	2009 Leaver	Summer 2010
2010-11	2010 Leaver	Summer 2011
2011-12	2011 AFGR	Summer 2012
2012-13	2012 AFGR	Summer 2013
2013-14	2013 Cohort	Summer 2014

Steven L. Beshear
Governor

Elaine Farris
Interim Commissioner of Education

EDUCATION AND WORKFORCE DEVELOPMENT CABINET
DEPARTMENT OF EDUCATION

Capital Plaza Tower • 500 Mero Street • Frankfort, Kentucky 40601
Phone: (502) 564-4770 • www.education.ky.gov

February 27, 2009

Mr. Joseph C. Conaty
Delegated Authority to Perform the Functions and Duties of the
Assistant Secretary for Elementary and Secondary Education
Office of Elementary and Secondary Education
U.S. Department of Education (USED)
400 Maryland Avenue, SW, Suite 3E314
Washington, D.C. 20202

RE: Request to extend the deadline to meet the reporting of the four-year adjusted cohort graduation rate to 2013-14

Dear Mr. Conaty:

Kentucky supports the new NCLB graduation rates; however, Kentucky is seeking approval to extend the deadline to meet the reporting of the four-year adjusted cohort graduation rate to 2013-14. The request is triggered by Kentucky's current effort to modernize the state's Student Information System (SIS) by moving to a new vendor and the subsequent operational effort to transition 174 school districts and over 1,400 schools from one SIS vendor to another. As background for the request Kentucky is providing in this letter and its attachments:

- Background information on Graduation Rates
  - Graduation Rates Within *NCLB*
  - Kentucky's Current Graduation Model
  - Kentucky's Proposed Transition Model;
- Evidence demonstrating that Kentucky is unable to meet the 2010-11 deadline;
- A detailed plan and timeline addressing the steps Kentucky is taking to implement the four-year adjusted cohort graduation rate;
- Compliance with final regulations prior to school year 2010-11 and transitional graduation rate through 2012-13.

Graduation Rates Within *NCLB*

In October 2008 the US Department of Education released final regulations establishing a uniform and more accurate measure of calculating high school graduation rate that is comparable across states; strengthening public school choice and supplemental educational service requirements; and increasing accountability and transparency. The final regulations define the

"four-year adjusted cohort graduation rate" as the number of students who graduate in four years with a regular high school diploma divided by the number of students who entered high school four years earlier (adjusting for transfers in and out, immigrants and deceased students).

- Students who graduate in four years include students who earn a regular high school diploma at the end of their fourth year; before the end of their fourth year; and, if a state chooses, during a summer session immediately following their fourth year.
- To remove a student from a cohort, a school or district must confirm in writing that a student has transferred out, immigrated to another country, or is deceased.
- For students who transfer out of a school, the written confirmation must be official and documents that the student has enrolled in another school or in an educational program that culminates in a regular high school diploma.

Kentucky's Current Graduation Model

Kentucky currently uses the National Center of Educational Statistics (NCES) defined four-year completion or leaver rate as the graduation rate for accountability calculations. This four-year-or-less completion rate emulates a true cohort approach following students through four years of high school. This formula is documented and is approved in Kentucky's NCLB Accountability Workbook. Below is the definition.

> "Graduation rate" means the quotient of: {number of current year grade 12 completers (standard diploma within four (4) years, including students with disabilities whose IEPs stipulate they will need more than four (4) years to obtain a standard diploma)} divided by {number of current year grade 12 completers (includes standard diplomas plus certificates of completion), plus the number of current year grade 12 dropouts, plus the number of dropouts from the current 12th grade that dropped out as 11th graders, plus the number of dropouts from the current 12th grade class that dropped out as 10th graders, plus the number of dropouts from the current 12th grade class that dropped out as 9th graders}.

Kentucky's Proposed Transition Model

Kentucky is currently completing the implementation of a new statewide Student Information System (SIS), which is scheduled to be completed by the end of the 2008-09 school year. The first year that Kentucky will be able to begin tracking cohorts (first time 9th graders) in the new SIS will begin with the 2009-10 school year. With this implementation, the 2009-10 9th grade cohort can be tracked through the system until the cohort is scheduled to graduate four years later (2012-13). The reporting of graduation rate is lagged by one year in Kentucky, so the 2012-13 four-year adjusted cohort graduation rate will not be reported until the 2013-14 reporting year.

During this transition period, Kentucky will implement the Averaged Freshman Graduation Rate (AFGR) and begin reporting aggregate and disaggregated graduation rates in the 2010-11 reporting year (2009-10 graduation rate). The AFGR will continue to be reported and included in Adequate Yearly Progress (AYP) for the 2011-12, 2012-13 and 2013-14 reporting years. While 2013-14 is the first year the four-year adjusted cohort graduation rate can be reported, Kentucky will continue to use the AFGR in AYP calculations for one additional year. This will allow sufficient time to verify procedures and check calculations before including the four-year adjusted cohort graduation rate in AYP.

See Attachment A for a detailed chart of Kentucky's Transitional Graduation Rate Plan, which includes timelines for data collection and reporting.

Evidence demonstrating that Kentucky is unable to meet the 2010-11 deadline

Kentucky awarded a contract to Infinite Campus, Inc. in December 2006 to provide and manage the student information system (SIS) for the state's 174 local school districts and over 1,400 schools. The implementation of the statewide SIS began in the 2007-08 school year with a small number of pilot districts and is scheduled to be completed by the end of the 2008-09 school year. The system will allow student data to be managed through a centralized database, providing real-time information to those who are authorized to view it. When an authorized user enters data into the system, other authorized users can view the changed data immediately.

KDE has worked with Infinite Campus to refine the new SIS and test it thoroughly before it is implemented throughout the Commonwealth. Based on the success of this testing, Jefferson County (Kentucky's largest school district) implemented the new SIS in July 2007 and the initial pilot districts went live in October 2007. Following the success of the pilot projects, additional districts began implementation in waves in October 2008 to be completed by April 2009. See Attachment B for a map of Kentucky districts live on Infinite Campus through February 16, 2009 and Attachment C for the Wave 2 through Wave 7 implementation schedule.

Because of the timeline associated with the full implementation of the new statewide SIS, the initial tracking of student cohorts in the SIS will not be able to begin until all schools have transitioned to the new system beginning with the 2009-10 school year.

A detailed plan and timeline addressing the steps Kentucky is taking to implement the four-year adjusted cohort graduation rate

With implementation of the new SIS, scheduled to be completed by the end of the 2008-09, Kentucky will be able to track cohorts (first time 9th graders) beginning with the 2009-10 school year. The statewide implementation will allow Kentucky to track the 2009-10 9th grade cohort through the system until the cohort is scheduled to graduate four years later (2012-13). Since the reporting of graduation rate is lagged by one year, the 2012-13 four-year adjusted cohort graduation rate will be reported for the first time in 2013-14. Kentucky will continue to use the AFGR for AYP calculations in 2013-14 to allow sufficient time to verify procedures and check calculations before including the four-year adjusted cohort graduation rate in AYP. Beginning with reporting year 2014-15, Kentucky will report the four-year adjusted cohort graduation rate and include it in AYP.

See Attachment D for a detailed chart of Kentucky's Cohort Graduation Rate Plan, which includes timelines for data collection and reporting.

Compliance with final regulations prior to school year 2010-11 and transitional graduation rate through 2012-13

Kentucky intends to comply with requirements of the final regulations that require:

- Prior to school year 2010-11, report the graduation rate in the aggregate and disaggregated by subgroups at the high school, district, and state levels using a transitional graduation rate (Kentucky's Current Graduation Model);
- Report the transitional graduation rate (AFGR) in the aggregate and disaggregated by subgroups at the high school, district, and state levels on report cards providing results of assessments administered in the 2010-11 school year;
- Using the transitional graduation rate (AFGR), report in the aggregate and disaggregated by subgroups, for school district and state AYP determinations for school years 2011-12, 2012-13 and 2013-14; and
- Report the four-year adjusted cohort graduation rate in the aggregate and disaggregated by subgroups, for school, district, and state reporting beginning in 2013-14 and for AYP determinations, beginning with those determinations based on school year 2014-15.

If you have questions, please contact Associate Commissioner Ken Draut at 502-564-2256 or via email at Ken.Draut@education.ky.gov. Thank you for your consideration of this request.

Sincerely,

Elaine Farris

cc: Kentucky Board of Education members
Patrick Rooney
David Harmon
Mary Ann Miller
Zollie Stevenson, Jr.
Ken Draut

EF:KD:re/mam

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF ELEMENTARY AND SECONDARY EDUCATION

THE ASSISTANT SECRETARY

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JUL 28 2009
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COMMISSIONER OF EDUCATION
FRANKFORT, KENTUCKY

The Honorable Elaine Farris
Interim Commissioner of Education
Kentucky Department of Education
Capital Plaza Tower
500 Metro Street
Frankfort, Kentucky 40601

Dear Commissioner Farris:

I am writing in response to your request under 34 C.F.R. § 200.19(b)(7) for an extension of the 2010–11 deadline for reporting a four-year adjusted cohort graduation rate (34 C.F.R. § 200.19(b)(4)(ii)(A)) and of the 2011–12 deadline for using a four-year adjusted cohort graduation rate in adequate yearly progress (AYP) determinations (34 C.F.R. § 200.19(b)(5)(i)). Graduation rates represent an important indicator of the extent to which schools and districts are preparing students for post-secondary education and the workforce.

Kentucky requested a three-year extension of the deadline because it is enhancing its student information system and the cohort of students entering 9th-grade in 2009–10 will be the first cohort that can be tracked with the new data system. Kentucky also proposed to "lag" the year in which it reports its data (i.e., to report graduation rate data from the 2010–11 school year with the results of assessments administered in 2011–12). Consequently, Kentucky will have the ability to calculate the four-year adjusted cohort graduation rate in 2012–13 but requested to lag its data to report it in 2013–14.

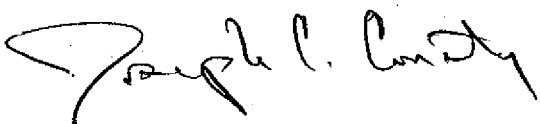
Although a state is permitted to lag its graduation data so that it can include students who graduate with a regular diploma in the summer after their senior year, the Department's *High School Graduation Rate Non-Regulatory Guidance* (see http://www.ed.gov/policy/elsec/guid/hsgrguidance.pdf, question C-3) explains that lagging graduation rate data does not constitute a sufficient reason for an extension of the deadline for reporting the four-year adjusted cohort graduation rate. As such, and as your staff has been informed through conversations with Department staff, I am denying Kentucky's request to delay reporting a four-year adjusted cohort graduation rate until 2013–14.

However, I am approving Kentucky's request for an extension of the deadline to report its four-year adjusted cohort graduation rate. Kentucky will first be required to report its four-year adjusted cohort graduation rate with the results of assessments administered in 2012–13 and to include it in AYP determinations based on assessments administered in 2013–14 (using the 2012–13 lagged data if the state desires to continue to lag graduation rate data for AYP purposes). I am also approving Kentucky's request to use the National Center for Education Statistics' Averaged Freshman Graduation Rate (AFGR) as its transitional rate until Kentucky begins using a four-year adjusted cohort graduation rate. Please note that, beginning with AYP determinations based on assessments administered in 2011–12, Kentucky must include the AFGR in AYP determinations in the aggregate and disaggregated by subgroups at the school, district, and state levels, as required by 34 C.F.R. § 200.19(b)(7)(iii). Finally, Kentucky must amend and submit for approval its Accountability

Workbook to reflect the graduation rate that will be reported and used in AYP determinations during this transition, and, in accordance with 34 C.F.R. § 200.19(b)(6)(ii), must submit for peer review and Department approval its graduation rate goal and targets for 2009–10 and beyond.

We appreciate the work you are doing to improve data quality in Kentucky. If you have any questions as you move forward with your work on Kentucky's graduation rate, please contact Vicki Robinson of my staff at Vicki.Robinson@ed.gov or (202) 205-5471.

Sincerely,



Joseph C. Conaty
Delegated Authority to Perform the Functions and Duties of the Assistant Secretary for Elementary and Secondary Education

cc: Governor Steve Beshear
Ken Draut
MaryAnn Miller

Student achievement data – historical detail

For reform criterion (A)(3)

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NAEP student achievement levels and achievement gaps

Kentucky - Percent At or Above Proficient on NAEP - 4th Grade Reading/Language Arts

Demographic	1992[1]	1994[1]	1998	2002	2003	2005	2007	Change from oldest year with data to 2007	Change from 2003-2007
Total									
ALL	23	26	29	30	31	31	33	10.6	2.8
By race / ethnicity									
White	24	27	31	32	33	33	36	11.4	3.1
Black	8	11	11	13	16	15	14	5.9	-1.2
Hispanic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asian / Pacific Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
American Indian	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	34	N/A	N/A
Gap - Black and White	*16*	*16*	*20*	*19*	*17*	*17*	*21*	*5.5*	*4.4*
Gap - Hispanic and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Asian / Pacific Island and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - American Indian and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Unclassified and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*2*	*N/A*	*N/A*
By socioeconomic status									
Eligible for Natl School Lunch Prograr	N/A	N/A	17	19	21	22	21	4.5	0.3
Not eligible for Natl School Lunch Pro	N/A	N/A	39	40	41	39	46	7.1	5.7
Info not available	N/A	N/A	N/A	23	35	N/A	N/A	N/A	N/A
Gap - Eligible and Not eligible	*N/A*	*N/A*	*23*	*22*	*20*	*17*	*25*	*#REF!*	*3.8*
By gender									
Male	21	22	28	25	27	29	30	8.9	2.5
Female	25	30	30	35	34	33	37	12.0	3.1
Gap - Male and Female	*4*	*7*	*3*	*10*	*7*	*4*	*8*	*3.1*	*0.6*
By disability status									
Student disability	N/A	N/A	14	8	11	14	18	4.1	6.8
Not student disability	N/A	N/A	30	30	32	32	35	5.2	2.9
Gap - Disability and Not disability	*N/A*	*N/A*	*16*	*23*	*21*	*19*	*17*	*1.1*	*-3.9*
By limited English proficiency									
English Language Learner	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Not English Language Learner	N/A	N/A	29	30	31	31	33	4.6	2.8
Gap - ELL and Not ELL	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Kentucky - Percent At or Above Proficient on NAEP - 4th Grade Mathematics

Demographic	1990[1]	1992[1]	1996[1]	2000	2003	2005	2007	2009	Change from oldest year with data to 2009	Change from 2003 - 2009
Total										
ALL	N/A	13	16	17	22	26	31	37	23.9	14.4
By race / ethnicity										
White	N/A	13	17	19	24	29	34	39	25.8	15.3
Black	N/A	3	4	2	8	9	12	14	10.7	5.8
Hispanic	N/A	N/A	N/A	N/A	N/A	N/A	15	22	7.0	N/A
Asian / Pacific Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	69	N/A	N/A
American Indian	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	21	32	11.2	N/A
Gap - Black and White	*N/A*	*10*	*13*	*18*	*16*	*19*	*21*	*25*	*15.1*	*9.4*
Gap - Hispanic and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*19*	*18*	*N/A*	*N/A*
Gap - Asian/Pacific Island and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*-30*	*N/A*	*N/A*
Gap - American Indian and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Unclassified and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*13*	*7*	*N/A*	*N/A*
By socioeconomic status										
Eligible for Natl School Lunch Prograr	N/A	N/A	7	6	12	16	18	21	14.4	9.6
Not eligible for Natl School Lunch Pro	N/A	N/A	24	26	32	37	46	53	28.7	20.3
Info not available	N/A	N/A	9	28	N/A	N/A	N/A	N/A	19.0	N/A
Gap - Eligible and Not eligible	*N/A*	*N/A*	*17*	*20*	*20*	*21*	*28*	*31*	*14.3*	*10.7*
By gender										
Male	N/A	14	17	19	24	29	33	39	25.2	14.7
Female	N/A	12	14	15	20	24	29	34	22.5	14.1
Gap - Male and Female	*N/A*	*-2*	*-3*	*-4*	*-4*	*-5*	*-5*	*-5*	*-2.7*	*-0.6*
By disability status										
Student disability	N/A	N/A	N/A	11	8	12	19	21	10.0	13.4
Not student disability	N/A	N/A	N/A	18	24	28	33	39	21.1	14.8
Gap - Disability and Not disability	*N/A*	*N/A*	*N/A*	*7*	*16*	*16*	*14*	*18*	*11.1*	*1.3*
By limited English proficiency										
English Language Learner	N/A	N/A	N/A	N/A	N/A	N/A	16	28	12.1	N/A
Not English Language Learner	N/A	N/A	N/A	17	22	26	31	37	19.5	14.3
Gap - ELL and Not ELL	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*15*	*9*	*-6.5*	*-6.5*

Kentucky - Percent At or Above Proficient on NAEP - 8th Grade Mathematics

Demographic	1990[1]	1992[1]	1996[1]	2000	2003	2005	2007	2009	Change from oldest year with data to 2009	Change from 2003 - 2009
Total										
ALL	10	14	16	20	24	23	27	27	16.8	3.6
By race / ethnicity										
White	11	15	17	22	25	24	29	29	17.9	3.8
Black	2	4	2	6	5	9	11	8	5.9	3.0
Hispanic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22	N/A	N/A
Asian / Pacific Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
American Indian	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gap - Black and White	*9*	*10*	*15*	*16*	*20*	*16*	*18*	*21*	*12.0*	*0.8*
Gap - Hispanic and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*7*	*N/A*	*N/A*
Gap - Asian/Pacific Island and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - American Indian and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Unclassified and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
By socioeconomic status										
Eligible for Natl School Lunch Prograr	N/A	N/A	4	8	11	14	15	15	10.4	3.4
Not eligible for Natl School Lunch Pro	N/A	N/A	23	29	33	31	37	38	15.7	5.9
Info not available	N/A	N/A	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gap - Eligible and Not eligible	*N/A*	*N/A*	*18*	*20*	*21*	*17*	*22*	*24*	*5.3*	*2.5*
By gender										
Male	11	15	17	22	25	24	30	30	18.4	5.3
Female	9	13	15	18	23	21	24	25	15.1	1.8
Gap - Male and Female	*-2*	*-2*	*-2*	*-4*	*-2*	*-3*	*-6*	*-5*	*-3.4*	*-3.5*
By disability status										
Student disability	N/A	N/A	N/A	4	3	5	7	7	3.4	4.3
Not student disability	N/A	N/A	N/A	22	26	24	29	29	6.9	3.2
Gap - Disability and Not disability	*N/A*	*N/A*	*N/A*	*18*	*23*	*19*	*22*	*21*	*3.5*	*-1.2*
By limited English proficiency										
English Language Learner	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Not English Language Learner	N/A	N/A	N/A	20	24	23	28	27	7.0	3.7
Gap - ELL and Not ELL	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Kentucky - Percent At or Above Proficient on NAEP - 8th Grade Reading/Language Arts

Demographic	1992[1]	1994[1]	1998	2002	2003	2005	2007	Change from oldest year with data to 2007	Change from 2003-2007
Total									
ALL	N/A	N/A	30	32	34	31	28	-2.4	-5.9
By race / ethnicity									
White	N/A	N/A	32	33	36	32	30	-2.6	-6.2
Black	N/A	N/A	11	14	14	15	14	2.8	0.3
Hispanic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asian / Pacific Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
American Indian	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gap - Black and White	*N/A*	*N/A*	*21*	*19*	*22*	*17*	*16*	*-5.5*	*-6.5*
Gap - Hispanic and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Asian / Pacific Island and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - American Indian and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
Gap - Unclassified and White	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
By socioeconomic status									
Eligible for Natl School Lunch Program	N/A	N/A	20	17	23	22	17	-2.7	-6.4
Not eligible for Natl School Lunch Pro	N/A	N/A	38	41	41	38	38	0.0	-3.5
Info not available	N/A	N/A	25	44	N/A	N/A	N/A	N/A	N/A
Gap - Eligible and Not eligible	*N/A*	*N/A*	*18*	*24*	*18*	*17*	*21*	*2.7*	*2.9*
By gender									
Male	N/A	N/A	23	27	27	25	23	0.3	-4.1
Female	25	30	30	35	34	33	37	12.0	3.1
Gap - Male and Female	*N/A*	*N/A*	*7*	*8*	*7*	*8*	*14*	*6.9*	*7.2*
By disability status									
Student disability	N/A	N/A	N/A	5	7	6	7	2.2	0.1
Not student disability	N/A	N/A	32	33	35	32	29	-2.8	-6.3
Gap - Disability and Not disability	*N/A*	*N/A*	*N/A*	*28*	*28*	*26*	*22*	*-6.5*	*-6.4*
By limited English proficiency									
English Language Learner	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Not English Language Learner	N/A	N/A	30	32	34	31	28	-2.4	-5.9
Gap - ELL and Not ELL	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

ESEA student achievement levels and achievement gaps

Kentucky - Percent Proficient or Above on NCLB test - Reading									
Demographic	2003	2004	2005	2006	2007	2008	2009	Change from 2003-2009 in percentage points	Change from 2007-2009 in percentage points
Total									
ALL	50%	53%	56%	57%	68%	68%	69%	19	1
By race									
White	53%	56%	58%	59%	70%	71%	72%	19	1
African-American	31%	36%	38%	39%	51%	50%	51%	20	1
Hispanic	43%	45%	46%	46%	60%	60%	62%	20	2
Asian	65%	68%	69%	70%	81%	80%	79%	14	-2
Gap - African-American and White	21	20	21	21	20	21	20	-1	1
Gap - Hispanic and White	10	11	12	13	10	11	9	-1	-1
Gap - Asian and White	-13	-12	-11	-11	-11	-9	-8	5	3
By language status									
Limited English Proficient	27%	34%	33%	33%	47%	45%	46%	19	-1
Not Limited English Proficient	51%	54%	56%	58%	68%	69%	69%	19	1
Gap	24	20	23	25	22	23	23	0	2
By income									
Free/Reduced Lunch	37%	41%	44%	45%	58%	59%	60%	23	2
Not Free/Reduced Lunch	60%	63%	66%	67%	78%	78%	79%	19	1
Gap	23	22	22	21	20	20	19	-3	-1
By disability status									
With Disability	23%	28%	30%	31%	41%	41%	43%	20	3
Not With Disability	54%	58%	60%	61%	73%	73%	74%	19	1
Gap	31	29	30	30	33	32	30	-1	-2

Kentucky - Percent Proficient or Above on NCLB test - Mathematics

Demographic	2003	2004	2005	2006	2007	2008	2009	Change from 2003-2009 in percentage points	Change from 2007-2009 in percentage points
Total									
ALL	34%	40%	39%	41%	54%	60%	62%	28	8
By race									
White	36%	42%	41%	43%	57%	63%	65%	29	8
African-American	14%	19%	19%	22%	35%	39%	41%	27	6
Hispanic	26%	29%	27%	31%	47%	53%	56%	30	9
Asian	62%	65%	67%	68%	78%	79%	81%	19	3
Gap - African-American and White	22	23	22	22	22	24	24	2	2
Gap - Hispanic and White	10	13	14	12	10	10	9	-1	0
Gap - Asian and White	-26	-23	-26	-25	-21	-16	-16	10	6
By language status									
Limited English Proficient	22%	25%	24%	28%	39%	44%	51%	30	12
Not Limited English Proficient	34%	39%	39%	43%	55%	60%	63%	29	8
Gap	12	14	14	15	15	16	12	-1	-4
By income									
Free/Reduced Lunch	20%	26%	25%	28%	43%	50%	53%	33	10
Not Free/Reduced Lunch	44%	50%	49%	53%	66%	70%	73%	29	7
Gap	24	24	24	25	23	20	20	-4	-3
By disability status									
With Disability	12%	17%	18%	20%	29%	35%	39%	27	10
Not With Disability	37%	43%	42%	46%	59%	64%	66%	29	8
Gap	25	25	24	26	30	29	27	2	-3

High school graduation rates

Kentucky high school graduation rates (different methodologies)													
Methodology	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cumulative Promotion Index	63%	70%	62%	62%	64%	65%	72%	70%	70%	72%	72%	N/A	N/A
Leaver Rate	N/A	N/A	N/A	N/A	N/A	80%	81%	79%	81%	83%	83%	84%	85%

Perry, Teresa - Commissioner's Office

From: Farris, Elaine - Interim Commissioner, Dept. of Education
Sent: Thursday, May 07, 2009 10:51 AM
To: 'scottm@ccsso.org'
Cc: Smith, Jody - Commissioner's Office
Subject: CCSSO/NGAC Common Core Standards MOA
Attachments: 0527_001.pdf

Scott,

Please find attached Kentucky's Common Core Standards MOA that is due May 8. Please note that the MOA has been forwarded to the NGA Center as well. Kentucky's contact for this initiative will be Michael Miller. You can reach Michael at the contact information below.

Michael Miller, Director
Office of Teaching and Learning
Kentucky Department of Education
18th Floor – Capital Plaza Tower
Frankfort, Kentucky 40601
Phone: 502-564-2106
Email: Michael.Miller@education.ky.gov

Please let me know if I can be of further assistance.

Elaine Farris

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 set of standards. 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 a set of common core standards in English language arts and math 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. 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. 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.

☐ **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 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 may choose to include additional state standards beyond the common core. 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 based on research and evidence-based learning and can support the development of assessments that are aligned to the common core 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 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 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:

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.

In the twenty-six years since the release of *A Nation at Risk,* states have made great strides in increasing the academic rigor of education standards. Yet, America's children still remain behind other nations in terms of academic achievement and preparedness to succeed.

By signing on to the common core state standards initiative, governors and state commissioners of education across the country are committing to joining a state-led process to develop a common core of state standards in English language arts and mathematics for grades K-12. These standards will be research and evidence-based, internationally benchmarked, aligned with college and work expectations and include rigorous content and skills.

"To maintain America's competitive edge, we need all of our students to be prepared and ready to compete with students from around the world," said NGA Vice Chair Vermont Gov. Jim Douglas. "Common standards that allow us to internationally benchmark our students' performance with other top countries have the potential to bring about a real and meaningful transformation of our education system to the benefit of all Americans."

"As state school chiefs, we have been discussing and building momentum for state-led, voluntary common standards that are both rigorous and internationally benchmarked for the past two years," stated CCSSO President and Arkansas Commissioner of Education Ken James. "The broad level of commitment we have received from states across the nation for this unprecedented effort is both gratifying and exciting. It also clearly illustrates that this is an idea whose time has arrived."

The Common Core State Standards Initiative is being jointly led by the NGA Center and CCSSO in partnership with Achieve, Inc; ACT and the College Board. It builds directly on recent efforts of leading organizations and states that have focused on developing college- and career-ready standards and ensures that these standards can be internationally benchmarked to top-performing countries around the world. The goal is to have a common core of state standards that states can voluntarily adopt. States may choose

to include additional standards beyond the common core as long as the common core represents at least 85 percent of the state's standards in English language arts and mathematics.

"Measuring our students against international benchmarks is an important step," said Virginia Gov. Timothy Kaine. "Today, we live in a world without borders. It not only matters how Virginia students compare to those in surrounding states – it matters how we compete with countries across the world."

"Only when we agree about what all high school graduates need to be successful will we be able to tackle the most significant challenge ahead of us: transforming instruction for every child," said CCSSO President-Elect and Maine Education Commissioner Sue Gendron. "Common standards will provide educators clarity and direction about what all children need to succeed in college and the workplace and allow states to more readily share best practices that dramatically improve teaching and learning. Our graduates and frankly, the future of our economy, cannot wait any longer for our educational practices to give equal opportunity for success to every student."

The NGA Center and CCSSO are coordinating the process to develop these standards and have created an expert validation committee to provide an independent review of the common core state standards, as well as the grade-by-grade standards. This committee will be composed of nationally and internationally recognized and trusted education experts who are neutral to – and independent of – the process. The college- and career-ready standards are expected to be completed in September 2009. The grade-by-grade standards work is expected to be completed in January 2010.

###

Founded in 1908, the National Governors Association (NGA) is the collective voice of the nation's governors and one of Washington, D.C.'s most respected public policy organizations. Its members are the governors of the 50 states, three territories and two commonwealths. NGA provides governors and their senior staff members with services that range from representing states on Capitol Hill and before the Administration on key federal issues to developing and implementing innovative solutions to public policy challenges through the NGA Center for Best Practices. For more information, visit www.nga.org.

The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public. www.ccsso.org.

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

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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.

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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.

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[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.

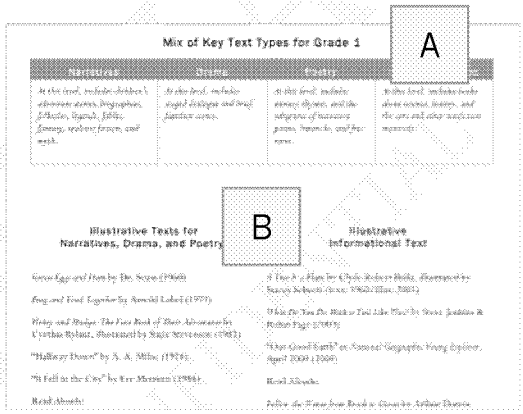
How to Read This Document

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.

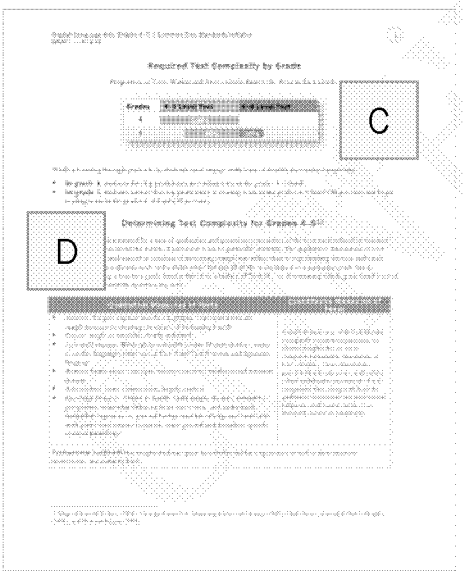
While all strands contain standards statements, each strand also has its own specific features.

Reading and Literature (ELA)/Reading (History/Science)

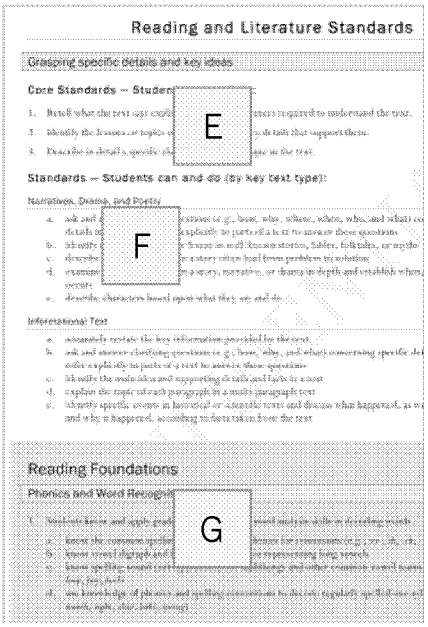


Kindergarten and grade 1 begin with the **mix of key text types (A)**, which identifies the genres and subgenres of reading material appropriate for each grade. This is followed by a list of **illustrative texts (B)** in the key text types. This list is suggestive of the sorts of texts appropriate for 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.)

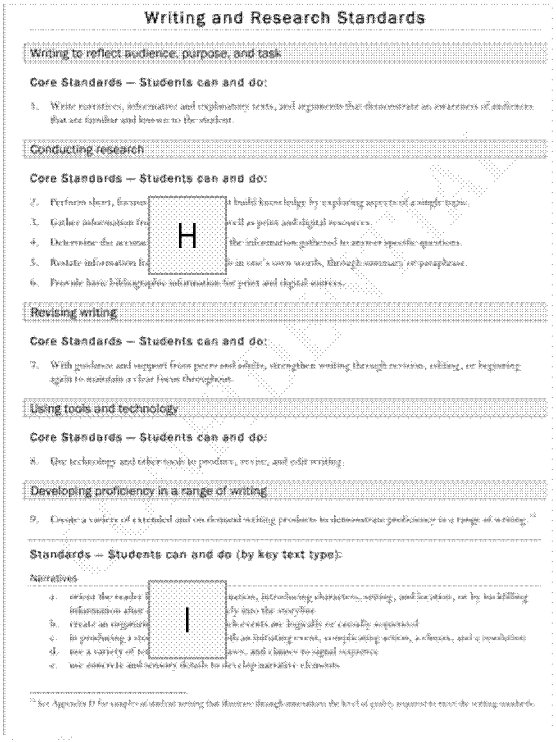


All grades/bands organize standards under a number of boxed subheadings (e.g., "Grasping specific details and key ideas"). The standards at all grade levels are divided into cross-cutting **Core Standards (E)**, which are numbered and applicable to many types of reading, and more specific **Standards (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.


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, focus[illegible] build knowledge by exploring aspects of a single topic.
3. Gather information fro[illegible] well as print and digital resources.
4. Determine the accura[illegible] the information gathered to answer specific questions.
5. Restate information fr[illegible] 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 a variety of extended and on demand writing products to demonstrate proficiency in a range of writing.[12]

Standards — Students can and do (by key text type):

Narratives

a. orient the reader [illegible] ction, introducing characters, setting, and location, or by backfilling information after [illegible] ly into the storyline
b. create an organiz[illegible] ch events are logically or causally sequenced
c. in producing a sto[illegible] ds an initiating event, complicating action, a climax, and a resolution
d. use a variety of te[illegible] ows, and clauses to signal sequence
e. use concrete and sensory details to develop narrative elements

[12] See Appendix D for samples of student writing that illustrate through annotation the level of quality required to meet the writing standards.

H

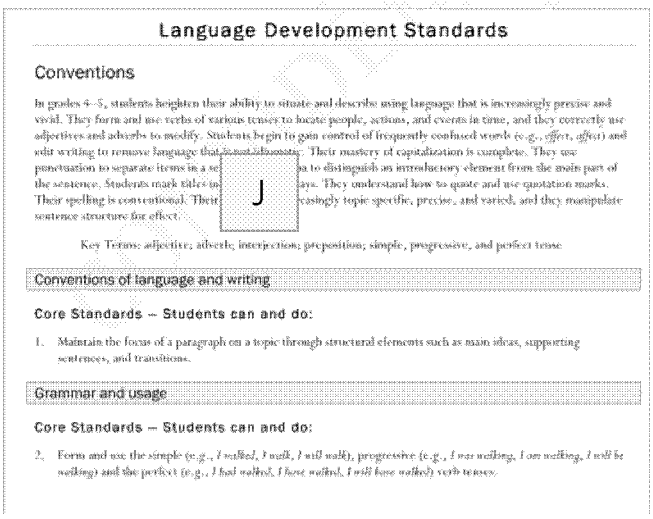
I

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.


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 se[illegible] to distinguish an introductory element from the main part of the sentence. Students mark titles in [illegible] ays. They understand how to quote and use quotation marks. Their spelling is conventional. Their [illegible] easingly 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.

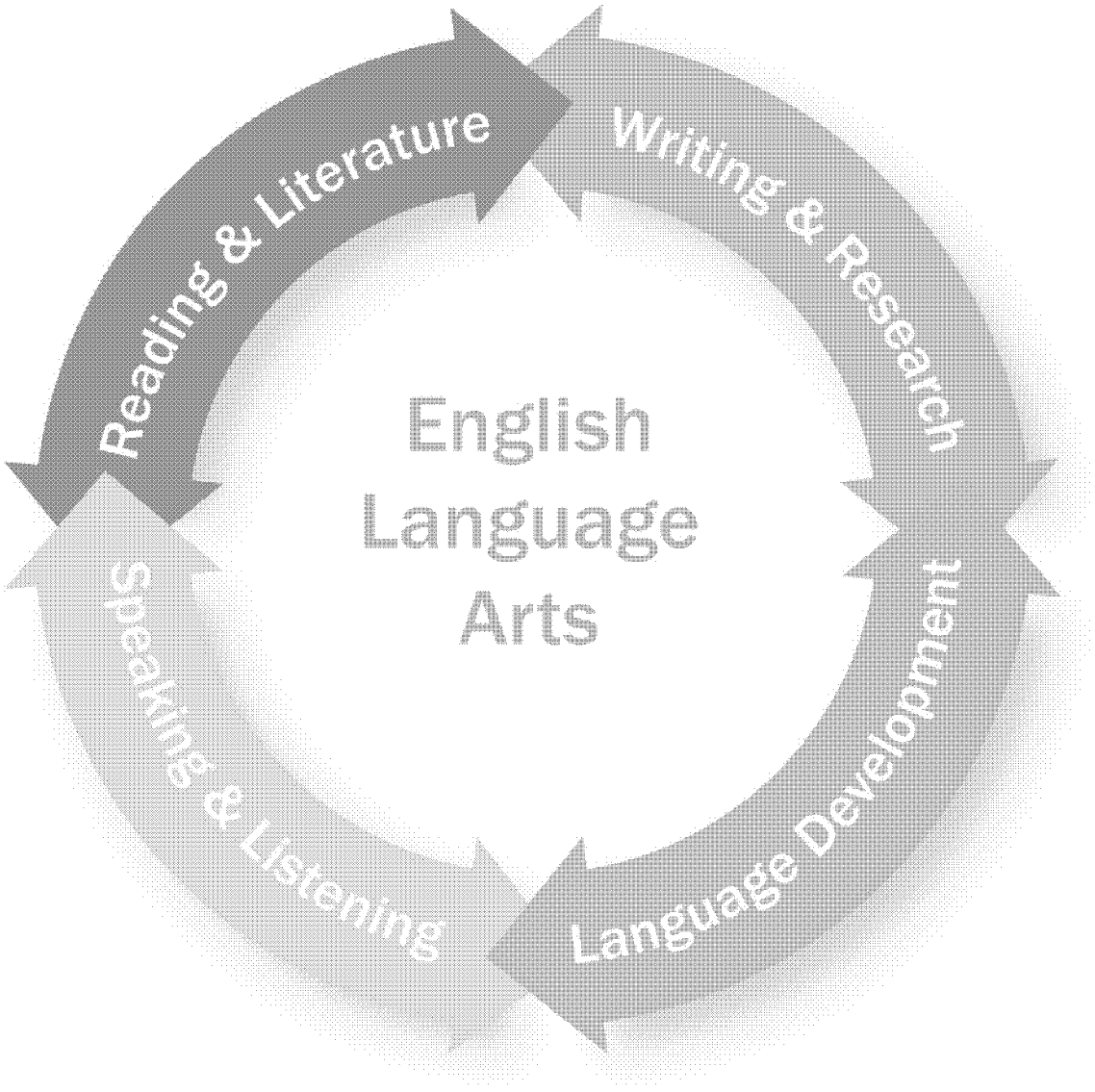
J

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).

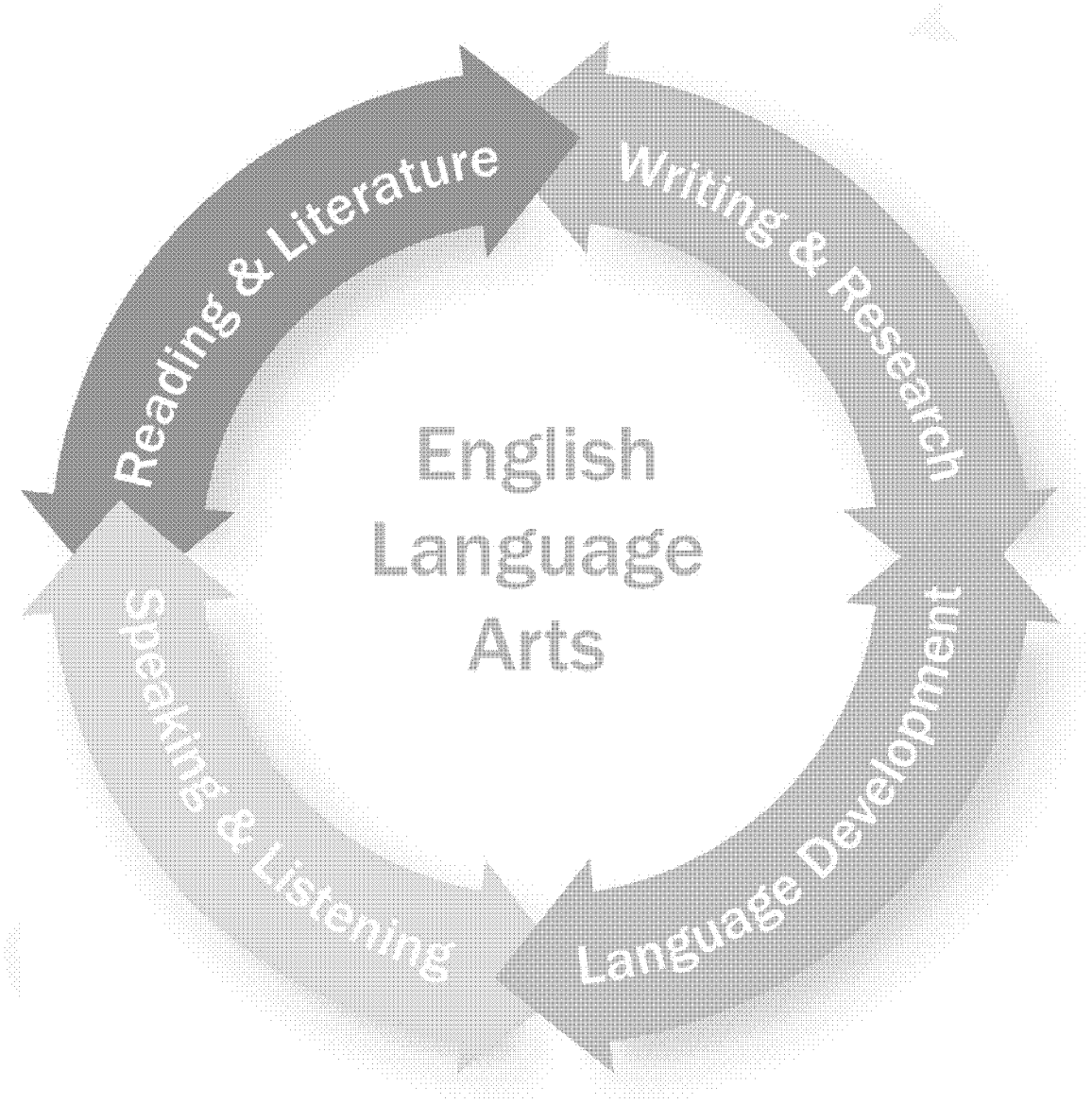
Acquiring vocabulary

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

FINAL

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

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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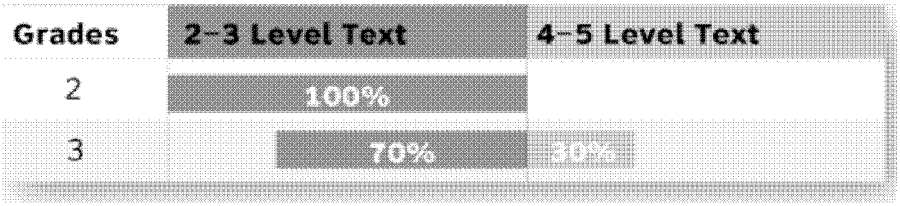
English Language Arts

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)

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[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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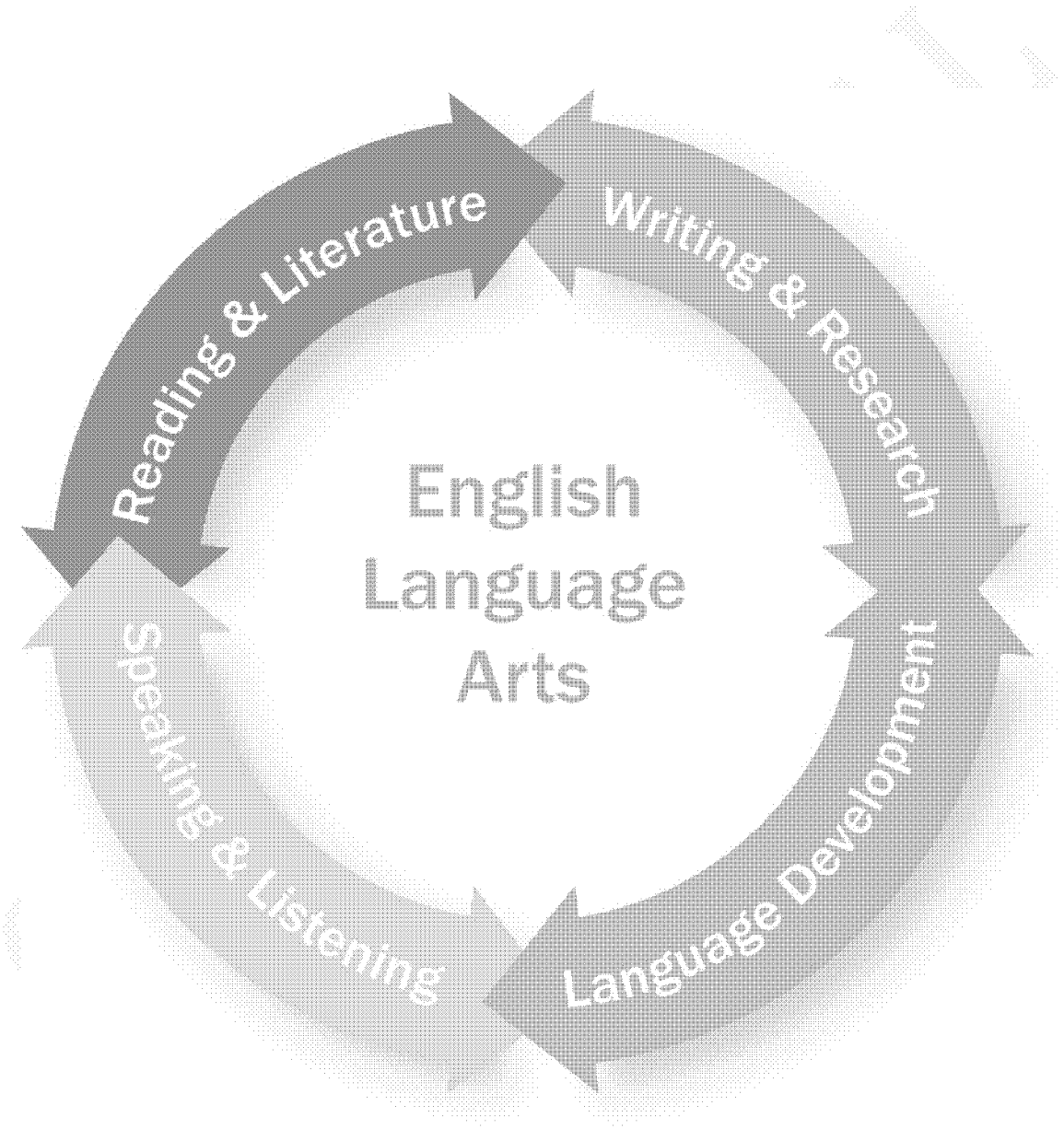
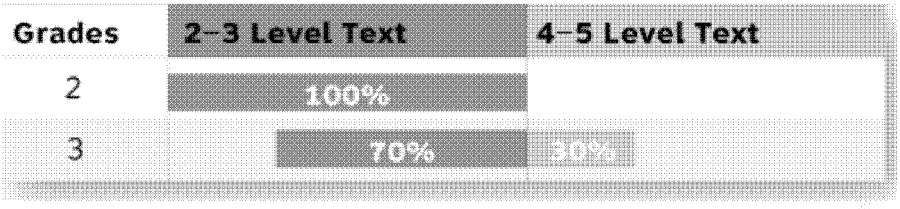
English Language Arts

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

CONFIDENTIAL

[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

DRAFT

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*).

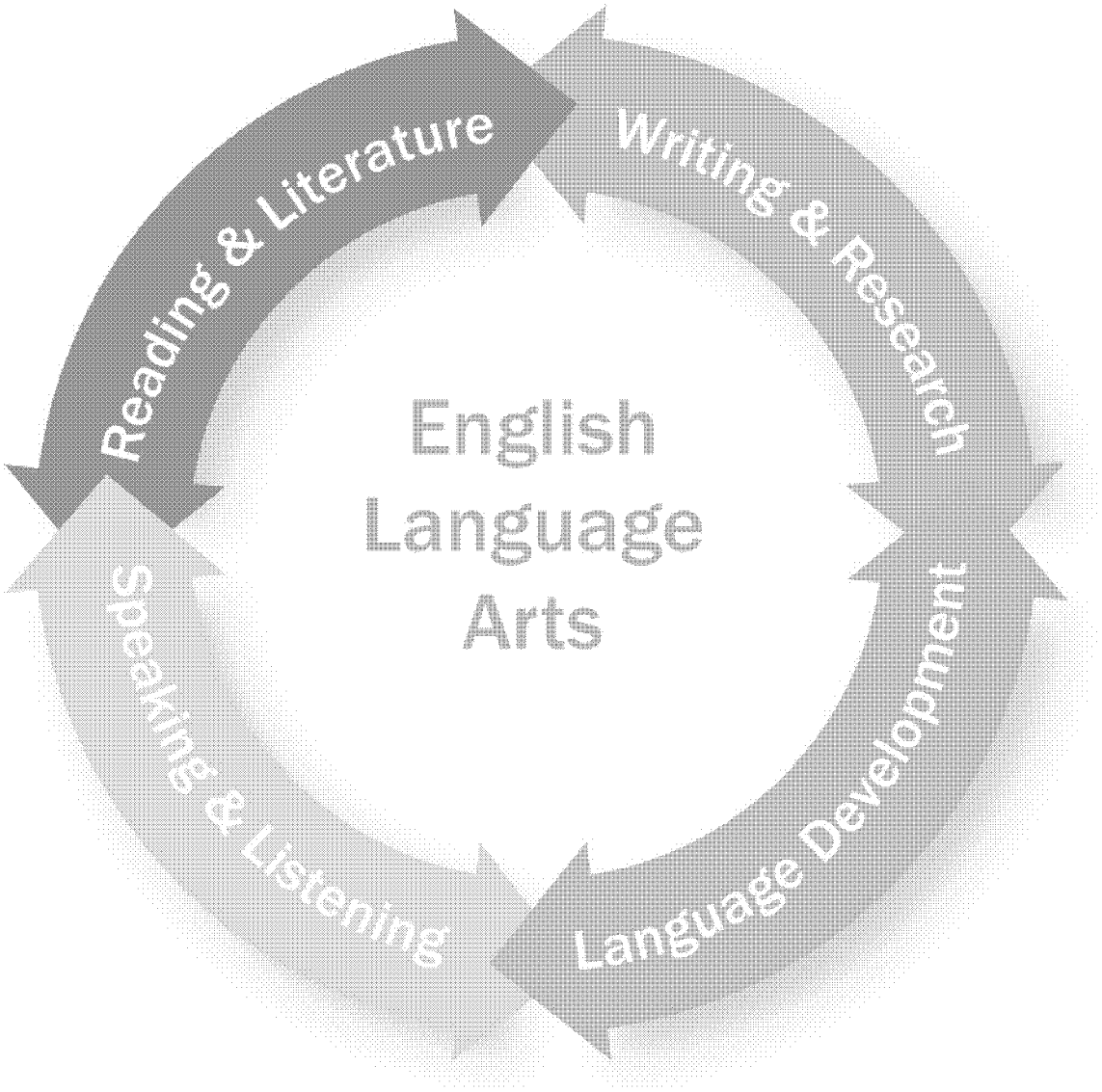
Acquiring vocabulary

Core Standards — Students can and do:

6. Acquire and use new vocabulary taught directly and gained through reading and conversations.

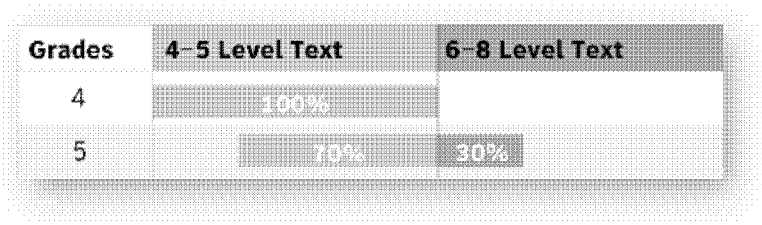
English Language Arts

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.

COMMON CORE

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

100%

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

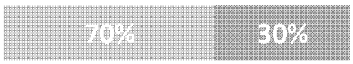
In grade 4, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- 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,

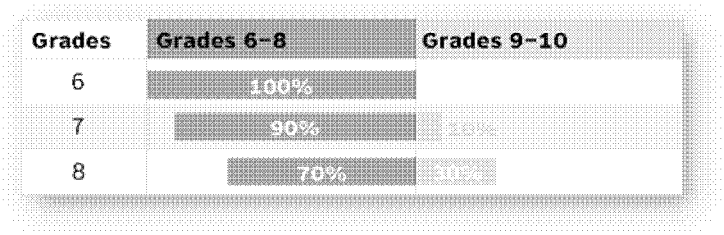
- Vocabulary standards applied to both reading, writing, speaking and listening
- **Grade-specific conventions focus:** Word choice
  - Form and choose between adjectives and adverbs. (Conventions Standard #4)
  - Correctly use frequently confused words. (Conventions Standard #5)
  - Use idiomatic language. (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.

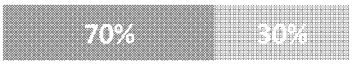
- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Sentence structure
  - Form compound, complex… (Conventions Standard #1)
  - Place phrases and clauses… (Conventions Standard #2)
  - Vary sentence patterns… (Conventions Standard #12)

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.

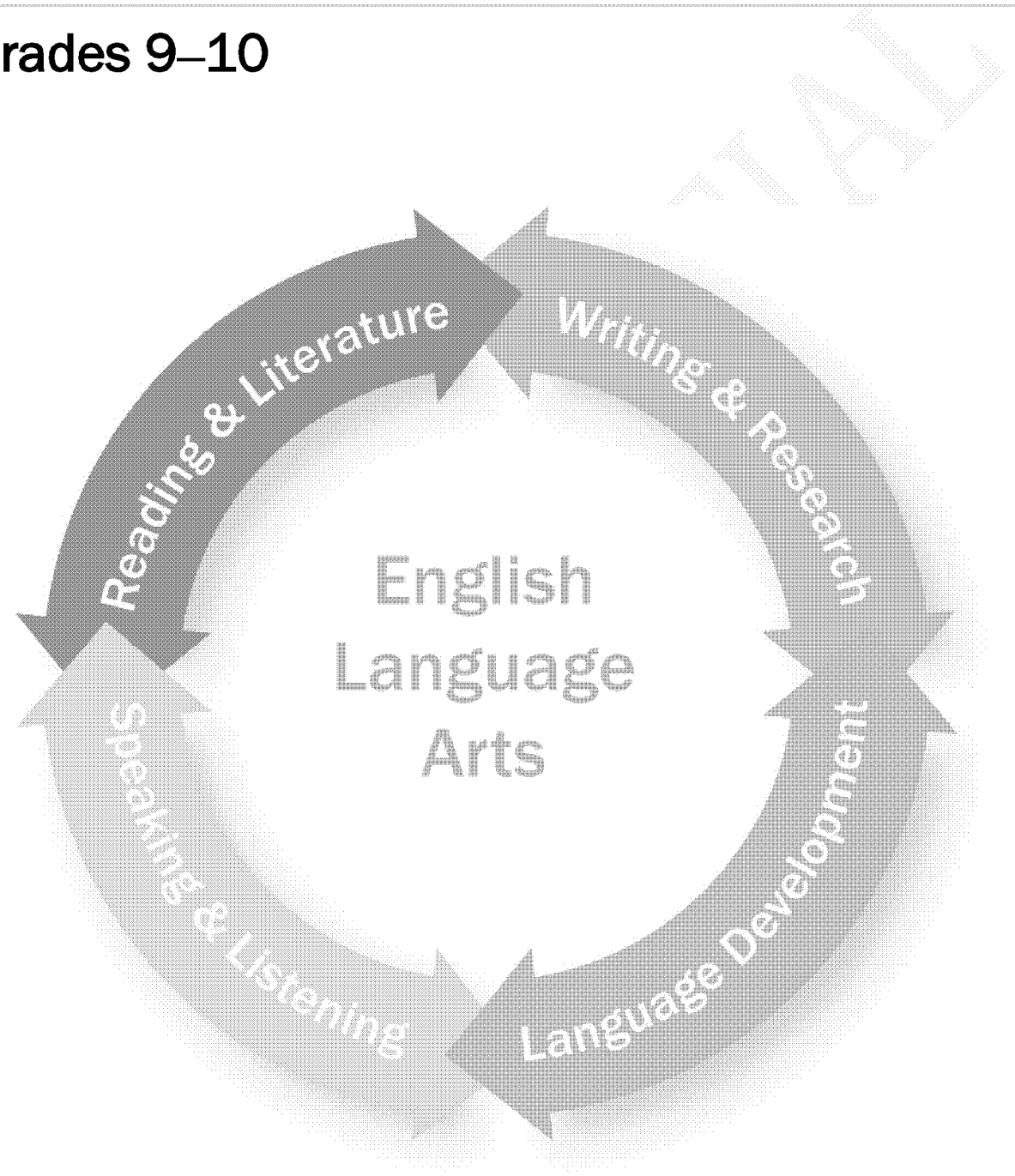
Language Development

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)

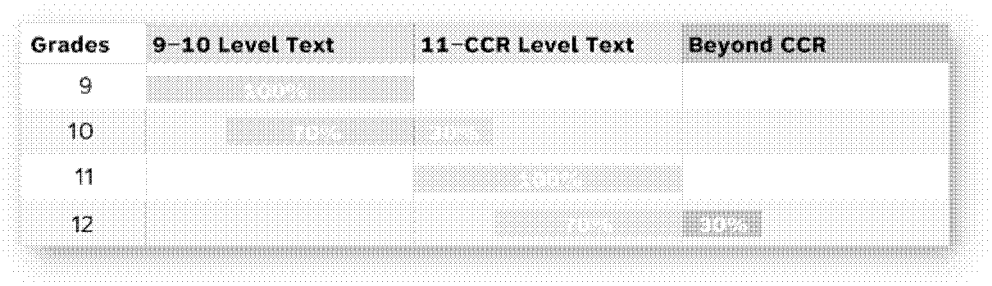
English Language Arts

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)

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)

*****Seminal historical texts that all students are expected to read***

[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.

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

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.

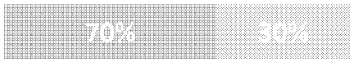
- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Style
  - Maintain consistency … (Conventions Standard #9)
  - (Style manual)… (Conventions Standard #10)

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.

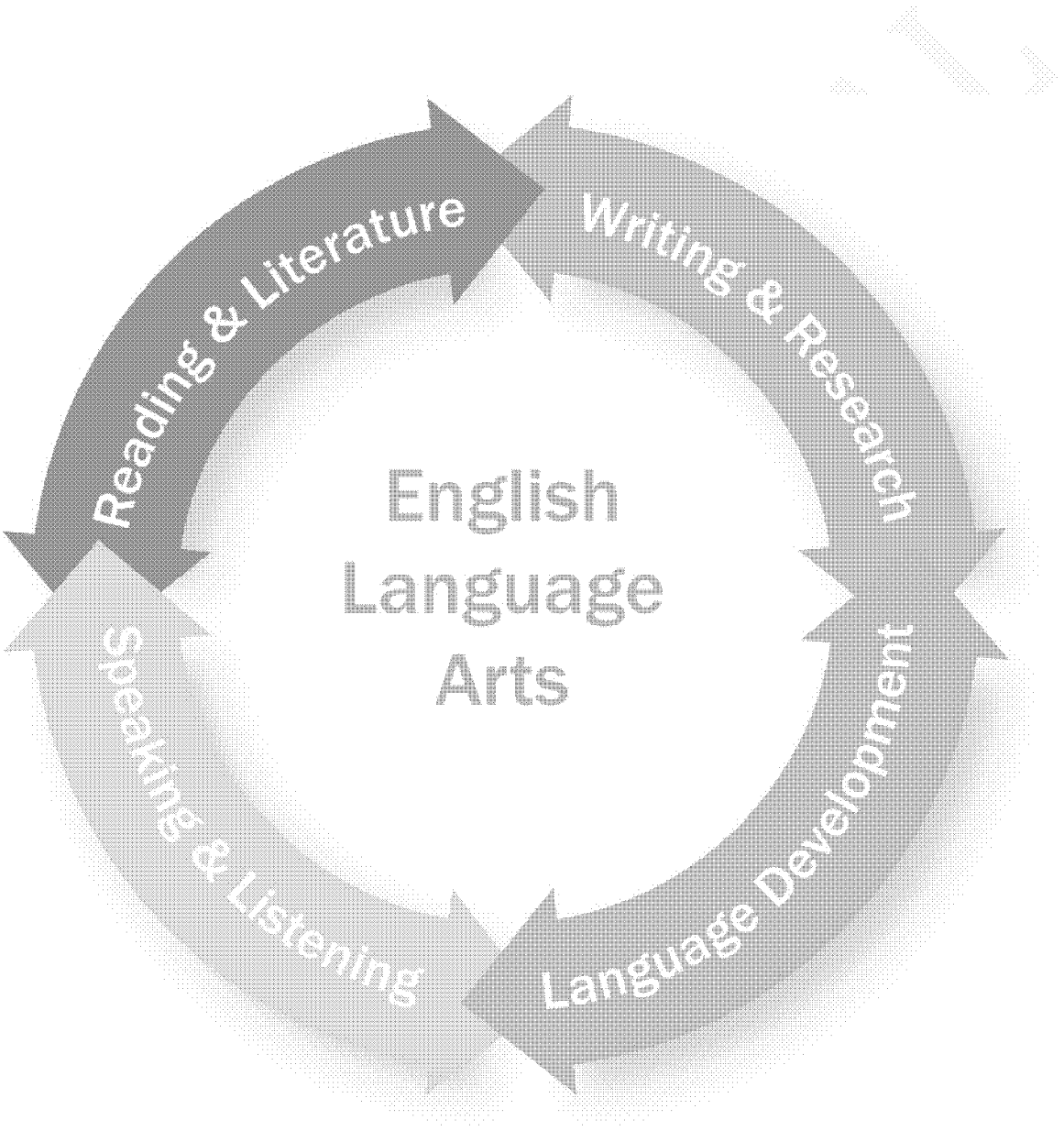
Language Development

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)

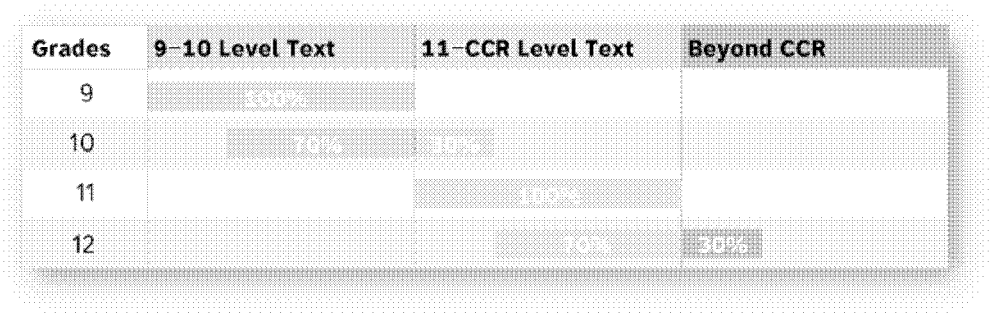
English Language Arts

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

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.

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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:

[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.

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[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 $(-1) \times a + a = (-1) \times a + (1) \times a = [(-1) + (1)] \times a = 0 \times a = 0$.

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,

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[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.

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[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.

Literacy for History and Science

6–12

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 requiredachievements, 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 Science6–12* 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 and assessment

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 into multiyear bands (grades 6–8, 9–10, and 11–CCR).

Researchand 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 Aof 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. 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 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 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

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.

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 teachers can use in conjunction with these 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 careerready. 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 acquiringthe 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 needsallow students of all disability levels to learn within the framework of the *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 devicesto demonstratecomprehension 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.

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[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.

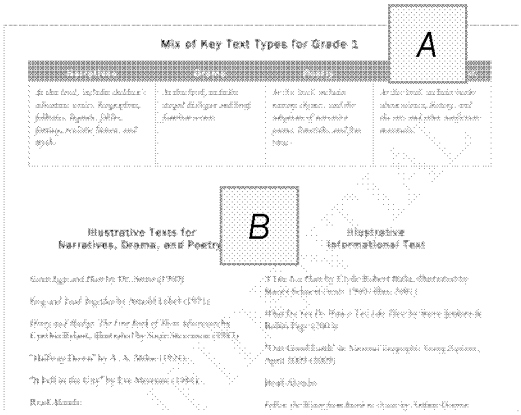
How to Read This Document

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 6–8, 9–10, and 11–CCR). Each grade/band is divided into strands—Reading, Writing, Speaking and Listening, and Language Development.

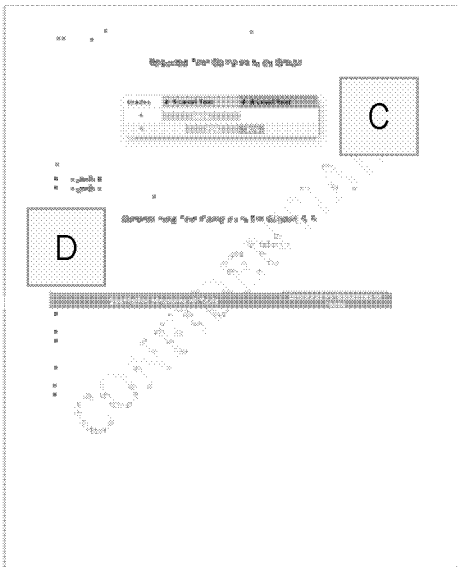
While all strands contain standards statements, each strand also has its own specific features.

Reading and Literature (ELA)/Reading (History/Science)

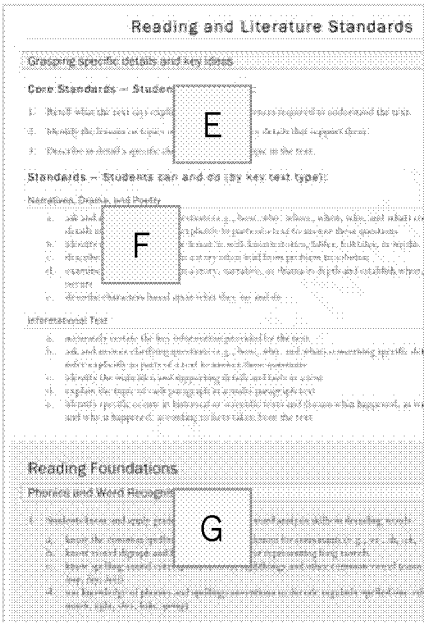


Kindergarten and grade 1 begin with the **mix of key text types (A)**, which identifies the genres and subgenres of reading material appropriate for each grade. This is followed by a list of **illustrative texts (B)** in the key text types. This list is suggestive of the sorts of texts appropriate for 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.)

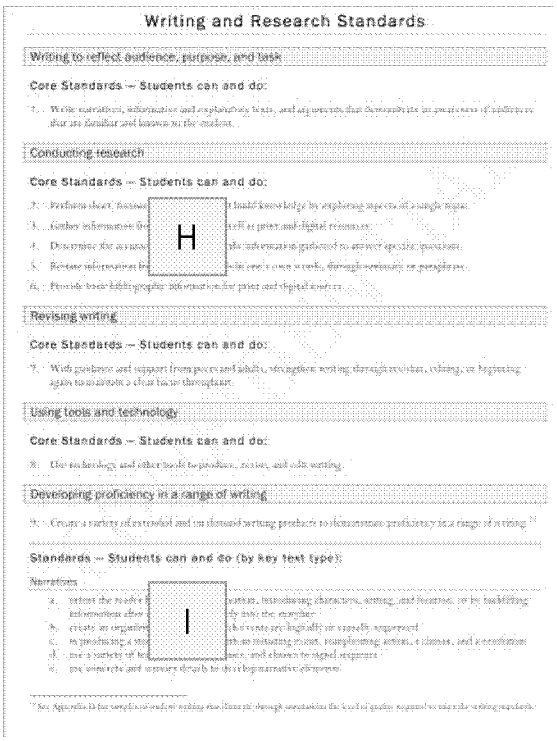


All grades/bands organize standards under a number of boxed subheadings (e.g., "Grasping specific details and key ideas"). The standards at all grade levels are divided into cross-cutting **Core Standards (E)**, which are numbered and applicable to many types of reading, and more specific **Standards (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.


Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards – Students can and do:

Conducting research

Core Standards – Students can and do:

Revising writing

Core Standards – Students can and do:

Using tools and technology

Core Standards – Students can and do:

Developing proficiency in a range of writing

Standards – Students can and do (by key text type):

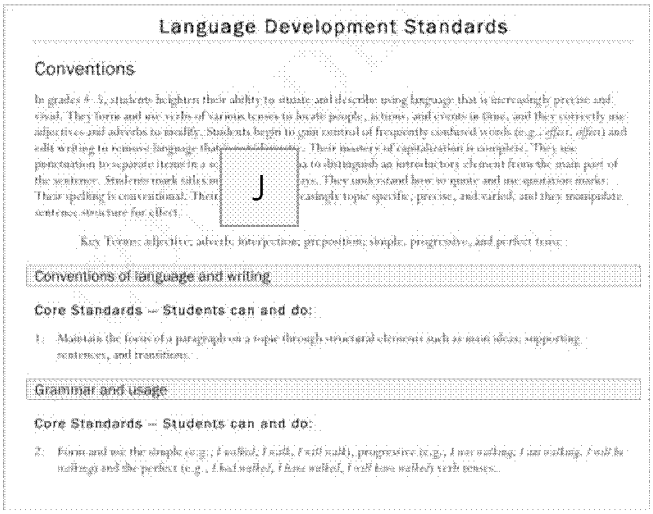
Narratives

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.


Language Development Standards

Conventions

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.

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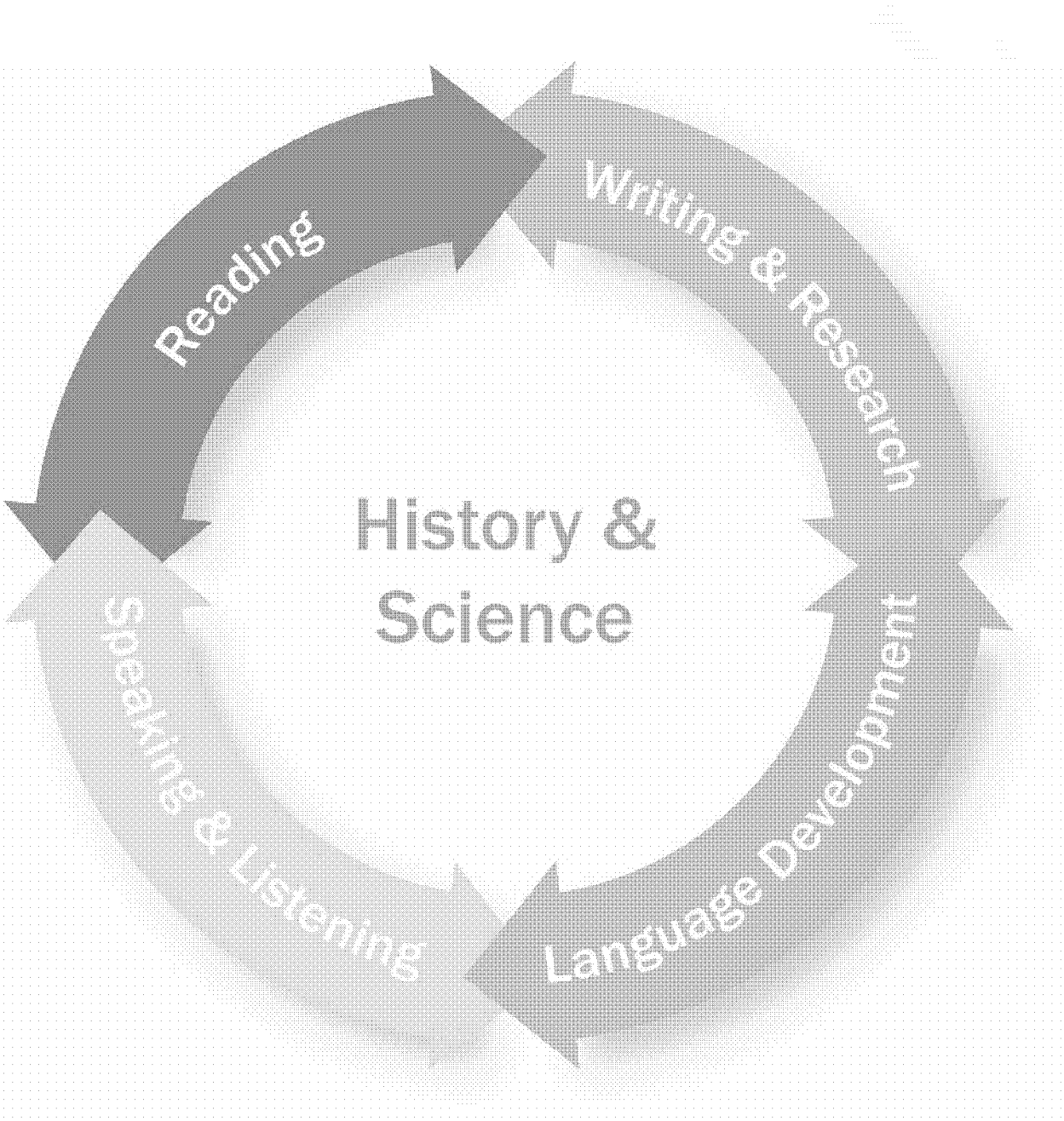
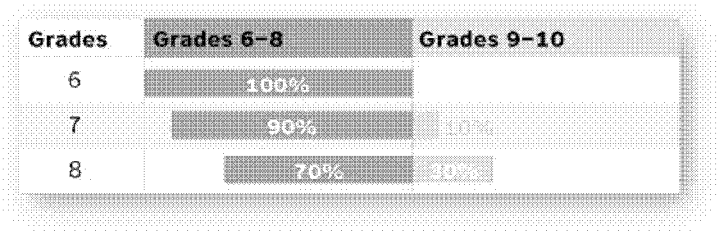
Literacy in History and Science

Grades 6–8



RequiredText 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 the9–10grade band levelas "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) independentlyas well as sustained practice with texts in the9–10 grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 6–8[4]

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	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.

[4] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004).

and historical knowledge useful for understanding characters, settings, and allusions; some discipline-specific content knowledge	
Professional Judgmentthat weighs students' prior knowledge and life experiences as well as their interests and motivations, and maturity level.	

Illustrative History/Social Science Text[5]	Illustrative Science/Technical Texts
Preamble and First Amendment to the United States Constitution by United States (1787, 1791)	"The Evolution of the Grocery Bag" by Henry Petroski (2003)
A Short Walk through the Pyramids and through the World of Art by Phillip Isaacson (1993)	"Space Probe" from *Astronomy & Space: From the Big Bang to the Big Crunch* edited by Phillis Engelbert (2009)
Freedom Walkers: The Story of the Montgomery Bus Boycott by Russell Freedman (2006)	"Elementary Particles" from *New Book of Popular Science* (2010)

[5] See Appendix B for other texts illustrative of Grades 6-8 text complexity.

Reading 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):

History/Social Science Text

a. summarize a primary source by drawing on the author's specific description of events or information, basing the summary on information in the text rather than prior knowledge or opinions
b. analyze precisely why significant events or actions occur, drawing on a full range of relevant text evidence to explicate the causes of events or decisions; distinguish whether earlier events caused later ones or simply preceded them
c. identify key steps in descriptions of civics or economics processes (e.g., how a bill becomes law, how interest rates are raised or lowered)

Science/Technical Text

a. outline the specific content contained in a scientific source, basing the summary on information in the text
b. follow multi-step procedural directions exactly and sequentially to conduct scientific investigations
c. diagram the problem or situation described in a text using pictures labeled with known information

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):

History/Social Science Text

a. understand text using discipline-specific vocabulary used to signal relationships of time, cause and effect, and comparison or contrast
b. demonstrate understanding of historical texts structured in a variety of ways, including a narrative of events, an explanation of events, or a comparison of events

c. compare how two or more authors treat the same or similar historical topics, including differences in their point of view, where they choose to focus, and which details they include and emphasize

Science/Technical Text

a. understand the meaning of symbols and technical vocabulary defined explicitly or used repeatedly in the text
b. navigatethe text, using tables of contents and other text featuresto locate information efficiently and to aid comprehension
c. determinethe relationships between and among concepts or topics presented in scientific texts, including how the author categorizes information or ideas, draws comparisons or contrasts, or links causes to effects

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):

History/Social Science Text

a. integrate graphic information, including headings, pictures, videos, maps, legends, and timelines, with the text (print or digital) to understand concepts more fully
b. analyze the relationship between primary and secondary historical documents
c. distinguish between fact, opinion, and reasoned judgment presented in historical accounts

Science/Technical Text

a. integrate the information that is provided in the text with a version of that information expressed in flow charts, diagrams, models, and tables
b. combine knowledge gained from reading a new chapter in a text with the information from previous chapters and describe how the new information builds on the previous content
c. outline how specific scientific explanations and technical descriptions are supported by evidence from the text

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.

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 formatand 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.

Standards— Students can and do (by key text type):[6]

Narratives

a. orient the reader by establishing a situation or by introducing people, setting, and location
b. create an organizing structure in which events are logically or causally sequenced
c. 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
d. use relevant, specific details to develop setting, events, and characterization
e. provide an engaging conclusion, such as a reflection

[6] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

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
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 one's 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

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 andedit writing for redundancy and wordiness.

Vocabulary

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 continue to expand their vocabulary through acquisition of Tier 3 words and phrases.

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).

Acquiring vocabulary

Core Standards — Students can and do:

4. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

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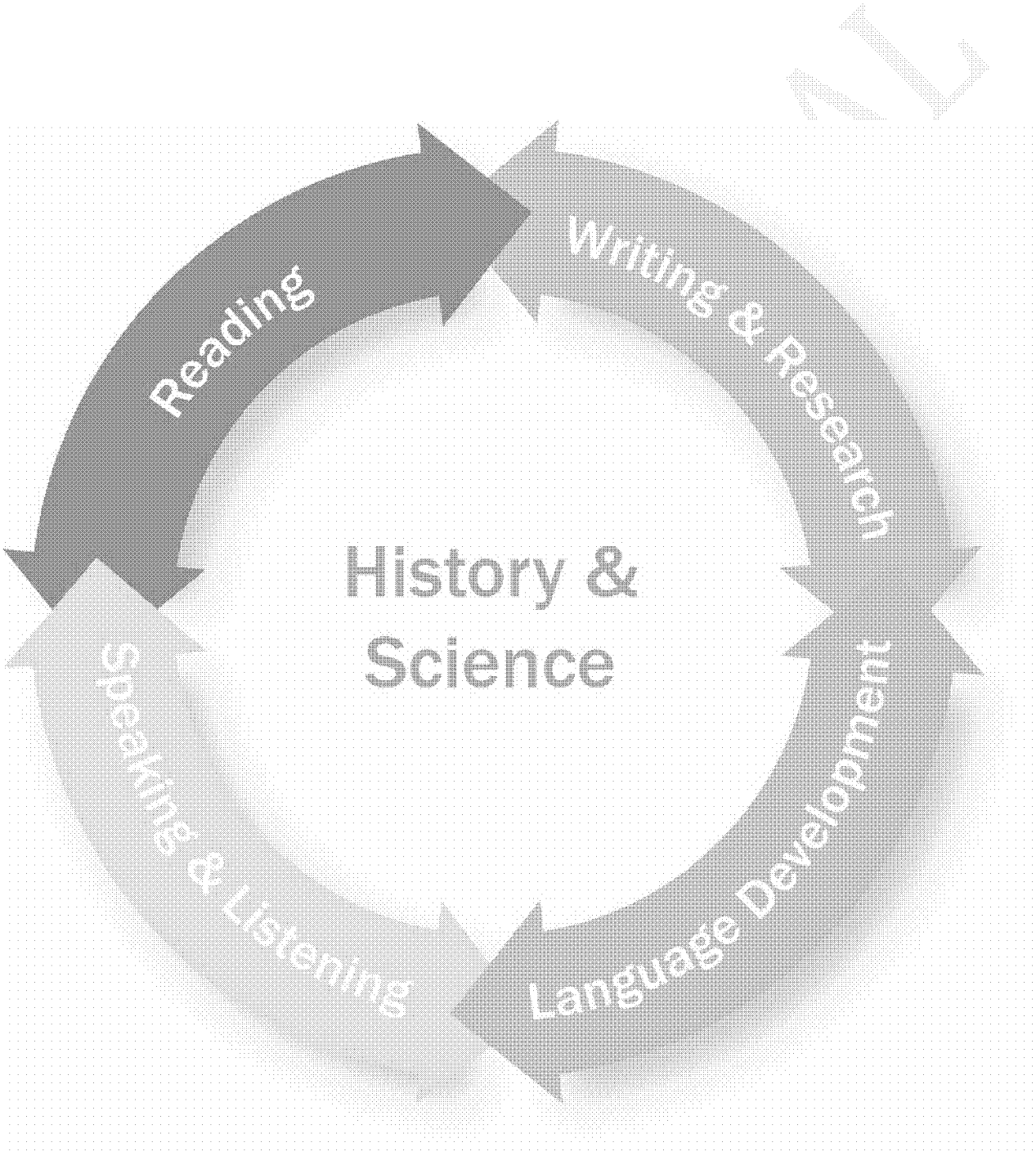
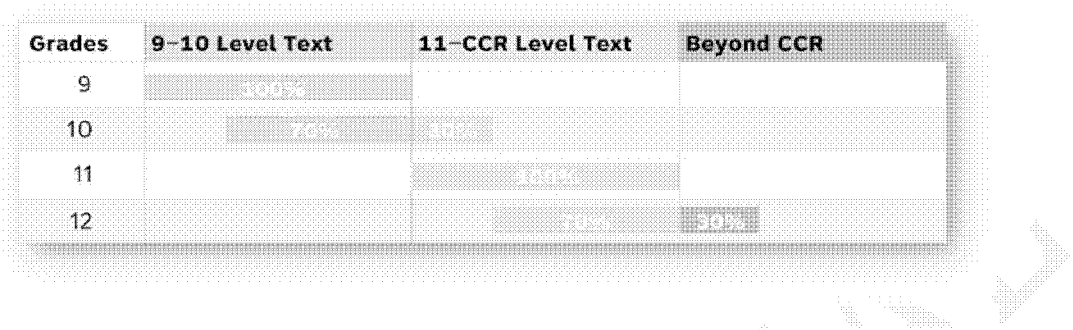
Literacy inHistory and Science

Grades 9–10



RequiredText 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 9–10grade band level (70 percent) independently and are introduced to texts in the 11–CCRgrade band levelas "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 9-10[7]

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-	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.

[7] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004).

specific content knowledge	
Professional Judgmentthat weighs students' prior knowledge and life experiences as well as their interests and motivations, and maturity level.	

Illustrative History/Social Science Text[8]

Bury My Heart at Wounded Knee: An Indian History of the American West by Dee Brown (1970)

Cod: A Biography of the Fish That Changed the World by Mark Kurlansky (1997)

The Longitude Prize by Joan Dash (2000)

Illustrative Science/Technical Texts

"Biography of an Atom" by Jacob Bronowski and Millicent Selsam (1965)

"Amusement Park Physics" by Jearl Walker (1979)

The Story of Science: Newton at the Center by Joy Hakim (2005)

COMMENT

[8] See Appendix B for other texts illustrative of Grades 9–10 text complexity.

Reading 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):

History/Social Science Text

a. demonstrate command of the precise details of a primary source document, drawing on specific points to support an understanding of the text
b. weave together the details of texts to form a comprehensive understanding of individual actors in a historical account, including their overlapping or competing motivations
c. distinguish short term or immediate causes from longer term causes in a history or social science account

Science/Technical Text

a. demonstrate command of the precise details of a scientific or technical explanation or description, drawing on specific points to support an understanding of a part or the text as a whole
b. infer and diagram the relationships among the various key terms and processes described in a text (such as the relations among *food chain*, *producers*, *consumers*, *decomposers*, *herbivores*, *carnivores*, or *force*, *friction*, *balanced forces*, *reaction force*, *energy*)
c. analyze the development of a hypothesis or explanation in a text and summarize the relationships among the 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):

History/Social Science Text

a. demonstrate understanding of text using vocabulary that provides political, social, and economic accounts of events
b. explain how the author of a text chooses to structure information or an explanation to emphasize key points and advance a point of view
c. compare and contrast how and why different authors organize and categorize similar information and describe the impact of those different approaches

Science/Technical Text

a. demonstrate knowledge of key terms and definitions used in a scientific or technical text and how they are used throughout the text
b. demonstrate understanding of how each key part and section of the text contributes specifically to a fuller understanding of the concept or topic at hand
c. compare information gained from a video or multimedia presentation of a scientific or technical topic to reading a text on the same topic

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):

History/Social Science Text

a. interpret complex, multifaceted quantitative or technical information presented in maps, legends, symbols, and videos
b. evaluate explanations of events by carefully examining the extent to which evidence within the text supports or contradicts the claims
c. compare how authors provide different points of views or perspectives on similar historical events or issues by assessing their claims, evidence, and reasoning

Science/Technical Text

a. interpret complex, multifaceted quantitative or technical information presented in flow charts, diagrams, models, and tables
b. interpret spatially or structurally scientific or technical information that is presented in a text by imagining and sketching its relationship of the described phenomena
c. evaluate whether the evidence provided is sufficient to support a scientific claim or to recommend a technical approach for solving a problem

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.

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 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.[9]

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[9] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards

Standards— Students can and do (by key text type):[10]

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

[10] See Appendix D 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.
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 presentcomplex informationabout 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 emphasisand effect
c. make strategic use of multimedia elements and visual displays of data to enhance understanding

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. Theymaintainparallel structure.Theyacquire 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.

Vocabulary

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 continue to expand their vocabulary through acquisition of Tier 3 words and phrases.

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).

Acquiring vocabulary

Core Standards — Students can and do:

4. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

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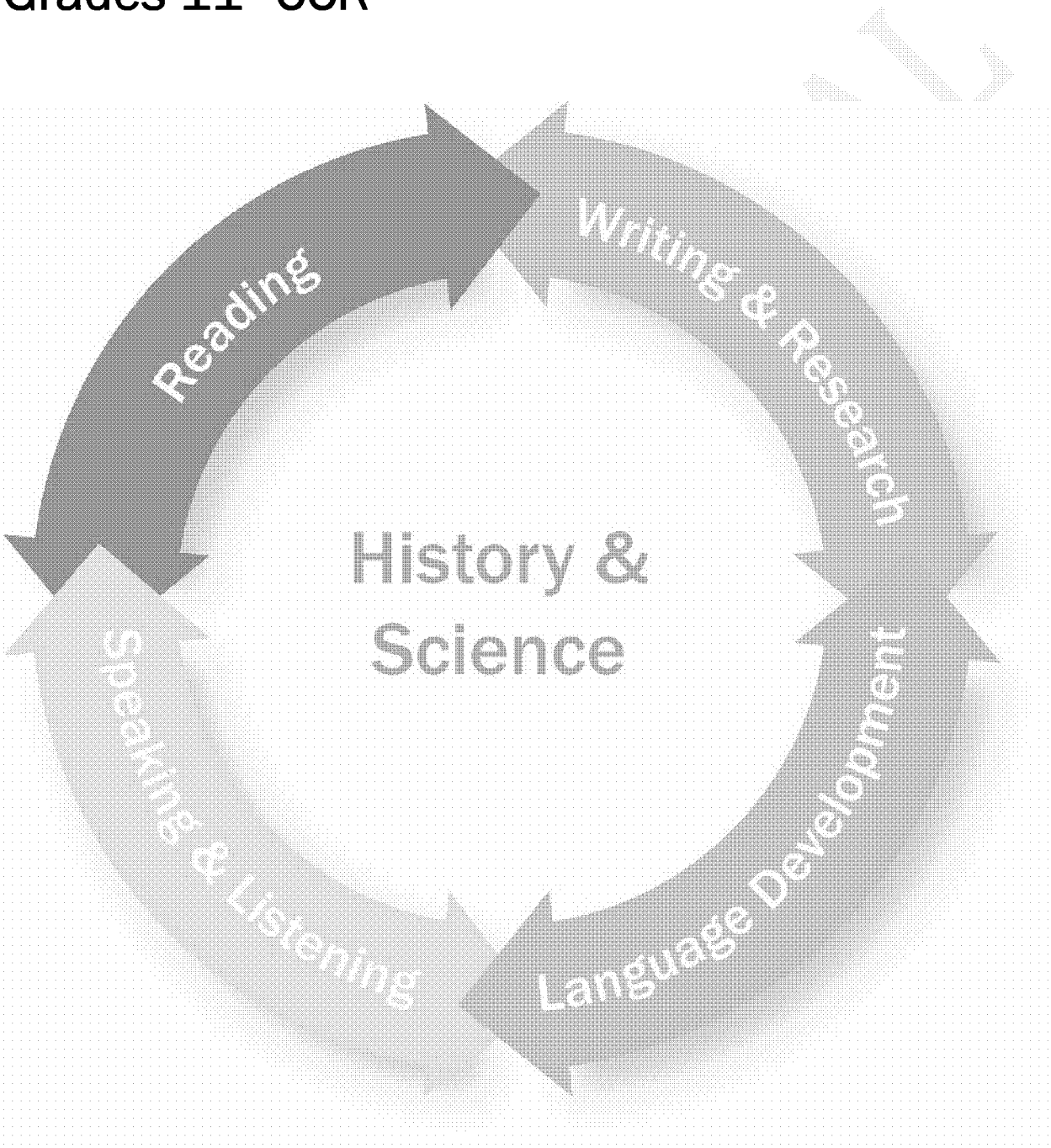
Literacy in History and Science

Grades 11–CCR



RequiredText Complexity by Grade

Proportion of Texts Within and Above Grade Band to be Read in Each

Grades	9–10 Level Text	11–CCR Level Text	Beyond CCR
9	100%		
10	70%	30%	
11		100%	
12		70%	30%

Grad

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-CCRgrade 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[11]

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.

[11] Adapted from ACT, Inc., (2005); Carnegie Council on Advancing Adolescent Literacy (2010); Chall, Bissex, Conrad, & Harris-Sharples (1996); and Hess and Biggam (2004).

Professional Judgmentthat weighs students' prior knowledge and life experiences as well as their interests and motivations, and maturity level.

Illustrative History/Social Science Text[12]

Democracy in America by Alexis de Tocqueville (1835) translated by Henry Reeve

Declaration of Sentiments by the Seneca Falls Conference (1848)

1776 by David McCullough (2005)

Illustrative Science/Technical Texts

"The Mysteries of Mass" by Gordon Kane (2005)

"The Coming Merger of Mind and Machine" by Ray Kurzweil (2008)

"Untangling the Roots of Cancer" by W. Wayt Gibbs (2008

[12] See Appendix B for other texts illustrative of Grades 11-CCR text complexity.

Reading 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):

History/Social Science Text

a. scrutinize the details within specific portions of primary texts and connect the insights gained to develop an understanding of the text as a whole
b. demonstrate an understanding of the precise elements of an author's explanation of historical events, including the specific distinctions the author makes between types of causes (e.g., economic, political, social)
c. analyze how the ideas and beliefs of historical actors influence events; describe the interactions between complex ideas and multifaceted events

Science/Technical Text

a. demonstrate an understanding of the precise elements of an author's account of phenomena and processes, including the specific distinctions the author makes when describing information or ideas
b. follow complex directions exactly to carry out experiments, measurements, or technical tasks, checking the text for fidelity at key points in the process
c. articulate the problem or situation presented in a complex technical or scientific text and, where possible, translate it into simpler terms or relationships (e.g., an equation)

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):

History/Social Science 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)
b. explain the significance of literal and metaphorical meanings of terminology (e.g., *Black Monday*, *Dark Ages*)
c. compare and contrast presentations of the same topic in different media, and describe the differences in focus, organization, and complexity

Science/Technical Text

a. understand the precise meaning of key terminology as used in its particular scientific or technical context
b. compare and contrast presentations of the same scientific or technical topic in different media and formats, including popular media and digital formats, and describe the differences in focus, depth of evidence, and links to other sources
c. compare and contrast various hypotheses, arguments, and points of view about the same scientific issue presented by different authors

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):

History/Social Science 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. identify aspects in an account that might reveal an author's perspective (such as biased vocabulary and elimination or inclusion of particular facts)
c. evaluate an author's perspective and credibility by corroborating information across different sources

Science/Technical Text

a. translate a text into an analogous table or chart and translate a graphic or equation into verbal form
b. recognize the cumulative nature of scientific evidence and describe the significance of experimental findings presented in texts and explain how and why they support or contradict known explanations or accounts
c. evaluate the reasoning that supports a scientific argument or explanation, including assessing the sufficiency and relevance of the evidence as well as identifying any misleading or unsubstantiated statements

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.

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.

Standards— Students can and do (by key text type):[13]

Narratives

[13] See Appendix C for samples of student writing that illustrate through annotations the level of quality required to meet the writing standards.

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

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

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. Theymaintainparallel structure.Theyacquire 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.

Vocabulary

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 continue to expand their vocabulary through acquisition of Tier 3 words and phrases.

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).

Acquiring vocabulary

Core Standards — Students can and do:

4. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

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 writingintended 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 onprimary 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.

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[14]

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.[15]

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.[16]

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.[17] In fact, at most, between five and fifteen percent of new words encountered when reading are retained.[18] The weaker a student's vocabulary is, the slighter the gain.[19] Yet research shows that if students are going to understand what they read, they must understand upward of 95 percent of the words.[20]

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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[14]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.

[15]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.

[16] 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

[17] Ibid.

[18] Ibid.

[19] Daneman & Green, 1986; Herman, Anderson, Person &Nagy, 1987; Sternberg & Powell

[20] 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.[21] 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.[22] 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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[21] Indeed, the fact that these words transcend specific disciplines argues for them being taught and used across the curriculum by all teachers.

[22] 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, History/Science 6–12

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.

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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.

Grades 6–8 Text Exemplars

Informational Texts (History and Social Sciences)

Preamble and First Amendment to the United States Constitution by United States (1787, 1791)

A Night to Remember by Walter Lord (1955)

A Short Walk through the Pyramids and through the World of Art by Phillip Isaacson (1993)

The Great Fire by Jim Murphy (1995)

Vincent Van Gogh: Portrait of an Artist by Jan Greenberg and Sandra Jordan (2001)

This Land Was Made for You and Me: The Life and Songs of Woody Guthrie by Elizabeth Partridge (2002)

Words We Live By: Your Annotated Guide to the Constitution by Linda R. Monk (2003)

Freedom Walkers: The Story of the Montgomery Bus Boycott by Russell Freedman (2006)

Informational Texts (Science, Mathematics, and Technology)

*Cathedral: The Story of Its Construction*by David Macaulay (1973)

The Building of Manhattan by Donald A. Mackay (1987)

*The Number Devil: A Mathematical Adventure*by Hans Magnus Enzensberger &Rotraut Susanne Berner (1998)

*Math Trek: Adventures in the Math Zone*by Ivars Peterson and Nancy Henderson (2000)

"The Evolution of the Grocery Bag"by Henry Petroski (2003)

"Geology" from *U*X*L Encyclopedia of Science* edited by Rob Nagel (2007)

"Space Probe" from *Astronomy & Space: From the Big Bang to the Big Crunch* edited by Phillis Engelbert (2009)

"Elementary Particles" from *New Book of Popular Science*(2010)

Grades 9–10 Exemplar Texts

Informational Texts (History and Social Sciences)

Bury My Heart at Wounded Knee: An Indian History of the American West by Dee Brown (1970)

Son of the Morning Star: Custer and the Little Bighorn by Evan S. Connell (1984)

The History of Art by E. H. Gombrich (1995)

Cod: A Biography of the Fish That Changed the World by Mark Kurlansky (1997)

Black, Blue, and Gray: African Americans in the Civil War by Jim Haskins (1998)

The Longitude Prize by Joan Dash (2000)

The Illustrated Book of Great Composers by Wendy Thompson (2004)

Before Columbus: The Americas of 1491 by Charles C. Mann (2009)

Informational Texts (Science, Mathematics, and Technology)

Elements by Euclid (300 BCE) translated byRichard Fitzpatrick

"Classifying the Stars" by Annie J. Cannon (1929)

"Biography of an Atom" by Jacob Bronowski and Millicent Selsam (1965)

"Amusement Park Physics" by Jearl Walker (1979)

"Life by the Numbers" by Keith Devlin (1998)

The Race to Save Lord God Bird by Phillip Hoose (2004)

The Story of Science: Newton at the Center by Joy Hakim (2005)

Circumference: Eratosthenes and the Ancient Quest to Measure the Globe by Nicholas Nicastro (2008)

Grades 11–12 Exemplar Texts

Informational Texts (History and Social Sciences)

Democracy in America by Alexis de Tocqueville (1835) translated by Henry Reeve

Declaration of Sentiments by the Seneca Falls Conference (1848)

"Independence Day Speech" by Frederick Douglass (1852)

"Education" by Ellen Condliffe Lagemann in *The Reader's Companion to American History* (Eric Foner and John A. Garraty, editors) (1991)

What They Fought For, 1861–1865 by James M. McPherson (1994)

America's Constitution: A Biography by Akhil Reed Amar (2005)

1776 by David McCullough (2005)

Mirror of the World: A New History of Art by Julian Bell (2007)

FedViews by the Federal Reserve Bank of San Francisco (2009)

Informational Texts (Science, Mathematics, and Technology)

Innumeracy: Mathematical Illiteracy and Its Consequences by John Allen Paulos (1988)

"Gravity in Reverse: The Tale of Albert Einstein's 'Greatest Blunder'" by Neil deGrasse Tyson (2003)

Google Hacks: Tips & Tools for Smarter Searching by Tara Calishain and Rael Dornfest (2004)

"The Mysteries of Mass" by Gordon Kane (2005)

"Working Knowledge: Electronic Stability Control" by Mark Fischetti (2007)

"The Coming Merger of Mind and Machine" by Ray Kurzweil (2008)

"Untangling the Roots of Cancer" by W. Wayt Gibbs (2008)

"The Cost Conundrum: Health Care Costs in McAllen, Texas" by Atul Gawande (2009)

Exemplars of Reading Text Complexity and Quality, K–5

Selecting Text Samples

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- *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.

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Organization and Excerpting

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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

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Kindergarten to Grade 1

Kindergarten to Grade 1: Narratives

Little Bear by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)

"Birthday Soup"

"Mother Bear, Mother Bear, Where are you?" calls Little Bear.

"Oh, dear, Mother Bear is not here, and today is my birthday.

"I think my friends will come, but I do not see a birthday cake. My goodness – no birthday cake. What can I do?

The pot is by the fire. The water in the pot is hot. If I put something in the water, I can make Birthday Soup. All my friends like soup.

Let me see what we have. We have carrots and potatoes, peas and tomatoes; I can make soup with carrots, potatoes, peas and tomatoes."

So Little Bear begins to make soup in the big black pot. First, Hen comes in. "Happy Birthday, Little Bear," she says. "Thank you, Hen," says Little Bear.

Hen says, "My! Something smells good here. Is it in the big black pot?"

"Yes," says Little Bear, "I am making Birthday Soup. Will you stay and have some?"

"Oh, yes, thank you," says Hen. And she sits down to wait.

Next, Duck comes in. "Happy Birthday, Little bear," says Duck. "My, something smells good. Is it in the big black pot?"

"Thank you, Duck," says Little Bear. "Yes, I am making Birthday Soup. Will you stay and have some with us?"

"Thank you, yes, thank you," says Duck. And she sits down to wait.

Next, Cat comes in.

"Happy Birthday, Little Bear," he says.

"Thank you, Cat," says Little Bear. "I hope you like Birthday Soup. I am making Birthday Soup.

Cat says, "Can you really cook? If you can really make it, I will eat it."

"Good," says Little Bear. "The Birthday Soup is hot, so we must eat it now. We cannot wait for Mother Bear. I do not know where she is."

"Now, here is some soup for you, Hen," says Little Bear. "And here is some soup for you, Duck, and here is some soup for you, Cat, and here is some soup for me. Now we can all have some Birthday Soup."

Cat sees Mother Bear at the door, and says, "Wait, Little Bear. Do not eat yet. Shut your eyes, and say one, two, three."

Little Bear shuts his eyes and says, "One, two, three."

Mother Bear comes in with a big cake.

"Now, look," says Cat.

"Oh, Mother Bear," says Little Bear, "what a big beautiful Birthday Cake! Birthday Soup is good to eat, but not as good as Birthday Cake. I am so happy you did not forget."

"Yes, Happy Birthday, Little Bear!" says Mother Bear. "This Birthday Cake is a surprise for you. I never did forget your birthday, and I never will."

***Are You My Mother?* by P. D. Eastman (1960)**

A mother bird sat on her egg.

The egg jumped.

"Oh oh!" said the mother bird. "My baby will be here! He will want to eat."

"I must get something for my baby bird to eat!" she said. "I will be back!"

So away she went.

The egg jumped. It jumped, and jumped, and jumped!

Out came the baby bird!

"Where is my mother?" he said.

He looked for her.

He looked up. He did not see her.

He looked down. He did not see her.

"I will go and look for her," he said.

So away he went.

Down, out of the tree he went.

Down, down, down! It was a long way down.

The baby bird could not fly.

He could not fly, but he could walk. "Now I will go and find my mother," he said.

He did not know what his mother looked like. He went right by her. He did not see her.

He came to a kitten. "Are you my mother?" he said to the kitten.

The kitten just looked and looked. It did not say a thing.

The kitten was not his mother, so he went on.

Then he came to a hen. "Are you my mother?" he said to the hen. "No," said the hen.

The kitten was not his mother. The hen was not his mother. So the baby bird went on.

[…]

***The Fire Cat* by Esther Averill (1960)**

"The Fire Cat"

Joe took Pickles to the Chief, who was sitting at his desk.

"Oh!" said the Chief. "I know this young cat. He is the one who chases little cats."

"How do you know?" asked Joe.

The Chief answered, "A Fire Chief knows many things."

Just then the telephone began to ring. "Hello," said the Chief. "Oh, hello, Mrs. Goodkind. Yes, Pickles is here. He came with Joe. What did you say? You think Pickles would like to live in our firehouse? Well, we shall see. Thank you, Mrs. Goodkind. Good-bye."

The Chief looked at Pickles and said, "Mrs. Goodkind says you are not a bad cat. And Joe likes you. I will let you live here IF you will learn to be a good firehouse cat."

Pickles walked quietly up the stairs after Joe. Joe and Pickles went into a room where the firemen lived.

The men were pleased to have a cat. They wanted to play with Pickles. But suddenly the fire bell rang. All the firemen ran to a big pole and down they went. The pole was the fast way to get to their trucks. Pickles could hear the trucks start up and rush off to the fire.

Pickles said to himself, "I must learn to do what the firemen do, I must learn to slide down the pole."

He jumped and put his paws around the pole. Down he fell with a BUMP.

"Bumps or no bumps, I must try again," said Pickles. Up the stairs he ran. Down the pole he came – and bumped. But by the time the firemen came back from the fire, Pickles could slide down the pole.

"What a wonderful cat you are!" said the firemen. The Chief did not say anything.

Pickles said to himself, "I must keep learning everything I can." So he learned to jump up on one of the big trucks. And he learned to sit up straight on the seat while the truck raced to a fire.

"What a wonderful cat you are!" said the firemen. The Chief did not say anything.

Pickles said to himself, "Now I must learn to help the firemen with their work."

At the next fire, he jumped down from the truck. He ran to a big hose, put his paws around it, and tried to help a fireman shoot water at the flames.

"What a wonderful cat you are!" said the firemen. The Chief did not say anything.

The next day the Chief called all the firemen to his desk. Then he called for Pickles. Pickles did not know what was going to happen. He said to himself, "Maybe the Chief does not like the way I work. Maybe he wants to send me back to my old yard." But Pickles went to the Chief.

At the Chief's desk stood all the firemen – and Mrs. Goodkind!

The Chief said to Pickles, "I have asked Mrs. Goodkind to come because she was your first friend. Pickles, jump up on my desk. I have something to say to you."

Pickles jumped up on the desk and looked at the Chief. Out of the desk the Chief took – a little fire hat!

"Pickles," said the Chief, "I have watched you at your work. You have worked hard. The time has come for you to know that you are now our Fire Cat."

And with these words, the Chief put the little hat on Pickles' head.

***Green Eggs and Ham* by Dr. Seuss (1960)**

[…]

Do you like green eggs and ham?

I do not like them, Sam-I-am. I do not like green eggs and ham.

Would you like them here or there?

I would not like them here or there. I would not like them anywhere. I do not like green eggs and ham. I do not like them, Sam-I-am.

Would you like them in a house? Would you like them with a mouse?

I would not like them in a house. I do not like them with a mouse. I do not like them here or there. I do not like them anywhere. I do not like green eggs and ham. I do not like them, Sam-I-am.

Would you eat them in a box? Would you eat them with a fox?

Not in a box. Not with a fox. Not in a house. Not with a mouse. I would not eat them here or there. I would not eat them anywhere. I would not eat green eggs and ham. I do not like them, Sam-I-am.

Would you? Could you? In a car? Eat them! Eat them! Here they are.

I would not, could not in a car.

You may like them. You will see. You may like them in a tree!

I would not, could not in a tree. Not in a car! You let me be.

I do not like them in a box. I do not like them with a fox. I do not like them in a house. I do not like them with a mouse. I do not like them here or there. I do not like them anywhere. I do not like green eggs and ham. I do not like them, Sam-I-am.

[…]

***Put Me in the Zoo* by Robert Lopshire (1960)**

I will go into the zoo. I want to see it. Yes, I do.

I would like to live this way. This is where I want to stay.

Will you keep me in the zoo? I want to stay in here with you.

We do not want you in the zoo. Out you go! Out! Out with you.

Why did they put me out this way? I should be in. I want to stay.

Why should they put you in the zoo? What good are you? What can you do?

What good am I? What can I do? Now here is one thing I can do.

Look! Now all his spots are blue!

And now his spots are orange! Say! He looks very good that way.

Now look at this! What do you see?

Green spots! As green as green can be!

Violet spots! Say! You are good! Do more! Do more! We wish you would.

I can do more. Look! This is new. Blue, orange, green, and violet, too.

Oh! They would put me in the zoo, if they could see what I can do.

[…]

***Frog and Toad Together* by Arnold Lobel (1971)**

"The Garden"

Frog was in his garden. Toad came walking by.

"What a fine garden you have, Frog," he said.

"Yes," said Frog. "It is very nice, but it was hard work."

"I wish I had a garden," said Toad.

"Here are some flower seeds. Plant them in the ground," said Frog, "and soon you will have a garden."

"How soon?" asked Toad.

"Quite soon," said Frog.

Toad ran home. He planted the flower seeds.

"Now seeds," said Toad, "start growing."

Toad walked up and down a few times. The seeds did not start to grow. Toad put his head close to the ground and said loudly, "Now seeds, start growing!" Toad looked at the ground again. The seeds did not start to grow.

Toad put his head very close to the ground and shouted, "NOW SEEDS, START GROWING!"

Frog came running up the path. "What is all this noise?" he asked. "My seeds will not grow," said Toad. "You are shouting too much," said Frog. "These poor seeds are afraid to grow."

"My seeds are afraid to grow?" asked Toad.

"Of course," said Frog. "Leave them alone for a few days. Let the sun shine on them, let the rain fall on them. Soon your seeds will start to grow."

That night, Toad looked out of his window. "Drat!" said Toad. "My seeds have not started to grow. They must be afraid of the dark."

Toad went out to his garden with some candles. "I will read the seeds a story," said Toad. "Then they will not be afraid." Toad read a long story to his seeds.

All the next day Toad sang songs to his seeds.

And all the next day Toad read poems to his seeds.

And all the next day Toad played music for his seeds.

Toad looked at the ground. The seeds still did not start to grow. "What shall I do?" cried Toad. "These must be the most frightened seeds in the whole world!"

Then Toad felt very tired and he fell asleep.

"Toad, Toad, wake up," said Frog. "Look at your garden!"

Toad looked at his garden. Little green plants were coming up out of the ground.

"At last," shouted Toad, "my seeds have stopped being afraid to grow!"

"And now you will have a nice garden too," said Frog.

"Yes," said Toad, "but you were right, Frog. It was very hard work."

***Owl at Home* by Arnold Lobel (1975)**

"Owl and the Moon"

One night Owl went down to the seashore. He sat on a large rock and looked out at the waves. Everything was dark. Then a small tip of the moon came up over the edge of the sea.

Owl watched the moon. It climbed higher and higher into the sky. Soon the whole, round moon was shining. Owl sat on the rock and looked up at the moon for a long time. "If I am looking at you, moon, then you must be looking back at me. We must be very good friends."

The moon did not answer, but Owl said, "I will come back and see you again, moon. But now I must go home." Owl walked down the path. He looked up at the sky. The moon was still there. It was following him.

"No, no, moon," said Owl. "It is kind of you to light my way. But you must stay up over the sea where you look so fine." Owl walked on a little farther. He looked at the sky again. There was the moon coming right along with him. "Dear moon," said Owl, "you really must hot come home with me. My house is small. You would not fit through the door. And I have nothing to give you for supper."

Owl kept on walking. The moon sailed after him over the tops of the trees. "Moon," said Owl, "I think that you do not hear me." Owl climbed to the top of a hill. He shouted as loudly as he could, "Good-bye, moon!"

The moon went behind some clouds. Owl looked and looked. The moon was gone. "It is always a little sad to say good-bye to a friend," said Owl.

Owl came home. He put on his pajamas and went to bed. The room was very dark. Owl was still feeling sad. All at once, Owl's bedroom was filled with silver light. Owl looked out of the window. The moon was coming from behind the clouds. "Moon, you have followed me all the way home. What a good, round friend you are!" said Owl.

Then Owl put his head on the pillow and closed his eyes. The moon was shining down through the window. Owl did not feel sad at all.

***Henry and Mudge: The First Book of Their Adventures* by Cynthia Rylant, illustrated by Suçie Stevenson (1987)**

"Henry and Mudge"

Every day when Henry woke up, he saw Mudge's big head. And every day when Mudge woke up, he saw Henry's small face.

They ate breakfast at the same time; they ate supper at the same time.

And when Henry was at school, Mudge just lay around and waited. Mudge never went for a walk without Henry again. And Henry never worried that Mudge would leave.

Because sometimes, in their dreams, they saw long silent roads, big wide fields, deep streams, and pine trees.

In those dreams, Mudge was alone and Henry was alone. So when Mudge woke up and knew Henry was with him, he remembered the dream and stayed closer.

And when Henry woke up and knew Mudge was with him, he remembered the dream
and the looking
and the calling
and the fear
and he knew he would never lose Mudge again.

[…]

***Poppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001)**

"The Sleigh Ride"

It was a very snowy day and Poppleton felt like a sleigh ride. He called his friend Cherry Sue.

"Would you like to go for a sleigh ride?" Poppleton asked.

"Sorry, Poppleton, I'm making cookies," said Cherry Sue.

Poppleton called his friend Hudson.

"Would you like to go for a sleigh ride?" Poppleton asked.

"Sorry," said Hudson, "I'm baking a cake."

Poppleton called his friend Fillmore.

"Would you like to go for a sleigh ride?" Poppleton asked.

"Sorry," said Fillmore. "I'm stirring some fudge."

Poppleton was disappointed. He couldn't find one friend for a sleigh ride. And besides that, they were all making such good things to eat!

He sat in front of his window, feeling very sorry for himself. Suddenly the doorbell rang.

"SURPRISE!"

There stood all of Poppleton's friends! With cookies and cake and fudge and presents! "HAPPY BIRTHDAY, POPPLETON!"

He had forgotten his own birthday! Everyone ate and laughed and played games with Poppleton.

Then, just before midnight, they all took him on a sleigh ride.

The moon was full and white. The stars twinkled. The owls hooted in the trees. Over the snow went the sleigh filled with Poppleton and all of his friends.

Poppleton didn't even make a birthday wish. He had everything already.

***Cowgirl Kate and Cocoa* by Erica Silverman, illustrated by Betsy Lewin (2005)**

Chapter 1 – A Story for Cocoa

Cowgirl Kate rode her horse, Cocoa, out to the pasture.

"It's time to herd cows," said Cowgirl Kate.

"I am thirsty," said Cocoa.

He stopped at the creek and took a drink.

"Are you ready now?" asked Cowgirl Kate.

"No," said Cocoa. "Now I am hungry."

Cowgirl Kate gave him an apple. He ate it in one bite. Then he sniffed the saddlebag.

Cowgirl Kate gave him another apple. He ate that in one bite, too. He sniffed the saddlebag again.

"You are a pig," said Cowgirl Kate.

"No," said Cocoa. "I am a horse."

"A cowhorse?" she asked.

"Of course," he said.

"But a cowhorse herds cows," she said.

"Just now, I am too full," he said.

Cowgirl Kate smiled. "Then I will tell you a story."

"Once there was a cowgirl who needed a cowhorse. She went to a ranch and saw lots and lots of horses. Then she saw a horse whose coat was the color of chocolate. His tail and mane were the color of caramel. 'Yum,' said the cowgirl, 'you are the colors of my favorite candy.' The horse looked at her. He sniffed her."

"'Are you a real cowgirl?' he asked. 'I am a cowgirl from the boots up,' she said. 'Well, I am a cowhorse from the mane down,' he said. 'Will you work hard every day?' the cowgirl asked.. The horse raised his head high. 'Of course,' he said, 'a cowhorse always does his job.' 'At last,' said the cowgirl, 'I have found my horse.'"

"That was a good story," said Cocoa. He raised his head high. "And now I am ready to herd cows."

Kindergarten to Grade 1: Poetry

"Mix a Pancake" by Christina Rossetti (1893)

Mix a pancake,
Stir a pancake,
Pop it in the pan;
Fry the pancake,
Toss the pancake—
Catch it if you can.

"Singing-Time" by Rose Fyleman (1919)

I wake in the morning early
And always, the very first thing,
I poke out my head and I sit up in bed
And I sing and I sing and I sing.

"Halfway Down" by A. A. Milne (1924)

Halfway down the stairs
Is a stair
Where I sit.
There isn't any
Other stair
Quite like
It.

[…]

"As I Was Going to St. Ives" by Unknown

from *The Oxford Dictionary of Nursery Rhymes*, edited by Iona and Peter Opie (1951)

As I was going to St. Ives,
I met a man with seven wives,
Each wife had seven sacks,
Each sack had seven cats,
Each cat had seven kits:
Kits, cats, sacks, and wives,
How many were there going to St. Ives?

"Drinking Fountain" by Marchette Chute (1957)

When I climb up
To get a drink,
It doesn't work
The way you'd think.

[…]

"Poem" by Langston Hughes (1958)

I loved my friend.
He went away from me.

[…]

"Wouldn't You?" by John Ciardi (1961)

If I
Could go
As high
And low
As the wind

[…]

"In the Falling Snow" by Richard Wright (1973)

In the falling snow

[…]

"Covers" by Nikki Giovanni (1980)

Glass covers windows
  to keep the cold away

[…]

"It Fell in the City" by Eve Merriam (1985)

It fell in the city,
It fell through the night,
And the black rooftops
All turned white.

[…]

"Celebration" by Alonzo Lopez (1993)

I shall dance tonight.
When the dusk comes crawling,

[…]

"Two Tree Toads" by Jon Agee (2009)

A three-toed tree toad tried to tie
A two-toed tree toad's shoe.

[...]

Kindergarten to Grade 1: Informational Texts

A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)

A tree is a plant. A tree is the biggest plant that grows. Most kinds of trees grow from seeds the way most small plants do. There are many kinds of trees. Here are a few of them. How many do you know? *[illustration is labeled with Maple, Conifer, Persimmon, Palms, Lemon, Willow]*

This tree grows in the country. It might grow in your yard, too. Do you know what kind it is? This is an apple tree.

This apple tree came from a seed. The seed was small. It grew inside an apple. Have you ever seen an apple seed? Ask an adult to help you cut an apple in two. The seeds are in the center. They look like this.

Most apple trees come from seeds that are planted. Sometimes an apple tree grows from a seed that falls to the ground. The wind blows leaves over the seed. The wind blows soil over the seed.

All winter the seed lies under the leaves and the soil. All winter the seed lies under the ice and snow and is pushed into the ground. Spring comes. Rain falls. The sun comes out and warms the earth. The seed begins to grow.

At first the young plant does not look like a tree. The tree is very small. It is only a stem with two leaves. It has no apples on it. A tree must grow up before it has apples on it. Each year the tree grows. It grows tall. In seven years it is so tall that you can stand under its branches. In the spring there are blossoms on the tree. Spring is apple-blossom time.

[…]

We cannot see the roots. They are under the ground. Some of the roots are large. Some of them are as small as hairs. The roots grow like branches under the ground. A tree could not live without roots.

Roots hold the trunk in the ground. Roots keep the tree from falling when the wind blows. Roots keep the rain from washing the tree out of the ground.

Roots do something more. They take water from the ground. They carry the water into the trunk of the tree. The trunk carries the water to the branches. The branches carry the water to the leaves.

Hundreds and hundreds of leaves grow on the branches. The leaves make food from water and air. They make food when the sun shines. The food goes into the branches. It goes into the trunk and roots. It goes to every part of the tree.

Fall comes and winter is near. The work of the leaves is over. The leaves turn yellow and brown. The leaves die and fall to the ground.

Now the tree is bare. All winter it looks dead. But the tree is not dead. Under its coat of bark, the tree is alive.

[…]

***My Five Senses* by Aliki (1962)**

I can see! I see with my eyes.

I can hear! I hear with my ears.

I can smell! I smell with my nose.

I can taste! I taste with my tongue.

I can touch! I touch with my fingers.

I do all this with my senses.
I have five senses.

When I see the sun or a frog or my baby sister, I use my sense of sight. I am seeing.

When I hear a drum or a fire engine or a bird, I use my sense of hearing. I am hearing.

When I smell soap or a pine tree or cookies just out of the oven, I use my sense of smell. I am smelling.

When I drink my milk and eat my food, I use my sense of taste. I am tasting.

When I touch a kitten or a balloon or water, I use my sense of touch. I am touching.

Sometimes I use all my senses at once.
Sometimes I use only one.
I often play a game with myself.
I guess how many senses I am using at that time.

When I look at the moon and the stars, I use one sense. I am seeing.

When I laugh and play with my puppy, I use four senses. I see, hear, smell, and touch.

When I bounce a ball, I use three senses. I see, hear, touch.

Sometimes I use more of one sense and less of another.

But each sense is very important to me, because it makes me aware.

To be aware is to see all there is to see…
hear all there is to hear…
smell all there is to smell…
taste all there is to taste…
touch all there is to touch.

Wherever I go, whatever I do, every minute of the day, my senses are working.
They make me aware.

***Starfish* by Edith Thacher Hurd, illustrated by Robin Brickman (1962)**

Starfish live in the sea. Starfish live deep down in the sea. Starfish live in pools by the sea.

Some starfish are purple. Some starfish are pink.

This is the sunflower starfish. It is the biggest of all. Starfish have many arms. The arms are called rays. Starfish have arms, but no legs.

Starfish have feet, but no toes. They glide and slide on tiny tube feet. They move as slowly as a snail.

The basket star looks like a starfish, but it is a little different. It doesn't have tube feet. It moves with its rays. It has rays that go up and rays that go down.

Tiny brittle stars are like the basket star. They hide under rocks in pools by the sea.

The mud star hides in the mud. It is a starfish. It has tiny tube feet.

A starfish has no eyes. A starfish has no ears or nose. Its tiny mouth is on its underside. When a starfish is hungry, it slides and it glides on its tiny tube feet.

It hunts for mussels and oysters and clams. It feels for the mussels, It feels for the oysters. It feels for the clams. It feels for something to eat.

The starfish crawls over a clam. Its rays go over it. Its rays go under it. Its rays go all over the clam. The starfish pulls and pulls. It pulls the shells open. It eats the clam inside.

Sometimes a starfish loses a ray. A crab may pull it off. A rock may fall on it. But this does not hurt. It does not bother the starfish. The starfish just grows another ray.

In the spring when the sun shines warm, and the sea grows warm, starfish lay eggs. Starfish lay eggs in the water. They lay many, many, many tiny eggs. The eggs look like sand in the sea. The tiny eggs float in the water. They float up and down. They move with the waves and the tide, up and down, up and down.

[…]

***What Do You Do With a Tail Like This?* by Steve Jenkins & Robin Page (2003)**

What do you do with a nose like this?

If you're a platypus, you use your nose to dig in the mud.
If you're a hyena, you find your next meal with your nose.
If you're an elephant, you use your nose to give yourself a bath.
If you're a mole, you use your nose to find your way underground.

If you're an alligator, you breathe through your nose while hiding in the water.

What do you do with ears like these?

If you're a jackrabbit, you use your ears to keep cool.

If you're a bat you "see" with your ears.

If you're a cricket, you hear with ears that are on your knees.

If you're a humpback whale, you hear sounds hundreds of miles away.

If you're a hippopotamus, you close your ears when you're under water.

What do you do with a tail like this?

If you're a giraffe, you brush off pesky flies with your tail.
If you're a skunk, you lift your tail to warn that a stinky spray is on the way.

If you're a lizard, you break off your tail to get away.

If you're a scorpion, your tail can give a nasty sting.

If you're a monkey, you hang from a tree by your tail.

What do you do with eyes like these?

If you're an eagle, you spot tiny animals from high in the air.

If you're a chameleon, you look two ways at once.

If you're a four-eye fish, you look above and below the water at the same time.

If you're a bush baby, you use your large eyes to see clearly at night.

If you're a horned lizard, you squirt blood out of your eyes.

What do you do with feet like these?

If you're a chimpanzee, you feed yourself with your feet.

If you're a water strider, you walk on water.

If you're a blue-footed booby, you do a dance.

If you're a gecko, you use your sticky feet to walk on the ceiling.

If you're a mountain goat, you leap from ledge to ledge.

What do you do with a mouth like this?

If you're a pelican, you use your mouth as a net to scoop up fish.

If you're an egg-eating snake, you use your mouth to swallow eggs larger than your head.

If you're a mosquito, you use your mouth to suck blood.

If you're an anteater, you capture termites with your long tongue.

If you're an archerfish, you catch insects by shooting them down with a stream of water.

***From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)**

When spring winds warm the earth, a farmer plants hundreds of pumpkin seeds.

Every pumpkin seed can become a baby pumpkin plant. Underground, covered with dark, moist soil, the baby plants begin to grow.

As the plants get bigger, the seeds crack open. Stems sprout up. Roots dig down. Inside the roots are tubes. Water travels up these tubes the way juice goes up a straw.

In less than two weeks from planting time, green shoots poke up through the earth.

These shoots grow into tiny seedlings. Two leaves, called seed leaves, uncurl on each stem. They reach up toward the sun.

Sunlight gives these leaves energy to make food. Like us, plants need food to grow. But green plants do not eat food as we do. Their leaves make it.

To make food, plants need light, water, and air. Leaves catch the sunlight. Roots soak up rainwater. And little openings in the leaves let air in. Using energy from the sun, the leaves mix the air with water from the soil to make sugar. This feeds the plant.

Soon broad, prickly leaves with jagged edges unfold on the stems.

The seed leaves dry up. Now the new leaves make food for the pumpkin plant.

Each pumpkin stem has many sets of tubes. One tube in each set takes water from the soil up to the leaves so they can make sugar. The other tube in each set sends food back down so the pumpkin can grow.

The days grow warmer. The farmer tends the pumpkin patch to keep weeds out. Weeds take water from the soil. Pumpkin plants need that water to grow.

[…]

***Mouse in a Meadow* by John Himmelman (2005)**

A mouse is in a meadow.

The mouse nibbles on nutsedge nutlets.

A leafhopper resting in the nutsedge jumps to a patch of grass.

A snake is hunting there.

The snake startles a moth, who flies away.

The moth lands in a spider's web.

A meadowlark beats her to it. No meal for the spider.

The spider repairs her web.

An ambush bug waits in a yarrow flower.

A butterfly lands on the flower and is caught.

A young artist draws the scene.

The artist brushes a beetle off his picture.

The beetle flies to a milkweed plant.

A frog hops under the plant. Coneheads jump out of its way.

One conehead lands in a spittlebug's bubbles.

The spittlebug makes more bubbles to hide again.

A bobolink watches. Either insect would taste good.

The bobolink hears a rustle.

A weasel is looking for something to eat.

It knows there is a mouse hiding in the meadow.

***Petting Zoo* by Dorling Kindersley (2005)**

We are at the petting zoo. What kind of animal do you see here? [*pictures of goats*]

We are petting a drowsy donkey.

We are walking two baby llamas.

I am brushing a pony's coat.

I am picking up a little pink pig.

I am carrying a soft yellow chick.

I am holding a green stick insect.

I am watching a beady-eyed frog.

It is mealtime now. I give the woolly lamb some milk.

I am feeding a hungry rabbit.

This fluffy guinea pig is nibbling a leaf.

The white goose wants a snack.

This long-horned goat is eating his lunch.

Goodbye, animals! It's time to go home.

***Meet the Meerkat* by Darrin Lunde, illustrated by Patricia J. Wynne (2007)**

Hello, little animal. What is your name?
My name is Little Meerkat. I am a kind of mongoose.

Little Meerkat, what do you look like?
I am long and thin. I have a pointy face. I am the size of a squirrel.

Little Meerkat, where do you live?
I live in the African desert. I like the hot sun.

Little Meerkat, do you live alone?
I live with my brothers and sisters. We all live in the same den.

Little Meerkat, what do you do all day?
In the morning I warm up in the sun. Then I run with my brothers and sisters to find food.

Little Meerkat, what do you eat?
I eat insects, spiders, and scorpions. I smell them with my nose. Then I dig them up with my feet.

Little Meerkat, do you make any sounds?
I make funny sounds all day long. *Cluck…murmur, murmur…peep*! I say *waauk-wauuk* when I see something dangerous.

Little Meerkat, what do you fear?
I am afraid of eagles and jackals. These animals try to eat me. I take turns with my brothers and sisters to watch for danger.

Little Meerkat, when do you sleep?
I return to my den just before dark.

Good night, Little Meerkat!

Meerkats do not like cold mornings. They are most active during the warm part of the day.

There is not much food where meerkats live. They have to travel far to find enough to eat.

Meerkats live in groups of ten or more. They like to be around other meerkats. They care for other meerkats who are sick or hurt. They sometimes even hug each other.

"The Forest in Spring" in *National Geographic Young Explorer,* April 2009 (2009)

Leaves turn green. Babies are born. It's spring, and the forest changes.

A weasel's fur is thinner now. Its fur turns from white to brown.

Baby woodpeckers hatch. They are hungry. Their mother brings them food.

Black bear cubs leave their winter dens. This cub climbs up a tree!

The weather gets warmer. Frozen wood frogs thaw. This one hops on a mushroom. In spring, the forest comes alive!

"Our Good Earth" in *National Geographic Young Explorer*, April 2009 (2009)

We need water, land, and air to live. Earth has all these things.

Water covers much of Earth. Most of this water is not safe to drink. Many people are running out of fresh drinking water.

You can help by using less water. Take shorter showers. Turn off the water when you brush your teeth.

Land covers the rest of Earth. Soil is part of some land. That's where food crops grow. Rain and wind can wear away soil.

You can help by saving soil. Plant trees and flowers. The plants and their roots will keep soil in place.

Air is all around us. Cars can make air dirty. Fewer cars on the road help keep air clean. Try to use other ways to get to school.

Kindergarten to Grade 1: Read-Aloud Narratives

***The Wonderful Wizard of Oz* by L. Frank Baum (1900)**

From Chapter 1 "The Cyclone"

Dorothy lived in the midst of the great Kansas prairies, with Uncle Henry, who was a farmer, and Aunt Em, who was the farmer's wife. Their house was small, for the lumber to build it had to be carried by wagon many miles. There were four walls, a floor and a roof, which made one room; and this room contained a rusty looking cookstove, a cupboard for the dishes, a table, three or four chairs, and the beds. Uncle Henry and Aunt Em had a big bed in one corner, and Dorothy a little bed in another corner. There was no garret at all, and no cellar--except a small hole dug in the ground, called a cyclone cellar, where the family could go in case one of those great whirlwinds arose, mighty enough to crush any building in its path. It was reached by a trap door in the middle of the floor, from which a ladder led down into the small, dark hole.

When Dorothy stood in the doorway and looked around, she could see nothing but the great gray prairie on every side. Not a tree nor a house broke the broad sweep of flat country that reached to the edge of the sky in all directions. The sun had baked the plowed land into a gray mass, with little cracks running through it. Even the grass was not green, for the sun had burned the tops of the long blades until they were the same gray color to be seen everywhere. Once the house had been painted, but the sun blistered the paint and the rains washed it away, and now the house was as dull and gray as everything else.

When Aunt Em came there to live she was a young, pretty wife. The sun and wind had changed her, too. They had taken the sparkle from her eyes and left them a sober gray; they had taken the red from her cheeks and lips, and they were gray also. She was thin and gaunt, and never smiled now. When Dorothy, who was an orphan, first came to her, Aunt Em had been so startled by the child's laughter that she would scream and press her hand upon her heart whenever Dorothy's merry voice reached her ears; and she still looked at the little girl with wonder that she could find anything to laugh at.

Uncle Henry never laughed. He worked hard from morning till night and did not know what joy was. He was gray also, from his long beard to his rough boots, and he looked stern and solemn, and rarely spoke.

It was Toto that made Dorothy laugh, and saved her from growing as gray as her other surroundings. Toto was not gray; he was a little black dog, with long silky hair and small black eyes that twinkled merrily on either side of his funny, wee nose. Toto played all day long, and Dorothy played with him, and loved him dearly.

Today, however, they were not playing. Uncle Henry sat upon the doorstep and looked anxiously at the sky, which was even grayer than usual. Dorothy stood in the door with Toto in her arms, and looked at the sky too. Aunt Em was washing the dishes.

[…]

***Little House in the Big Woods* by Laura Ingalls Wilder, illustrated by Garth Williams (1932)**

From "Two Big Bears"

[…]

The Story of Pa and the Bear in the Way

When I went to town yesterday with the furs I found it hard walking in the soft snow. It took me a long time to get to town, and other men with furs had come in earlier to do their trading. The storekeeper was busy, and I had to wait until he could look at my furs.

Then we had to bargain about the price of each one, and then I had to pick out the things I wanted to take in trade.

So it was nearly sundown before I could start home.

I tried to hurry, but the walking was hard and I was tired, so I had not gone far before night came. And I was alone in the Big Woods without my gun.

There were still six miles to walk, and I came along as fast as I could. The night grew darker and darker, and I wished for my gun, because I knew that some of the bears had come out of their winter dens. I had seen their tracks when I went to town in the morning.

Bears are hungry and cross at this time of year; you know they have been sleeping in their dens all winter long with nothing to eat, and that makes them thin and angry when they wake up. I did not want to meet one.

"I hurried along as quick as I could in the dark. By and by the stars gave a little light. It was still black as pitch where the woods were thick, but in the open places I could see, dimly. I could see the snowy road ahead a little way, and I could see the dark woods standing all around me. I was glad when I came into an open place where the stars gave me this faint light.

All the time I was watching, as well as I could, for bears. I was listening for the sounds they make when they go carelessly through the bushes.

Then I came again into an open place, and there, right in the middle of my road, I saw a big black bear.

He was standing up on his hind legs, looking at me. I could see his eyes shine. I could see his pig-snout. I could even see one of his claws, in the starlight.

My scalp prickled, and my hair stood straight up. I stopped in my tracks, and stood still. The bear did not move. There he stood, looking at me.

I knew it would do no good to try to go around him. He would follow me into the dark woods, where he could see better than I could. I did not want to fight a winter-starved bear in the dark. Oh, how I wished for my gun!

I had to pass that bear, to get home. I thought that if I could scare him, he might get out of the road and let me go by. So I took a deep breath, and suddenly I shouted with all my might and ran at him, waving my arms.

He didn't move.

I did not run very far towards him, I tell you! I stopped and looked at him, and he stood looking at me. Then I shouted again. There he stood. I kept on shouting and waving my arms, but he did not budge.

Well, it would do me no good to run away. There were other bears in the woods. I might meet one any time. I might as well deal with this one as with another. Besides, I was coming home to Ma and you girls. I would never get here, if I ran away from everything in the woods that scared me.

So at last I looked around, and I got a good big club, a solid, heavy branch that had been broken from a tree by the weight of snow in the winter.

I lifted it up in my hands, and I ran straight at that bear. I swung my club as hard as I could and brought it down, bang! on his head.

And there he still stood, for he was nothing but a big, black, burned stump!

I had passed it on my way to town that morning. It wasn't a bear at all. I only thought it was a bear, because I had been thinking all the time about bears and being afraid I'd meet one."

[…]

***Mr. Popper's Penguins* by Richard and Florence Atwater, illustrated by Robert Lawson (1938)**

From Chapter 1: "Stillwater"

It was an afternoon in late September. In the pleasant little city of Stillwater, Mr. Popper, the house painter was going home from work.

He was carrying his buckets, his ladders, and his boards so that he had rather a hard time moving along. He was spattered here and there with paint and calcimine, and there were bits of wallpaper clinging to his hair and whiskers, for he was rather an untidy man.

The children looked up from their play to smile at him as he passed, and the housewives, seeing him, said, "Oh dear, there goes Mr. Popper. I must remember to ask John to have the house painted over in the spring."

No one knew what went on inside of Mr.Popper's head, and no one guessed that he would one day be the most famous person in Stillwater.

He was a dreamer. Even when he was busiest smoothing down the paste on the wallpaper, or painting the outside of other people's houses, he would forget what he was doing. Once he had painted three sides of a kitchen green, and the other side yellow. The housewife, instead of being angry and making him do it over, had liked it so well that she had made him leave it that way. And all the other housewives, when they saw it, admired it too, so that pretty soon everybody in Stillwater had two-colored kitchens.

The reason Mr. Popper was so absent-minded was that he was always dreaming about far-away countries. He had never been out of Stillwater. Not that he was unhappy. He had a nice little house of his own, a wife whom he loved dearly, and two children, named Janie and Bill. Still, it would have been nice, he often thought, if he could have seen something of the world before he met Mrs. Popper and settled down. He had never hunted tigers in India, or climbed the peaks of the Himalayas, or dived for pearls in the South Seas. Above all, he had never seen the Poles.

That was what he regretted most of all. He had never seen those great shining white expanses of ice and snow. How he wished that he had been a scientist, instead of a house painter in Stillwater, so that he might have joined some of the great Polar expeditions. Since he could not go, he was always thinking about them.

Whenever he heard that a Polar movie was in town, he was the first person at the ticket-window, and often he sat through three shows. Whenever the town library had a new book about the Arctic or the Antarctic—the North Pole or the South Pole—Mr. Popper was the first to borrow it. Indeed, he had read so much about Polar explorers that he could name all of them and tell you what each had done. He was quite an authority on the subject.

[…]

***Finn Family Moomintroll* by Tove Jansson, translated by Elizabeth Portch (1948)**

Preface

One grey morning the first snow began to fall in the Valley of the Moomins. It fell softly and quietly, and in a few hours everything was white.

Moomintroll stood on his doorstep and watched the valley nestle beneath its winter blanket. "Tonight," he thought, "we shall settle down for our long winter's sleep." (All Moomintrolls go to sleep about November. This is a good idea, too if you don't like the cold and the long winter darkness.) Shutting the door behind him, Moomintroll stole in to his mother and said:
"The snow has come!"

"I know," said Moominmamma. "I have already made up all your beds with the warmest blankets. You're to sleep in the little room under the eaves with Sniff."

"But Sniff snores so horribly," said Moomintroll. "Couldn't I sleep with Snufkin instead?"

"As you like, dear," said Moominmamma. "Sniff can sleep in the room that faces east."

So the Moomin family, their friends, and all their acquaintances began solemnly and with great ceremony to prepare for the long winter. Moominmamma laid the table for them on the verandah but they only had pine-needles for supper. (It's important to have your tummy full of pine if you intend to sleep all the winter.) When the meal was over, and I'm afraid it didn't taste very nice, they all said good-night to each other, rather more cheerfully than usual, and Moominmamma encouraged them to clean their teeth.

The Moominpappa went round and shut all the doors and shutters and hung a mosquito net over the chandelier so that it wouldn't get dusty.

Then everyone crept into his bed and, making a cosy nest for himself, pulled his blanket over his ears and thought of something nice. But Moomintroll sighed a little and said:
"I'm afraid we shall waste an awful lot of time."

"Don't worry," answered Snufkin, "we shall have wonderful dreams, and when we wake up it'll be spring."

"Mm-m," mumbled Moomintroll sleepily, but he had already drifted away into a hazy dream world.

Outside the snow fell, thick and soft. It already covered the steps and hung heavily from the roofs and eaves. Soon Moominhouse would be nothing but a big, round snowball. The clocks stopped ticking one by one. Winter had come.

***A Story A Story* by Gail E. Haley (1970)**

Once, oh small children round my knee, there were no stories on earth to hear. All the stories belonged to Nyame, the Sky God. He kept them in a golden box next to his royal stool.

Ananse, the Spider Man, wanted to buy the Sky God's stories. So he spun a web up to the sky.

When the Sky God heard what Ananse wanted, he laughed: "Twe, twe, twe. The price of my stories is that you bring me Osebo the leopard of-the-terrible-teeth, Mmboro the hornet who-stings-like-fire, and Mmoatia the fairy whom-men-never-see."

Ananse bowed and answered: "I shall gladly pay the price."

"Twe, twe, twe," chuckled the Sky God. "How can a weak old man like you, so small, so small, so small, pay my price?"

But Ananse merely climbed down to earth to find the things that the Sky God demanded.

Ananse ran along the jungle path – yiridi, yiridi, yiridi – till he came to Osebo the leopard-of-the-terrible-teeth.

"Oho, Ananse," said the leopard, "you are just in time to be my lunch."

Ananse replied: "As for that, what will happen will happen. But first let us play the binding binding game."

The leopard, who was fond of games, asked: "How is it played?"

"With vine creepers," explained Ananse. "I will bind you by your foot and foot. Then I will untie you, and you can tie me up."

"Very well," growled the leopard, who planned to eat Ananse as soon as it was his turn to bind him.

So Ananse tied the leopard
by his foot
by his foot
by his foot
by his foot, with the vine creeper.
Then he said: "Now, Osebo, you are ready to meet the Sky God." And he hung the tied leopard in a tree in the jungle.

[…]

***The Paper Crane* by Molly Bang (1985)**

A man once owned a restaurant on a busy road. He loved to cook good food and he loved to serve it. He worked from morning until night, and he was happy.

But a new highway was built close by. Travelers drove straight from one place to another and no longer stopped at the restaurant. Many days went by when no guests came at all. The man became very poor, and had nothing to do but dust and polish his empty plates and tables.

One evening a stranger came into the restaurant. His clothes were old and worn, but he had an unusual gentle manner.

Though he said he had not money to pay for food, the owner invited him to sit down. He cooked the best meal he could make and served him like a king. When the stranger had finished, he said to his host, "I cannot pay you with money, but I would like to thank you in my own way."

He picked up a paper napkin from the table and folded it into the shape of a crane. "You have only to clap your hands," he said, "and this bird will come to life and dance for you. Take it, and enjoy it while it is with you." With these words the stranger left.

It happened just as the stranger had said. The owner had only to clap his hands and the paper crane became a living bird, flew down to the floor, and danced.

Soon word of the dancing crane spread, and people came from far and near to see the magic bird perform.

The owner was happy again, for his restaurant was always full of guests. He cooked and served and had company from morning until night.

The weeks passed. And the months.

One evening a man came into the restaurant. His clothes were old and worn, but had an unusual, gentle manner. The owner knew him at once and was overjoyed.

The stranger, however, said nothing. He took a flute from his pocket, raised it to his lips, and began to play.

The crane flew down from its place on the shelf and danced as it had never danced before.

The stranger finished playing, lowered the flute from his lips, and returned it to his pocket. He climbed on the back of the crane, and they flew out of the door and away.

The restaurant still stands by the side of the road, and guests still come to eat the good food and hear the story of the gentle stranger and the magic crane made from a paper napkin. But neither the stranger nor the dancing crane has ever been seen again.

Kindergarten to Grade 1: Read-Aloud Poetry

"The Owl and the Pussycat" by Edward Lear (1871)

The Owl and the Pussy-cat went to sea
  In a beautiful pea-green boat,
They took some honey, and plenty of money,
  Wrapped up in a five-pound note.
The Owl looked up to the stars above,
  And sang to a small guitar,
'O lovely Pussy! O Pussy, my love,
  What a beautiful Pussy you are,
        You are,
        You are!
  What a beautiful Pussy are!'

Pussy said to the Owl, 'You elegant fowl!
  How charmingly sweet you sing!
O let us be married! Too long we have tarried:
  But what shall we do for a ring?'
They sailed away, for a year and a day,
  To the land where the Bong-tree grows
And there in a wood a Piggy-wig stood
  With a ring at the end of his ose,
        His nose,
        His nose,
  With a ring at the end of his nose.

'Dear Pig, are you willing to sell for one shilling
  Your ring?' Said the Piggy, 'I will.'
So they took it away, and were married next day
  By the turkey who lives on the hill.
They dined on mince, and slices of quince,
  Which they ate with a runcible spoon;
And hand in hand, on the edge of the sand,
  They danced by the light of the moon,
        The moon,
        The moon,
  They danced by the light of the moon.

"April Rain Song" by Langston Hughes (1932)

Let the rain kiss you.
Let the rain beat upon your head with silver
  liquid drops.

[…]

"The Fox's Foray" – Traditional rhyme
From *The Oxford Nursery Rhyme Book*, edited by Peter and Iona Opie (1955)

A fox jumped out one winter's night,
And begged the moon to give him light.
For he'd many miles to trot that night
Before he reached his den O!
Den O! Den O!
For he'd many miles to trot that night before he reached his den O!

The first place he came to was a farmer's yard,
Where the ducks and the geese declared it hard
That their nerves should be shaken and their rest so marred
By a visit from Mr. Fox O!
Fox O! Fox O!
That their nerves should be shaken and their rest so marred
By a visit from Mr. Fox O!

He took the grey goose by the neck,
And swung him right across his back;
The grey goose cried out, Quack, quack, quack,
With his legs hanging dangling down O!
Down O! Down O!
The grey goose cried out, Quack, quack, quack,
With his legs hanging dangling down O!

Old Mother Slipper Slopper jumped out of bed,
And out of the window she popped her head:
Oh, John, John, the grey goose is gone,
And the fox is off to his den O!
Den O! Den O!
Oh, John, John, the grey goose is gone,
And the fox is off to his den O!

John ran up to the top of the hill.
And blew his whistle loud and shrill;
Said the fox, That is very pretty music still –
I'd rather be in my den O!
Den O! Den O!
Said the fox, That is very pretty music still –
I'd rather be in my den O!

The fox went back to his hungry den,
And his dear little foxes, eight, nine, ten;
Quoth they, Good daddy, you must go there again,
If you bring such god cheer from the farm O!
Farm O! Farm O!
Quoth they, Good daddy, you must go there again,
If you bring such god cheer from the farm O!

The fox and his wife, without any strife,
Said they never ate a better goose in all their life:
They did very well without fork or knife,
And the little ones chewed on the bones O!
Bones O! Bones O!
They did very well without fork or knife,
And the little ones chewed on the bones O!

***Over in the Meadow* by John Langstaff, illustrated by Feodor Rojankovsky (1957)**

[…]

Over in the meadow in a new little hive
Lived an old mother queen bee and her honeybees five.
"Hum," said the mother,
"We hum," said the five;
So they hummed and were glad in their new little hive.

Over in the meadow in a dam built of sticks
Lived an old mother beaver and her little beavers six.
"Build," said the mother,
"We build," said the six;
So they built and were glad in the dam built of sticks.

Over in the meadow in the green wet bogs
Lived an old mother froggie and her seven polliwogs.
"Swim," said the mother.
"We swim," said the 'wogs;
So they swam and were glad in the green wet bogs.

Over in the meadow as the day grew late
Lived an old mother owl and her little owls eight.
"Wink," said the mother,
"We wink," said the eight;
So they winked and were glad as the day grew late.

[…]

***Zin! Zin! Zin! a Violin* by Lloyd Moss, illustrated by Marjorie Priceman (1995)**

With mournful moan and silken tone,
Itself alone comes ONE TROMBONE.
Gliding, sliding, high notes go low;
ONE TROMBONE is playing SOLO.

[…]

Kindergarten to Grade 1: Read-Aloud Informational Texts

***The Year at Maple Hill Farm* by Alice and Martin Provensen (1978)**

The Year

This is a book about farm animals,
And what happens during one year on a farm.

The year is divided into twelve months,
The months are divided into weeks,
The weeks into days,
The days into minutes, and on a farm something is happening every minute.

Animals don't know there is such a thing as a year,
But they do know about seasons.
Animals know when the cold will come,
And they grow heavy overcoats.
They know when it is summer,
And they shed them.
When it is hot, the look for shade,
And in winter, they look for shelter.

People have names for what they call the months of the year.
We could start with any month as far as the animals are concerned,
But it is usual to begin with January.

January is a winter month. The ground is covered with snow. It is a cold, grey time of year and night falls early.

Cows stay in the barnyard when the ground is frozed. So do the chickens, but not many eggs are laid in January. The days are too short and dark. The horses don't mind the cold. Neither do the sheep with their heavy winter coats.

All the farm animals stay close to the barn where they are fed. There is hay and grain to eat. Even the wild deer come nearer the farm, hoping to find a little salt or a windfall apple under the snow.

February follows January. The forest pond is frozen solid, all but a marshy place where the spring water feeds the pond.

The children are having a skating party. When they are cold, they sit by the fire and toast their toes and noses. The geese play in the icy water all winter. You'd think their bare feet would freeze but they never do.

The noisy rooks are having a circus. They toss and tumble on the trapezes of bare branches. Rooks like winter. Under the ice, in a tunnel in the frozen ground, the water rat is napping. He won't be up until spring.

[…]

***Fire! Fire!* by Gail Gibbons (1984)**

From "Fire! Fire! In the city…"

In an apartment house, a breeze has blown a towel up into the flame of a hot stove. A fire begins. The smoke alarm screams.

A phone call alerts the fire-dispatch center. Instantly, a dispatcher calls the firehouse nearest the fire.

A loudspeaker blares out the address of the fire, and the firefighters go into action. They slide down brass poles to the ground floor, where the fire engines are, and hurry into their fire-fighting gear. Then they take their positions on their engines.

The big trucks roar out of the firehouse. Sirens scream and lights flash.

The fire engines arrive at the scene. The fire is bigger now. The fire chief is in charge. He decides the best way to fight this fire.

Hoses are pulled from the trucks. Each separate fire truck is called a "company." Each separate company has an officer in charge. The fire chief tells each officer in charge what he wants the firefighters to do.

Firefighters are ordered to search the building to make sure no one is still inside. A man is trapped. A ladder tower is swung into action. The man is rescued quickly.

At the same time, an aerial ladder is taking other firefighters to the floor above the fire. Inside, the firefighters attach a hose to the building's standpipe. Water is sprayed onto the fire to keep it from moving up through the apartment house.

Now the aerial ladder is swung over to the roof of the burning building. Firefighters break holes in the roof and windows to let out poisonous gases, heat, and smoke before they can cause a bad explosion. There's less danger now for the firefighters working inside the building.

Firefighters are battling the blaze from the outside of the building, too. Fire hoses carry water from the fire hydrants to the trucks.

Pumps in the fire trucks control the water pressure and push the water up through the discharge hoses. Streams of water hit the burning building and buildings next door to keep the fire from spreading.

The fire is under control.

The fire is out. The firefighters clean up the rubble. Back at the firehouse, they clean their equipment and make an official report on the fire.

[…]

***Follow the Water from Brook to Ocean* by Arthur Dorros (1991)**

After the next big rain storm, put your boots on and go outside. Look at the water dripping from your roof. Watch it gush out of the drainpipes. You can see water flowing down your street too.

Water is always flowing. It trickles in the brook near your house.

Sometimes you see water rushing along in a stream or in a big river.

Water always flows downhill. It flows from high places to low places, just the way you and your skateboard move down a hill.

Sometimes water collects in a low spot in the land – a puddle, a pond, or a lake. The water's downhill journey may end there. Most of the time, though, the water will find a way to keep flowing downhill. Because water flows downhill, it will keep flowing until it can't go any lower. The lowest parts of the earth are the oceans. Water will keep flowing until it reaches an ocean.

Where does the water start? Where does the water in a brook or a stream or a river come from? The water comes from rain. And it comes from melting snow. The water from rain and melting snow runs over the ground. Some of it soaks into the ground, and some water is soaked up by trees and other plants. But a lot of the water keeps traveling over the ground, flowing downhill.

The water runs along, flowing over the ground. Trickles of water flow together to form a brook. A brook isn't very deep or wide. You could easily step across a brook to get to the other side.

The brook flows over small stones covered with algae. Algae are tiny plants. They can be green, red, or brown. Green algae make the water look green. *Plop!* A frog jumps into the brook. A salamander wiggles through leafy water plants. *Slap!* A trout's tail hits the water. Lots of creatures live in the moving water.

[…]

***Amazing Whales!* by Sarah L. Thomson (2005)**

A blue whale is as long as a basketball court. Its eyes are as big as softballs. Its tongue weighs as much as an elephant.

It is the biggest animal that has ever lived on Earth – bigger than any dinosaur.

But not all whales are this big. A killer whale is about as long as a fire truck. Dolphins and porpoises are whales too, very small whales. The smallest dolphin is only five feet long. That's probably shorter than your mom.

There are about 80 kinds of whales. All of them are mammals. Dogs and monkeys and people are mammals, too. They are warm-blooded. This means that their blood stays at the same temperature even if the air or water around them gets hot or cold.

Mammal babies drink milk from their mothers. Whale babies are called calves.

And mammals breathe air. A whale must swim to the ocean's surface to breathe or it will drown. After a whale calf is born, its mother may lift it up for its first breath of air.

A whale uses its blowholes to breathe. It can have one blowhole or two. The blowholes are on the top of its head. When a whale breathes out, the warm breath makes a cloud called a blow. Then the whale breathes in. Its blowholes squeeze shut. The whale dives under the water. It holds its breath until it comes back up.

When sperm whales hunt, they dive deeper than any other whale. They can hold their breath for longer than an hour and dive down more than a mile.

Deep in the ocean, where the water is dark and cold, sperm whales hunt for giant squid and other animals.

Some whales, like sperm whales, have teeth to catch their food. They are called toothed whales. Other whales have not teeth. They are called baleen whales. (Say it like this: bay-LEEN.) Blue whales and humpback whales are baleen whales. They have strips of baleen in their mouths. Baleen is made of the same stuff as your fingernails. It is strong but it can bend.

A baleen whale fills its mouth with water. In the water there might be fish or krill. Krill are tiny animals like shrimp. The whale closes its mouth. The water flows back out between the strips of baleen.

The fish or krill are trapped inside its mouth for the whale to eat.

Some whales, like killer whales, hunt in groups to catch their food. These groups are called pods. A whale mother and her children, and even her grandchildren sometimes live in one pod.

[…]

***Living Sunlight: How Plants Bring the Earth to Life* by Molly Bang & Penny Chisholm, illustrated by Molly Bang (2009)**

Listen to me. Do this one thing: Lay your hand over your heart, and feel. Feel your heart pump, pump, and pump. Feel how warm you are. That is my light, alive inside of you.

I am your sun, your golden star. I burn. My light-energy explodes in all directions. Most fades into endless space. But some tiny, tiny part of my light falls on your small planet Earth.

I warm your land and seas, melt your glaciers, create your winds. I do all this. But I do far, far more…

My light becomes the energy for all life on Earth. All living things—including YOU—pulse with my light and keep it circling round and round on Earth.

How do living things do this? What is your secret?

Your secret starts in plants—green plants. Plants suck up water—H2O—from the Earth. In daylight, green plants catch my energy with their chlorophyll. Then…

KAZAP! Plants use my energy to break apart the water—break the H2O into H and O2, hydrogen and oxygen. But as plants break apart the water, they trap my energy as little packets.

Meanwhile, plants are breathing. (Yes, plants breathe!) they breathe out the oxygen they broke off from the water and breathe in carbon dioxide—CO2—from the air.

Now plants use the packets of my energy and the carbon dioxide from the air to build… CHUNKA-CHUNKA-CHUNKA…

…sugar! And with this sugar, plants build all their parts. All the leaves and stems and juices, all the seeds and fruit and flowers of all the plants on Earth are built with sugar made from air and water using my light energy.

This is photosynthesis – making life with sunlight, my light. This is my gift of energy to you.

But wait! *You* are not green! *You* have no leaves, no chlorophyll. *You* cannot catch my light. And neither can your parents, or your friends, your teachers, or any reptile, insect, fish, bird, or mammal in the whole wide world.

So…how do YOU get my energy? Do you know?

Yes, you eat plants. When you eat their leaves and stems and juices, when you eat their seeds and fruit and flowers, you eat my energy, my living light.

[…]

Grades 2–3

Grades 2–3: Narratives

***My Father's Dragon* by Ruth Stiles Gannett, illustrated by Ruth Chrisman Gannett (1948)**

From Chapter Seven: "My Father Meets a Lion"

[…]

"Who are you?" the lion yelled at my father.

"My name is Elmer Elevator."

"Where do you think you are going?"

"I'm going home," said my father.

"That's what you think!" said the lion. "Ordinarily I'd save you for afternoon tea, but I happen to be upset enough and hungry enough to eat you right now." And he picked up my father in his front paws to feel how fat he was.

My father said, "Oh, please, Lion, before you eat me, tell me why you are so particularly upset today."

"It's my mane," said the lion, as he was figuring out how many bites a little boy would make. "You see what a dreadful mess it is, and I don't seem to be able to do anything about it. My mother is coming over on the dragon this afternoon, and if she sees me this way I'm afraid she'll stop my allowance. She can't stand messy manes! But I'm going to eat you now, so it won't make any difference to you."

"Oh, wait a minute," said my father, "and I'll give you just the things you need to make your mane a tidy and beautiful. I have them here in my pack."

"You do?" said the lion, "Well, give them to me, and perhaps I'll save you for afternoon tea after all," and he put my father down on the ground."

My father opened the pack and took out the comb and the brush and the seven hair ribbons of different colors. "Look," he said, "I'll show you what to do on your forelock, where you can watch me. First you brush a while, and then you comb, and then you brush again until all the twigs and snarls are gone. Then you divide it up into three and braid it like this and tie a ribbon around the end."

Ad my father was doing this, the lion watched very carefully and began to look much happier. When my father tied the ribbon he was all smiles. "Oh, that's wonderful, really wonderful!" said the lion. "Let me have the comb and brush and see if I can do it." So my father gave him the comb and brush and the lion began busily grooming his mane. As a matter of fact, he was so busy that he didn't even know when my father left.

[…]

***Crow Boy* by Taro Yashima (1955)**

On the first day of our village school in Japan, there was a boy missing.
He was found hidden away in the dark space underneath the schoolhouse floor.
None of use knew him. He was nicknamed Chibi because he was very small. Chibi means "tiny boy."

This strange boy was afraid of our teacher and could not learn a thing.
He was afraid of the children and could not make friends with them at all.

He was left alone in the study time.

He was left alone in the play time.

He was always at the end of the line, always at the foot of the class, a forlorn little tag-along.

Soon Chibi began to make his eyes cross eyed so that he was not able to see whatever he did not want to see.

And Chibi found many ways, one after another, to kill time and amuse himself.

Just the ceiling was interesting enough for him to watch for hours.

The wooden top of his desk was another interesting thing to watch.

A patch of cloth on a boy's shoulder was something to study.

Of course the window showed him many things all year round.

Even when it was raining the window had surprising things to show him.

On the playground, if he closed his eyes and listened, Chibi could hear many different sounds, near and far.

And Chibi could hold and watch insects and grubs that most of us wouldn't touch or even look it.

So that not only the children in our class but the older ones and even the younger ones called him stupid and slowpoke.

But, slowpokes or not, day after day Chibi came trudging to school.

He always carried the same lunch, a rice ball wrapped in a radish leaf.

Even when it rained or stormed he still came trudging along, wrapped in a raincoat made from dried zebra grass.

And so, day by day, five years went by, and we were in the sixth grade, the last class in school.

[…]

***Amos* & *Boris* by William Steig (1971)**

[…]

The *Rodent*, for that was the boat's name, proved to be very well made and very well suited to the sea. And Amos, after one miserable day of seasickness, proved to be a natural sailor, very well suited to the ship.

He was enjoying his trip immensely. It was beautiful weather. Day and night he moved up and down, up and down, on waves as big as mountains, and he was full of wonder, full of enterprise, and full of love for life.

One night, in a phosphorescent sea, he marveled at the sight of some whales spouting luminous water; and later, lying on the deck of his boat gazing at the immense, starry sky, the tiny mouse Amos, a little speck of a living thing in the vast living universe, felt thoroughly akin to it all. Overwhelmed by the beauty and mystery of everything, he rolled over and over and right off the deck of his boat and into the sea.

"Help!" he squeaked as he grabbed desperately at the *Rodent*. But it evaded his grasp and went bowling along under full sail, and he never saw it again.

And there he was! Where? In the middle of the immense ocean, a thousand miles from the nearest shore, with no one else in sight as far as the eye could see and not even so much as a stick of driftwood to hold on to. "Should I try to swim home?" Amos wondered. "Or should I just try to stay afloat?" He might swim a mile, but never a thousand. He decided to just keep afloat, treading water and hoping that something – who knows what? – would turn up to save him. But what if a shark, or some big fish, a horse mackerel, turned up? What was he supposed to do to protect himself? He didn't know.

Morning came, as it always does. He was getting terribly tired. He was a very small, very cold, very wet and worried mouse. There was still nothing in sight but the empty sea. Then, as if things weren't bad enough, it began to rain.

At last the rain stopped and the noonday sun gave him a bit of cheer and warmth in the vast loneliness; but his strength was giving out. He began to wonder what it would be like to drown. Would it take very long? Would it feel just awful? Would his soul go to heaven? Would there be other mice there?

As he was asking himself these dreadful questions, a huge head burst through the surface of the water and loomed up over him. It was a whale. "What sort of fish are you?" the whale asked. "You must be one of a kind!"

"I'm not a fish," said Amos. "I'm a mouse, which is a mammal, the highest form of life. I live on land."

"Holy clam and cuttlefish!" said the whale. "I'm a mammal myself, though I live in the sea. Call me Boris," he added.

Amos introduced himself and told Boris how he came to be there in the middle of the ocean. The whale said he would be happy to take Amos to the Ivory Coast of Africa, where he happened to be headed anyway, to attend a meeting of whales from all the seven seas. But Amos said he'd had enough adventure to last him a while. He wanted only to get back home and hoped the whale wouldn't mid going out his way to take him there.

"Not only would I not mind," said Boris, "I would consider it a privilege. What other whale in the all the world ever had the chance to get to know such a strange creature as you! Please climb aboard." And Amos got on Boris's back.

"Are you sure you're a mammal?" Amos asked. "You smell more like a fish." Then Boris the whale went swimming along, with Amos the mouse on his back.

[. . .]

***The Treasure* by Uri Shulevitz (1978)**

There was once a man and his name was Isaac.

He lived in such poverty that again and again he went to bed hungry.

One night, he had a dream.

In his dream, a voice told him to go to the capital city and look for a treasure under the bridge by the Royal Palace.
"It is only a dream," he thought when he woke up, and he paid no attention to it.

The dream came back a second time.
And Isaac still paid no attention to it.

When the dream came back a third time, he said, "Maybe it's true," and so he set out on his journey.

Now and then, someone gave him a ride, but most of the way he walked.

He walked through forests.

He crossed over mountains.

Finally he reached the capital city.

But when he came to the bridge by the Royal Palace, he found that it was guarded day and night.

He did not dare to search for the treasure.
Yet he returned to the bridge every morning and wandered around it until dark.

One day, the captain of the guards asked him, "Why are you here?"

Isaac told him the dream. The captain laughed.

"You poor fellow," he said, "what a pity you wore your shoes out for a dream! Listen, if I believed a dream I once had, I would go right now to the city you came from, and I'd look for a treasure under the stove in the house of a fellow named Isaac."
And he laughed again.

Isaac bowed to the captain and started on his long way home.

He crossed over mountains.

He walked through forests.

Now and then, someone gave him a ride, but most of the way he walked.

At last he reached his own town.

When he got home, he dug under his stove, and there he found the treasure.

In thanksgiving, he built a house of prayer, and in one of its corners he put an inscription: Sometimes one must travel far to discover what is near.

Isaac sent the captain of the guards a priceless ruby.
And for the rest of his days he lived in contentment and he was never poor again.

***The Stories Julian Tells* by Ann Cameron (1981)**

From "A Day When Frogs Wear Shoes"

My little brother, Huey, my best friend, Gloria, and I were sitting on our front steps. It was one of those hot summer days when everything stands still. We didn't know what to do. We were watching the grass grow. It didn't grow fast.

"You know something?" Gloria said. "This is a slow day."

"It's so slow the dogs don't bark," Huey said.

"It's so slow the flies don't fly," Gloria said.

"It's so slow ice cream wouldn't melt," I said.

"If we had any ice cream," Huey said.

"But we don't," Gloria said.

We watched the grass some more.

"We'd better do something," I said.

"Like what?" Gloria asked.

"We could go visit Dad," Huey said.

"That's a terrible idea," I said.

"Why? Huey asked. "I like visiting Dad."

My father has a shop about a mile from our house where he fixes cars. Usually it is fun to visit him. If he has customers, he always introduces us as if we were important guests. If he doesn't have company, sometimes he lets us ride in the cars he puts up on the lift. Sometimes he buys us treats.

"Huey," I said, "Usually, visiting Dad is a good idea. Today, it's a dangerous idea."

"Why?" Gloria asked.

"Because we're bored," I said. "My dad hates it when people are bored. He says the world is so interesting nobody should ever be bored."

"I see," Gloria said, as if she didn't.

"So we'll go see him," Huey said, "and we just won't tell him we're bored. We're bored, but we won't tell him."

"Just so you remember that!" I said.

"Oh, I'll remember," Huey said.

Huey was wearing his angel look. When he has that look you know he'll never remember anything.

[…]

***Sarah, Plain and Tall* by Patricia MacLachlan (1985)**

[…]

I wiped my hands on my apron and went to the window. Outside, the prairie reached out and touched the places where the sky came down. Though the winter was nearly over, there were patches of snow everywhere. I looked at the long dirt road that crawled across the plains, remembering the morning that Mama had died, cruel and sunny. They had come for her in a wagon and taken her away to be buried. And then the cousins and aunts and uncles had come and tried to fill up the house. But they couldn't.

Slowly, one by one, they left. And then the days seemed long and dark like winter days, even though it wasn't winter. And Papa didn't sing.

[…]

***Tops and Bottoms* by Janet Stevens (1995)**

Once upon a time there lived a very lazy bear who had lots of money and lots of land. His father had been a hard worker and a smart business bear, and he had given all of his wealth to his son.

But all Bear wanted to do was sleep.

Not far down the road lived a hare. Although Hare was clever, he sometimes got into trouble. He had once owned land, too, but now he had nothing. He had lost a risky bet with a tortoise and had sold off all of his land to Bear to pay off the debt.

Hare and his family were in very bad shape.

"The children are so hungry father bear! We must think of something!" Mrs. Hare cried one day. So Hare and Mrs. Hare put their heads together and cooked up a plan.

[…]

Bear stared at his pile. "But, Hare, all the best parts are in your half!"

"You chose the tops, Bear," Hare said.

"Now, Hare, you've tricked me. You plant this field again—and this season I want the bottoms!"

Hare agreed. "It's a done deal, Bear."

[…]

***The Raft* by Jim LaMarche (2000)**

[…]

Somehow, on the river, it seemed like summer would never end. But of course it did.

On my last day, I got up extra early and crept down to the dock. The air was cool and a low pearly fog hung over the river. I untied the raft and quietly drifted downstream.

Ahead of me, through the fog, I saw two deer moving across the river, a doe and a fawn. When they reached the shore, the doe leaped easily up the steep bank, then turned to wait for her baby. But the fawn was in trouble. It kept slipping down the muddy bank, The doe returned to the water to help, but the more the fawn struggled, the deeper it got stuck in the mud.

I pushed off the river bottom and drove the raft hard onto the muddy bank, startling the doe. Then I dropped into the water. I was ankle-deep in mud.

You're okay," I whispered to the fawn, praying that the raft would calm it. "I won't hurt you."

Gradually the fawn stopped struggling, as if it understood that I was there to help. I put my arms around it and pulled. It barely moved. I pulled again, then again. Slowly the fawn eased out of the mud, and finally it was free. Carefully I carried the fawn up the bank to its mother.

Then, quietly, I returned to the raft. From there I watched the doe nuzzle and clean her baby, and I knew what I had to do. I pulled the stub of a crayon from my pocket, and drew the fawn, in all its wildness, onto the old gray boards of the raft. When I had finished, I knew it was just right.

[…]

***The Lighthouse Family: The Storm* by Cynthia Rylant, illustrated by Preston McDaniels (2002)**

In a lonely lighthouse, far from city and town, far form the comfort of friends, lived a kindhearted cat named Pandora.

She had been living in this lighthouse all alone for four long years, and it was beginning to wear. She found herself sighing long, deep, lonely sighs. She sat on the rocks overlooking the waves far too long. Sometimes her nose got a sunburn.

And at night, when she tried to read by the lantern light, her mind wandered and she would think for hours on her childhood when she had friends and company.

Why did Pandora accept this lonely lighthouse life?

Because a lighthouse had once saved her.

When Pandora was but a kitten, she and her father had gone sailing aboard a grand schooner, bound for a new country. Pandora's mother had stayed behind, with the baby, to join them later.

And while they were at sea, Pandora and her father were shaken from their beds one night by an awful twisting of the ship's great bow.

"Stay here, Pandora!" her father had commanded. "Stay here and wait until I come for you!"

They were in a terrible storm. The wind was howling, and the waves crashed hard upon them. Worse, a deep fog had spread itself all over the water, and it is fog that will bring a ship to its end. Fog that will blind a sailor's eyes until his ship has hit the jagged shore and torn itself to pieces.

Pandora's father knew this as he worked with the others to keep the ship's sails aloft and his daughter trembled in her bed. He knew what somber danger they were in.

But Pandora's father was a brave cat and he would not give up hope. He would hold tight to the riggings with the others until help, in whatever form might come to them.

In time, the winds began to settle and the waves grew smaller. But the dense fog refused to lift.

The ship's captain was clearly worried. For he knew these waters they sailed in. He knew the long history of ships gone down.

And he carried little hope that help might come to them, that someone might lead them away from the deadly shore. For only a lighthouse might show them the way, and there had been no working light on these waters for a hundred years.

So it was with much bewilderment, and amazement, and overwhelming *joy* that he heard, first, the deep, clear sound of a foghorn, then saw before him a *light*. Yes, a light! And it was not the light of another ship or small boat. Only a very powerful lamp could make itself seen through a fog like this. Only the lamp of a lighthouse.

"Pull leeward!" cried the captain. "Away from the light!"

And everyone pulled hard on the riggings to make the ship turn, turn away from the dangerous shore. [...]

***The One-Eyed Giant (Book One of Tales from the Odyssey)* by Mary Pope Osborne (2002)**

From Chapter Five: "The One-Eyed Giant"

A hideous giant lumbered into the clearing. He carried nearly half a forest's worth of wood on his back. His monstrous head jutted from his body like a shaggy mountain peak. A single eye bulged in the center of his forehead.

The monster was Polyphemus. He was the most savage of all the Cyclopes, a race of fierce one-eyed giants who lived without laws or leader. The Cyclopes were ruthless creatures who were known to capture and devour any sailors who happened near their shores.

Polyphemus threw down his pile of wood. As it crashed to the ground, Odysseus and his men fled to the darkest corners of the cave.

Unaware that the Greeks were hiding inside, Polyphemus drove his animals into the cave. Then he rolled a huge boulder over its mouth to block out the light of day and imprison his flock inside.

Twenty-four wagons could not haul that rock away, Odysseus thought desperately. *How will we escape this monster?*

Odysseus' men trembled with terror as the giant made a small fire and milked his goats in the shadowy light. His milking done, he threw more wood on his fire. The flame blazed brightly, lighting up the corners of the cave where Odysseus and his men were hiding.

"What's this? Who are you? From where do you come?" the giant boomed. He glared at the Greeks with his single eye. "Are you pirates who steal the treasure of others?"

Odysseus' men were frozen with terror. But Odysseus hid his own fear and stepped toward the monster.

"We are not pirates," he said, "We are Greeks blown off course by storm winds. Will you offer us the gift of hospitality like a good host? If you do, mighty Zeus, king of the gods, will be pleased. Zeus is the guardian of all strangers."

"Fool!" the giant growled. "Who are you to tell me to please Zeus? I am a son of Poseidon, god of the seas! I am not afraid of Zeus!"

Odysseus men cowered in fear.

Polyphemus moved closer to Odysseus. He spoke in a soft, terrible voice. "But tell me, stranger, where is your ship? Near or far from shore?"

Odysseus knew Polyphemus was trying to trap him. "Our ship was destroyed in the storm," he lied. "It was dashed against the rocks. With these good men I escaped, I ask you again, will you welcome us?"

[…]

Grades 2-3: Poetry

"Autumn" by Emily Dickinson (1893)

The morns are meeker than they were.
The nuts are getting brown;
The berry's cheek is plumper,
The rose is out of town.

The maple wears a gayer scarf,
The field a scarlet gown.
Lest I should be old-fashioned,
I'll put a trinket on.

"Who Has Seen the Wind" by Christina G. Rossetti (1893)

Who has seen the wind?
  Neither I nor you;
But when the leaves hang trembling
  The wind is passing through.

Who has seen the wind?
  Neither you nor I;
But when the trees bow down their heads
  The wind is passing by.

"Afternoon on a Hill" by Edna St. Vincent Millay (1917)

I will be the gladdest thing
  Under the sun!
I will touch a hundred flowers
  And not pick one.

I will look at cliffs and clouds
  With quiet eyes,
Watch the wind bow down the grass,
  And the grass rise.

And when lights begin to show
  Up from the town,
I will mark which must be mine,
  And then start down!

"Something Told the Wild Geese" by Rachel Field (1934)

Something told the wild geese
  It was time to go.
Though the fields lay golden
  Something whispered, "Snow."

[…]

"Grandpa's Stories" by Langston Hughes (1958)

The pictures on the television
Do not make me dream as well
As the stories without pictures
Grandpa knows how to tell.

[…]

"A Bat Is Born" by Randall Jarrell (1964)

A bat is born
Naked and blind and pale.
His mother makes a pocket of her tail
And catches him. He clings to her long fur
By his thumbs and toes and teeth.
And them the mother dances through the night
Doubling and looping, soaring, somersaulting—
Her baby hangs on underneath.

[…]

"Knoxville, Tennessee" by Nikki Giovanni (1968)

I always like summer
best
you can eat fresh corn
from daddy's garden

[…]

"Weather" by Eve Merriam (1969)

Dot a dot dot dot a dot dot
Spotting the windowpane.
Spack a spack speck flick a flack fleck
Freckling the window pane

[…]

"Eating While Reading" by Gary Soto (1995)

What is better
Than this book
And the churn of candy
In your mouth,

[…]

Grades 2–3 Informational Texts

***A Medieval Feast* by Aliki (1983)**

I was announced from the palace that the King would soon make a long journey.

On the way to his destination, the King and his party would spend a few nights at Camdenton Manor. The lord of the manor knew what this meant. The king traveled with his Queen, his knights, squires, and other members of his court. There could be a hundred mouths to feed!

Preparations for the visit began at once. The lord and lady of the manor had their serfs to help them. The serfs lived in huts provided for them on the lord's estate, each with its own plot of land. In return, they were bound to serve the lord. They farmed his land, managed his manor house, and if there was a war, they had to go to battle with the lord and the King.

But now they prepared.

The manor had its own church, which was attended by everyone on the estate.

The manor house had to be cleaned, the rooms readied, tents set up for the horsemen, fields fenced for the horses. And above all, provisions had to be gathered for the great feast.

The Royal Suite was redecorated.

Silk was spun, new fabric was woven.
The Royal Crest was embroidered on linen and painted on the King's chair.

The lord and his party went hunting and hawking for fresh meat.

Hunting was a sport for the rich only. The wild animals that lived on the lord's estate belonged to him. Anyone caught poaching—hunting illegally—was severely punished.

Falcons and hawks were prized s pets. They were trained to attack birds for their masters to capture.

They trapped rabbits and birds of all kinds, and fished for salmon and eels and trout.

Serfs hid in bushes and caught birds in traps. They set ferrets in burrows to chase out rabbits.

There were fruits and vegetables growing in the garden, herbs and flowers for sauces and salads, and bees made honey for sweetening.

[…]

***Maps* & *Globes* by Jack Knowlton, pictures by Harriet Barton (1985)**

Thousands of years ago, our ancestors invented the map.

Ancient maps were crude but very useful tools. They helped people find food, clean water, and the way back home—even when home was a cave.

As civilizations grew, better maps were needed.

The oldest existing maps are from the ancient kingdom of Babylonia. These maps were etched on tablets of damp clay that soon baked rock hard in the midday sun.

Early Chinese mapmakers painted beautiful maps of their empire on pure silk cloth. People in every part of the world cleverly used local materials to make maps they wanted and needed.

***Charts* are maps used to sail the wide oceans.**

The Polynesian Islanders sailed the vast Pacific Ocean using *stick chart* maps. These charts were woven with reeds and palm leaves that showed the ocean's currents and wave directions. Seashells were attached to each chart to indicate the larger islands.

[…]

***Sunshine Makes the Seasons* by Franklyn M. Branley (1985)**

Sunshine warms the earth.

If the sun stopped shining, the earth would get colder and colder. We would freeze. The whole earth would freeze.

The sun shines all through the year. But we are warmer in summer than in winter. The amount of sunshine makes the difference.

The earth spins around, or rotates, once in twenty-four hours. That's why we have a day and night. When we are on the sun side of the earth, there is daylight. As the earth rotates, we turn away from the sun. There is sunset and then night.

At the same time that the earth spins, it goes around the sun. The earth takes a year to make one trip around the sun.

During a year the length of our day changes. In winter the days are short. It may be dark by the time you get home from school. It is cold because we don't get many hours of sunshine.

As we move into spring, days become longer, By summer they are even longer.

The days may be so long that it is still light when you go to bed. It is warm because we get many hours of sunshine. After the long days of summer, the days begin to get shorter and cooler. It is fall and time to go back to school.

All through the year the earth had been rotating once in twenty-four hours, giving us day and night. And all through the year the lengths of darkness and daylight have been changing. The seasons have been changing too.

[…]

***From Seed to Plant* by Gail Gibbons (1991)**

[…]

"A 'From Seed to Plant' Project"

How to raise bean plants

1. Find a clean glass jar. Take a piece of black construction paper and roll it up.
2. Slide the paper into the jar. Fill the jar with water.
3. Wedge the bean seeds between the black paper and the glass. Put the jar in a warm place.
4. In a few days the seeds will begin to sprout. Watch the roots grow down. The shoots will grow up.
5. 5. Put dirt into a big clay pot.
6. Carefully remove the small plants from the glass jar. Place them in the soil, covering them up to the base of their shoots.
7. Water them…and watched them grow.

[…]

***Throw Your Teeth on the Roof: Tooth Traditions Around the World* by Selby B. Beeler, illustrated by G. Brian Karas (1998)**

Has this ever happened to you?
You find a loose tooth in your mouth.
Yikes! You can wiggle it with your finger.
You can push it back and forth with your tongue.
Then one day it falls out.
There you are with your old baby tooth in your hand and a big hole in your mouth.
It happens to everyone, everywhere, all over the world.
"Look! Look! My tooth fell out! My tooth fell out!"
But what happens next?
What in the world do you do with your tooth?

North America

United States
I put my tooth under my pillow. While I'm sound asleep, the Tooth Fairy will come into my room, take my tooth, and leave some money in its place.

Mexico
When I go to sleep, I leave my tooth in a box on the bedside table. I hope El Ratón, the magic mouse, will take my tooth and bring me some money. He leaves more money for a front tooth.

Yupik
My mother wraps my tooth in a food, like meat or bread. Then I feed it to a female dog and say, "Replace this tooth with a better one."

Yellowknife Déné
My mother or grandmother takes my tooth and puts it in a tree and then my family dances around it. This makes certain that my new tooth will grow in as straight as a tree.

Navajo
My mother saves my tooth until my mouth stops hurting. Then we take my tooth to the southeast, away from our house. We bury the tooth on the east side of a healthy young sagebrush, rabbit bush, or pinyon tree because we believe that east is the direction associated with childhood.

[…]

***So You Want to Be President?* By Judith St. George, illustrated by David Small (2000)**

[…]

Every single President has taken this oath: "I do solemnly swear (or affirm) that I will faithfully execute the office of President of the United States, and will to the best of my ability, preserve, protect, and defend the Constitution of the United States."

Only thirty-five words! But it's a big order if you're President of this country. Abraham Lincoln was tops at filling that order. "I know very well that many others might in this matter or as in others, do better than I can," he said. "But…I am here. I must do the best I can, and bear the responsibility of taking the course which I feel I ought to take."

That's the bottom line. Tall, short, fat, thin, talkative, quiet, vain, humble, lawyer, teacher, or soldier—this is what most of our Presidents have tried to do, each in his own way. Some succeeded. Some failed. If you want to be President—a good President—pattern your self after the best. Our best have asked more of themselves than they thought they could give. They have had the courage, spirit, and will to do what they knew was right. Most of all, their first priority has always been the people and the country they served.

***Boy, Were We Wrong About Dinosaurs* by Kathleen V. Kudlinski, illustrated by S.D. Schindler (2005)**

Long, long ago, before people knew anything about dinosaurs, giant bones were found in China. Wise men who saw the bones tried to guess what sort of enormous animal they could have come from.

After they studied the fossil bones, the ancient Chinese decided that they came from dragons. They thought these dragons must have been magic dragons to be so large. And they believed that dragons could still be alive.

Boy, were they wrong!

No one knows exactly what dinosaurs looked like. All that is left of them are fossil bones and a few other clues. Now that we think that many of our own past guesses about dinosaurs were just as wrong as those of ancient China.

Some of our mistakes were little ones. When the first fossil bones of *Iguanodon* were found, one was shaped like a rhino's horn. Scientists guessed that the strange horn fit like a spike on *Iguanodon*'s nose

Boy, were we wrong about *Iguanodon*!

When a full set of fossil bones was found later, there were two pointed bones, they were part of *Iguanodon*'s hands, not its nose!

Other new clues show us that we may have been wrong about every kind of dinosaur.

Some of our first drawings of dinosaurs showed them with their elbows and knees pointing out to the side, like a lizard's. With legs like that, big dinosaurs could only waddle clumsily on all fours or float underwater.

Now we know that their legs were straight under them, like a horse's. Dinosaurs were not clumsy. The sizes and shapes of their leg bones see to show that some were as fast and graceful as deer.

[…]

***Bat Loves the Night* by Nicola Davies, illustrated by Sarah Fox-Davies (2008)**

Bats are the only mammals that can really fly, and flight has made them very successful. There are more than nine hundred species, living in almost every habitat from subarctic tundra to tropical forests and deserts. Birds may rule the air by day, but bats are the monarchs of the night.

This book is about one of the pipistrelle bats. Pipistrelles are found around the world, from North America to Africa, Europe, Asia, and Australia.

Bat is waking, upside down as usual, hanging by her toenails.

Her beady eyes open.
Her pixie ears twitch.

She shakes her thistledown fur.

She unfurls her wings, made of skin so fine the finger bones inside show through.

The pipistrelle bat's body is no bigger than your thumb.

A bat's wing is its arm and hand. Four extra-long fingers support the skin of the wing.

Bats' toes are shaped like hooks, so it's no effort for a bat to hang upside down.

Now she unhooks her toes and drops into black space. With a sound like a tiny umbrella opening, she flaps her wings.

Bat is flying.

[…]

***Moonshot: The Flight of Apollo 11* by Brian Floca (2009)**

High above there is the Moon, cold and quiet, no air, no life, but glowing in the sky.

Here below there are three men who close themselves in special clothes, who—*click*—lock hands in heavy gloves, who—*click*—lock heads in large round helmets.

It is summer here in Florida, hot, and near the sea. But now these men are dressed for colder, stranger places. They walk with stiff and awkward steps in suits not made for Earth.

They have studied and practiced and trained, and said good-bye to family and friends. If all goes well, they will be gone for one week, gone where no one has been.

Their two small spaceships are *Columbia* and *Eagle*. They sit atop the rocket that will raise them into space, a monster of a machine: It stands thirty stories, it weighs six million pounds, a tower full of fuel and fire and valves and pipes and engines, too big to believe, but built to fly—the mighty, massive Saturn V.

The astronauts squeeze in to *Columbia*'s sideways seats, lying on their backs, facing toward the sky—Neil Armstrong on the left, Michael Collins in the right, Buzz Aldrin in the middle.

Click and they fasten straps.
Click and the hatch is sealed.

There they wait, while the Saturn hums beneath them.

Near the rocket, in Launch Control, and far away in Houston, in Mission Control, there are numbers, screens, and charts, ways of watching and checking every piece of the rocket and ships, the fuel, the valves, the pipes, the engines, the beats of the astronauts' hearts.

As the countdown closes, each man watching is asked the question: GO/NO GO?
And each man answers back: "GO." "GO." "GO."
Apollo 11 is GO for launch.

[…]

***Where Do Polar Bears Live?* by Sarah L. Thomson, illustrated by Jason Chin (2010)**

This island is covered with snow. No trees grow. Nothing has green leaves. The land is white as far as you can see.

Then something small and round and black pokes up out of the snow.

A black nose sniffs the air. Then a smooth white head appears. A mother polar bear heaves herself out of her den.

A cub scrambles after her.

When the cub was born four months ago, he was no bigger than a guinea pig. Blind and helpless, he snuggled in his mother's fur. He drank her milk and grew, safe from the long Arctic winter.

Outside the den, on some days, it was fifty degrees below zero. From October to February, the sun never rose.

Now it is spring—even though snow still covers the land. The cub is about the size of a cocker spaniel. He's ready to leave the den. For the first time, he sees bright sunlight and feels the wind ruffle his fur.

The cub tumbles and slides down icy hills. His play makes him strong and teaches him to walk and run in snow.

Like his mother, he cub is built to survive in the Arctic. Hi white fur will grow to be six inches thick—longer than your hand. The skin beneath the cub's fur is black. It soaks up the heat of the sun. Under the skin is a layer of fat. Like a snug blanket, this blubber keeps in the heat of the bear's body.

Polar bears get too hot more easily than they get too cold. They stretch out on the ice to cool off.

[…]

Grades 2–3: Read-Aloud Narratives

"How the Camel Got His Hump" in *Just So Stories* by Rudyard Kipling (1902)

Now this is the next tale, and it tells how the Camel got his big hump.

In the beginning of years, when the world was so new and all, and the Animals were just beginning to work for Man, there was a Camel, and he lived in the middle of a Howling Desert because he did not want to work; and besides, he was a Howler himself. So he ate sticks and thorns and tamarisks and milkweed and prickles, most 'scruciating idle; and when anybody spoke to him he said "Humph!" Just "Humph!" and no more.

Presently the Horse came to him on Monday morning, with a saddle on his back and a bit in his mouth, and said, "Camel, O Camel, come out and trot like the rest of us."

"Humph!" said the Camel; and the Horse went away and told the Man.

Presently the Dog came to him, with a stick in his mouth, and said, "Camel, O Camel, come and fetch and carry like the rest of us."

"Humph !" said the Camel; and the Dog went away and told the Man.

Presently the Ox came to him, with the yoke on his neck and said, "Camel, O Camel, come and plough like the rest of us."

"Humph!" said the Camel; and the Ox went away and told the Man.

At the end of the day the Man called the Horse and the Dog and the Ox together, and said, "Three, O Three, I 'm very sorry for you (with the world so new-and-all); but that Humph-thing in the Desert can't work, or he would have been here by now, so I am going to leave him alone, and you must work double-time to make up for it."

That made the Three very angry (with the world so new-and-all), and they held a palaver, and an *indaba,* and a *punchayet,* and a pow-wow on the edge of the Desert; and the Camel came chewing milkweed *most* 'scruciating idle, and laughed at them. Then he said "Humph!" and went away again.

Presently there came along the Djinn in charge of All Deserts, rolling in a cloud of dust (Djinns always travel that way because it is Magic), and he stopped to palaver and pow-wow with the Three.

"Djinn of All Deserts," said the Horse, "*is* it right for any one to be idle, with the world so new-and-all?"

"Certainly not," said the Djinn.

"Well," said the Horse, "there's a thing in the middle of your Howling Desert (and he's a Howler himself) with a long neck and long legs, and he hasn't done a stroke of work since Monday morning. He won't trot."

"Whew!" said the Djinn, whistling, "that's my Camel, for all the gold in Arabia! What does he say about it?"

"He says 'Humph!'" said the Dog; "and he won't fetch and carry."

"Does he say anything else?"

"Only 'Humph!'; and he won't plough," said the Ox.

"Very good," said the Djinn. "I'll humph him if you will kindly wait a minute."

[…]

***The Thirteen Clocks* by James Thurber (1950)**

Once upon a time, in a gloomy castle on a lonely hill, where there were thirteen clocks that wouldn't go, there lived a cold aggressive Duke, and his niece, the Princess Saralinda. She was warm in every wind and weather, but he was always cold. His hands were as cold as his smile and almost as cold as his heart. He wore gloves when he was asleep, and he wore gloves when he was awake, which made it difficult for him to pick up pins or coins or kernels of nuts, or to tear the wings from nightingales. He was six feet four, and forty-six, and even colder than he thought he was. One eye wore a velvet patch; the other glittered through a monocle, which made half of his body seem closer to you than the other half. He had lost one eye when he was twelve, for he was fond of peering into nests and lairs in search of birds and animals to maul. One afternoon, a mother shrike had mauled him first. His nights were spent in evil dreams, and his days were given to wicked schemes.

Wickedly scheming, he would limp and cackle through the cold corridors of the castle, planning new impossible feats for the suitors of Saralinda to perform. He did not wish to give her hand in marriage, since her hand was the only warm hand in the castle. Even the hands of his watch and the hands of all the thirteen clocks were frozen. They had all frozen at the same time, on a snowy night, seven years before, and after that it was always ten to five in the castle. Travelers and mariners would look up at the gloomy castle on the lonely hill and say, "Time lies frozen there. It's always Then. It's never Now."

[…]

***The Cricket in Times Square* by George Selden, illustrated by Garth Williams (1960)**

From Chapter Three: "Chester"

Tucker Mouse had been watching the Bellinis and listening to what they said. Next to scrounging, eaves-dropping on human beings was what he enjoyed most. That was one of the reasons he lived in the Times Square subway station. As soon as the family disappeared, he darted out across the floor and scooted up to the newsstand. At one side the boards had separated and there was a wide space he could jump through. He'd been in a few times before—just exploring. For a moment he stood under the three-legged stool, letting his eyes get used to the darkness. Then he jumped up on it.

"Psst!" he whispered. "Hey, you up there—are you awake?"

There was no answer.

"Psst! Psst! Hey!" Tucker whispered again, louder this time.

From the shelf above came a scuffling, like little feet feeling their way to the edge. "Who is that going 'psst'?" said a voice.

"It's me," said Tucker. "Down here on the stool."

A black head, with two shiny black eyes, peered down at him. "Who are you?"

"A mouse," said Tucker. "Who are *you*?"

"I'm Chester Cricket, said the cricket. He had a high, musical voice. Everything he said seemed spoken in an unheard melody.

"My name's Tucker," said Tucker Mouse. "Can I come up?"

"I guess so," said Chester Cricket. "This isn't my house anyway."

Tucker jumped up beside the cricket and looked him all over. "A cricket," he said admiringly. "So you're a cricket. I never saw one before."

I've seen mice before," the cricket said. "I knew quite a few back in Connecticut."

"Is that where you're from?" asked Tucker.

"Yes," said Chester. "I guess I'll never see it again," he added wistfully.

[…]

***The Search for Delicious* by Natalie Babbitt (1969)**

There was a time once when the earth was still very young, a time some call the oldest days. This was long before there were any people about to dig parts of it up and cut parts of it off. People came along much later, building their towns and castles (which nearly always fell down after a while) and plaguing each other with quarrels and supper parties. The creatures who lived on earth in that early time strayed each in his own place and kept it beautiful. There were dwarfs in the mountains, woldwellers in the forests, mermaids in the lakes, and, of course, winds in the air.

There was one particular spot on the earth where a ring of mountains enclosed a very dry and dusty place. There were winds and dwarfs there, but no mermaids because there weren't any lakes, and there were no woldwellers either because forests couldn't grow in so dry a place.

Then a remarkable thing happened. Up in the mountains one day a dwarf was poking about with a sharp tool, looking for a good spot to begin mining. He poked and poked until he had made a very deep hole in the earth. Then he poked again and clear spring water came spurting up in the hole. He hurried in great excitement to tell the other dwarfs and they all came running to see the water. They were so pleased that they built over it a fine house of heavy stones and they made a special door out of a flat rock and balanced it in its place very carefully on carved hinges. Then one of them made a whistle out of a small stone which blew a certain very high note tuned to just the right warble so that when you blew it, the door of the rock house would open, and when you blew it again, the door would not shut. They took turns being in charge of the whistle and they worked hard to keep the spring clean and beautiful.

[…]

***Bud, Not Buddy* by Christopher Paul Curtis (1999)**

From Chapter 1

Here we go again. We were all standing in line waiting for breakfast when one of the caseworkers came in and tap-tap-taped down the line. Uh-oh, this meant bad news, either they'd found a foster home for somebody or somebody was about to get paddled. All the kids watched the woman as she moved along the line, her high-heeled shoes sounding like little fire-crackers going off on the wooden floor.

Shoot! She stopped at me and said, "Are you Buddy Caldwell?"

I said, "It's Bud, not Buddy, ma'am."

She put her hand on my shoulder and took me out of the line. Then she pulled Jerry, one of the littler boys, over. "Aren't you Jerry Clark?" He nodded.

"Boys, good news! Now that the school year has ended, you both have been accepted in new temporary-care homes starting this afternoon!"

Jerry asked the same thing I was thinking, "Together?"

She said, "Why no, Jerry, you'll by in a family with three little girls…"

Jerry looked like he'd just found out they were going to dip him in a pot of boiling milk.

"…and Bud…" She looked at some papers she was holding. "Oh, yes, the Amoses, you'll be with Mr. and Mrs. Amos and their son, who's twelve years old, that makes him just two years older than, doesn't it, Bud?"

Yes, ma'am."

She said, "I'm sure you'll both be very happy."

Me and Jerry looked at each other.

The woman said, "Now, now, boys, no need to look so glum, I know you don't understand what it means, but there's a depression going on all over this country. People can't find jobs and these are very, very difficult times for everybody. We've been lucky enough to find two wonderful families who've opened their doors for you. I think it's best that we show our new foster families that we're very…"

She dragged out the word very, waiting for us to finish her sentence for her.

Jerry said, "Cheerful, helpful and grateful." I moved my lips and mumbled.

She smiled and said, "Unfortunately, you won't have time for breakfast. I'll have a couple of pieces of fruit put in a bag. In the meantime go to the sleep room and strip your beds and gather all of your things."

Here we go again. I felt like I was walking in my sleep as I followed Jerry back to the room where all the boys' beds were jim-jammed together. This was the third foster home I was going to and I'm used to packing up and leaving, but it still surprises me that there are always a few seconds, right after they tell you you've got to go, when my nose gets

all runny and my throat gets all choky and my eyes get all sting-y. But the tears coming out doesn't happen to me anymore, I don't know when it first happened, but is seems like my eyes don't cry anymore.

[…]

Grades 2–3 Read-Aloud Poetry

"The Jumblies" by Edward Lear (1871)

They went to sea in a sieve, they did;
In a sieve they went to sea:
In spite of all their friends could say,
On a winter's morn, on a stormy day,
In a sieve they went to sea.
And when the sieve turned round and round,
And every one cried, "You'll all be drowned!"
They called aloud, "Our sieve ain't big;
But we don't care a button, we don't care a fig:
In a sieve we'll go to sea!"

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

They sailed away in a sieve, they did,
In a sieve they sailed so fast,
With only a beautiful pea-green veil
Tied with a ribbon, by way of a sail,
To a small tobacco-pipe mast.
And every one said who saw them go,
"Oh! won't they be soon upset, you know?
For the sky is dark, and the voyage is long;
And, happen what may, it's extremely wrong
In a sieve to sail so fast."

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

The water it soon came in, it did;
The water it soon came in:
So, to keep them dry, they wrapped their feet
In a pinky paper all folded neat;
And they fastened it down with a pin.
And they passed the night in a crockery-jar;
And each of them said, "How wise we are!
Though the sky be dark, and the voyage be long,
Yet we never can think we were rash or wrong,
While round in our sieve we spin."

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

And all night long they sailed away;
And when the sun went down,
They whistled and warbled a moony song
To the echoing sound of a coppery gong,
In the shade of the mountains brown."
O Timballoo! How happy we are
When we live in a sieve and a crockery-jar!
And all night long, in the moonlight pale,
We sail away with a pea-green sail
In the shade of the mountains brown

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

They sailed to the Western Sea, they did,—
To a land all covered with trees:
And they bought an owl, and a useful cart,
And a pound of rice, and a cranberry-tart,
And a hive of silvery bees;
And they bought a pig, and some green jackdaws,
And a lovely monkey with lollipop paws,
And forty bottles of ring-bo-ree,
And no end of Stilton cheese.

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

And in twenty years they all came back,—
In twenty years or more;
And every one said, "How tall they've grown!
For they've been to the Lakes, and the Torrible Zone,
And the hills of the Chankly Bore.
"And they drank their health, and gave them a feast
Of dumplings made of beautiful yeast;
And every one said, "If we only live,
We, too, will go to sea in a sieve,
To the hills of the Chankly Bore.

Far and few, far and few,
Are the lands where the Jumblies live:
Their heads are green, and their hands are blue
And they went to sea in a sieve.

"The Pied Piper of Hamelin" by Robert Browning (1888)

Hamelin Town's in Brunswick,
By famous Hanover city;
The river Weser, deep and wide,
Washes its wall on the southern side;
A pleasanter spot you never spied;
But, when begins my ditty,
Almost five hundred years ago,
To see the townsfolk suffer so
From vermin, was a pity.

Rats!
They fought the dogs and killed the cats,
And bit the babies in the cradles,
And ate the cheeses out of the vats.
And licked the soup from the cook's own ladles,
Split open the kegs of salted sprats,
Made nests inside men's Sunday hats,
And even spoiled the women's chats,
By drowning their speaking
With shrieking and squeaking
In fifty different sharps and flats.

At last the people in a body
To the Town Hall came flocking:
"Tis clear," cried they, "our Mayor's a noddy;
And as for our Corporation--shocking
To think we buy gowns lined with ermine
For dolts that can't or won't determine
What's best to rid us of our vermin!
You hope, because you're old and obese,
To find in the furry civic robe ease?
Rouse up, sirs! Give your brains a racking
To find the remedy we're lacking,
Or, sure as fate, we'll send you packing!"
At this the Mayor and Corporation
Quaked with a mighty consternation.

[…]

"Your World" by Georgia Douglas Johnson (1918)

Your world is as big as you make it.
I know, for I used to abide
In the narrowest nest in a corner,
My wings pressing close to my side.

But I sighted the distant horizon
Where the skyline encircled the sea
And I throbbed with a burning desire
To travel this immensity.

I battered the cordons around me
And cradled my wings on the breeze,
Then soared to the uttermost reaches
With rapture, with power, with ease!

"The Song of the Jellicles" by T. S. Eliot (1939)

Jellicle Cats come out tonight,
Jellicle Cats come one come all:
The Jellicle Moon is shining bright—
Jellicles come to the Jellicle Ball.

Jellicle Cats are black and white,
Jellicle Cats are rather small;
Jellicle Cats are merry and bright,
And pleasant to hear when they caterwaul.
Jellicle Cats have cheerful faces,
Jellicle Cats have bright black eyes;
They like to practise their airs and graces
And wait for the Jellicle Moon to rise.

Jellicle Cats develop slowly,
Jellicle Cats are not too big;
Jellicle Cats are roly-poly,
They know how to dance a gavotte and a jig.
Until the Jellicle Moon appears
They make their toilette and take their repose:
Jellicles wash behind their ears,
Jellicles dry between their toes.

Jellicle Cats are white and black,
Jellicle Cats are of moderate size;
Jellicles jump like a jumping-jack,
Jellicle Cats have moonlit eyes.
They're quiet enough in the morning hours,
They're quiet enough in the afternoon,
Reserving their terpsichorean powers
To dance by the light of the Jellicle Moon.

Jellicle Cats are black and white,
Jellicle Cats (as I said) are small;
If it happens to be a stormy night
They will practise a caper or two in the hall.
If it happens the sun is shining bright
You would say they had nothing to do at all:
They are resting and saving themselves to be right
For the Jellicle Moon and the Jellicle Ball.

"Fireflies" by Paul Fleischman, illustrated by Eric Beddows (1988)

From *Joyful Noise: Poems for Two Voices*

Light
Night
is our parchment

fireflies
flitting

fireflies
glimmering

glowing
Insect calligraphers
practicing penmanship

Six-legged scribblers
of vanishing messages,

Fine artists in flight
adding dabs of light

Signing the June nights
as if they were paintings

flickering
fireflies
fireflies.

Light
is the ink we use
Night

We're
fireflies
flickering

flashing

fireflies
gleaming

Insect calligraphers

copying sentences
Six-legged scribblers

fleeting graffiti
Fine artists in flight

bright brush strokes
Signing the June nights
as if they were paintings
We're
fireflies
flickering
fireflies.

Grades 2–3: Read-Aloud Informational Texts

***Lincoln: A Photobiography* by Russell Freedman (1987)**

From Chapter One: "The Mysterious Mr. Lincoln"

Abraham Lincoln wasn't the sort of man who could lose himself in a crowd. After all, he stood six feet four inches tall. And to top it off, he wore a high silk hat.

His height was mostly in his long bony legs. When he sat in a chair, he seemed no taller than anyone else. I was only when he stood up that he towered over other men.

At first glance, most people thought he was homely. Lincoln thought so too, once referring to his "poor, lean, lank face." As a young man he was sensitive about his gawky looks, but in time, he learned to laugh at himself. When a rival called him "two-faced" during a political debate, Lincoln replied: "I leave it to my audience. If I had another face, do you think I'd wear this one?"

According to those who knew him, Lincoln was a man of many faces. In repose, he often seemed sad and gloomy. But when he began to speak, his expression changed. "The dull, listless features dropped like a mask," said a Chicago newspaperman. "The eyes began to sparkle, the mouth to smile, the whole countenance was wreathed in animation, so that a stranger would have said, 'Why, this man, so angular and solemn a moment ago, is really handsome.'"

Lincoln was the most photographed man of his time, but his friends insisted that no photo ever did him justice. It's no wonder. Back then cameras required long exposures. The person being photographed had to"freeze" as the seconds ticked by. If he blinked an eye, the picture would be blurred. That's why Lincoln looks so stiff and formal in his photos. We never see him laughing or joking.

[…]

***A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997)**

"Soap Bubbles"

There are few objects you can make that have both the dazzling beauty and delicate precision of a soap bubble. Shown here at actual size, this bubble is a nearly perfect sphere. Its shimmering liquid skin is five hundred times thinner than a human hair.

Bubbles made of plain water break almost as quickly as they form. That's because surface tension is so strong the bubbles collapse. Adding soap to water weakens water's surface tension. This allows a film of soapy water to stretch and stretch without breaking.

When you blow a bubble, it looks somewhat like a drop of water emerging from a faucet. And just like the surface of a drop of water, the bubble's surface shrinks to form a sphere. Spheres and circles are mathematical shapes. Because they can form spontaneously, they are also shapes of nature.

[…]

***The Museum Book: A Guide to Strange and Wonderful Collections* by Jan Mark, illustrated by Richard Holland (2007)**

From Chapter One

Suppose you went into a museum and you didn't know what it was. Imagine: it's raining, there's a large building nearby with an open door, and you don't have to pay to go in. It looks like an ancient Greek temple. Temples are places of worship, so you'd better go in quietly.
But inside it doesn't seem much like any temple or mosque or church you have ever been in. That is, it looks like all of them, but the furniture is out of place. Perhaps it's a hotel; it has fifty rooms, but there is only one bed, although it is a very splendid bed. Apparently Queen Elizabeth I slept in it. Or perhaps there are fifty beds, but they are all in one room and you can't sleep in any of them. There are red velvet ropes to keep you out.

Farther down the corridor you notice a steam locomotive. It's a train station! But there is no track except for a few yards that the engine is resting on, and already you have seen something else. Across the hall is a totem pole that goes right up to the roof, standing next to a Viking ship. Beyond it is a room full of glass cases displaying rocks, more kinds of rocks than you ever knew existed, from diamonds to meteorites. From where you are standing, you can see into the next room, where the glass cases are full of stuffed fish; and the next, which is lined with shelves of Roman pottery; and the next, which is crowded with birds; and after that, lions and giraffes and pandas and whales.

It must be a zoo.

[. . .]

Just then you see someone walking toward you who isn't dead—you hope. He is wearing a uniform with a badge on it that reads *Guide*.

"Enjoying yourself?" he says.

You say, "Where did you get all this stuff?"

"All?" he says. "These are just the things we show to the public. Down in the basement there's a hundred thousand times more. Do you know," he murmurs, "we've got *twenty-seven* two-headed sheep?"

"But why?" you ask. "Why do you have *any* two-headed sheep.

"Because people give them to us," he says. "And so that you can look at them. Where else would you see one? Where else would you be able to see the mummy case of King Tutankhamun, the first plane to fly the Atlantic, the first train engine, the last dodo, a *diplodocus*, the astrolabe of Ahmad of Isfahan (an example of the oldest scientific instrument in the world), chicken-skin gloves, the lantern carried by Guy Fawkes when he went to blow up the British Parliament buildings, a murderer's trigger finger—?"

"But where am I?" you say. "What *is* this place?"

And he says, "It's a museum."

[. . .]

***What the World Eats* by Faith D'Aluisio, photographed by Peter Menzel (2008)**

From "Mali: The Natomos of Kouakourou"

The village of Kouakourou—north of Mali's capital, Bamako, on the Niger River—looks as though it might have risen one day from the depths of the desert. The houses and courtyard walls blend in with the earth around them: desert-colored, sun-dried mud bricks, stuck together with mud mortar and plastered with…mud. There is no electricity. Inside the houses, the windowless rooms are cool and bare, containing only a sleeping mat or two, and sometimes a cushion or stool. A high-walled courtyard—for cooking, mealtimes, and general daily life—surrounds each house, and beyond that is a common area where the women and girls pound grain in a mortar, singing to pass the time.

[…]

***Wild Tracks! A Guide to Nature's Footprints* by Jim Arnosky (2008)**

"Feline Tracks"

Of all the larger predators, wildcats are the most likely to use the same trails again and again. In deep snow, their habitual routes become gully trails in which the feline tracks going to and coming from their hunting grounds are preserved, down out of the wind, away from blowing snow.

A cat's sharp retractable claws do not show in its track unless the cat has lunged to catch its prey or scratched the ground to cover its droppings. Only cats thoroughly cover their droppings.

Bobcat, lion, and jaguar paws all have three-lobed heels. The lynx, the ocelot, and the jaguarondi have single lobed-heels.

The wildcats we have in North America are, from the smallest to the largest: ocelot, jaguarondi, bobcat, lynx, American lion, and jaguar.

Grades 4–5

Grades 4–5: Narratives

***Alice in Wonderland* by Lewis Carroll (1865)**

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so VERY remarkable in that; nor did Alice think it so VERY much out of the way to hear the Rabbit say to itself, 'Oh dear! Oh dear! I shall be late!' (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually TOOK A WATCH OUT OF ITS WAISTCOAT-POCKET, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

In another moment down went Alice after it, never once considering how in the world she was to get out again.

[…]

***The Secret Garden* by Frances Hodgson Burnett (1911)**

When Mary Lennox was sent to Misselthwaite Manor to live with her uncle everybody said she was the most disagreeable-looking child ever seen. It was true, too. She had a little thin face and a little thin body, thin light hair and a sour expression. Her hair was yellow, and her face was yellow because she had been born in India and had always been ill in one way or another. Her father had held a position under the English Government and had always been busy and ill himself, and her mother had been a great beauty who cared only to go to parties and amuse herself with gay people. She had not wanted a little girl at all, and when Mary was born she handed her over to the care of an Ayah, who was made to understand that if she wished to please the Mem Sahib she must keep the child out of sight as much as possible. So when she was a sickly, fretful, ugly little baby she was kept out of the way, and when she became a sickly, fretful, toddling thing she was kept out of the way also. She never remembered seeing familiarly anything but the dark faces of her Ayah and the other native servants, and as they always obeyed her and gave her her own way in everything, because the Mem Sahib would be angry if she was disturbed by her crying, by the time she was six years old she was as tyrannical and selfish a little pig as ever lived. The young English governess who came to teach her to read and write disliked her so much that she gave up her place in three months, and when other governesses came to try to fill it they always went away in a shorter time than the first one. So if Mary had not chosen to really want to know how to read books she would never have learned her letters at all.

One frightfully hot morning, when she was about nine years old, she awakened feeling very cross, and she became crosser still when she saw that the servant who stood by her bedside was not her Ayah.

"Why did you come?" she said to the strange woman. "I will not let you stay. Send my Ayah to me."

The woman looked frightened, but she only stammered that the Ayah could not come and when Mary threw herself into a passion and beat and kicked her, she looked only more frightened and repeated that it was not possible for the Ayah to come to Missie Sahib.

There was something mysterious in the air that morning. Nothing was done in its regular order and several of the native servants seemed missing, while those whom Mary saw slunk or hurried about with ashy and scared faces. But no one would tell her anything and her Ayah did not come. She was actually left alone as the morning went on, and at last she wandered out into the garden and began to play by herself under a tree near the veranda. She pretended that she was making a flower-bed, and she stuck big scarlet hibiscus blossoms into little heaps of earth, all the time growing more and more angry and muttering to herself the things she would say and the names she would call Saidie when she returned.

[…]

***The Black Stallion* by Walter Farley (1941)**

The tramp steamer *Drake* plowed away from the coast of India and pushed its blunt prow into the Arabian Sea, homeward bound. Slowly it made its way west toward the Gulf of Aden. Its hold was loaded with coffee, rice, tea, oil seeds and jute. Black smoke poured from its one stack, darkening the hot cloudless sky.

Alexander Ramsay, Jr., known to his friends back home in New York City as Alec, leaned over the rail and watched the water slide away from the sides of the boat. His red hair blazed redder than ever in the hot sun, his tanned elbows rested heavily on the rail as he turned his freckled face back toward the fast-disappearing shore.

[…]

***The Little Prince* by Antoine de Saint-Exupery (1943)**

[…]

It was then that the fox appeared.

"Good morning," said the fox.

"Good morning," the little prince responded politely, although when he turned around he saw nothing.

"I am right here," the voice said, "under the apple tree."

"Who are you?" asked the little prince, and added, "You are very pretty to look at."

"I am a fox," said the fox.

"Come and play with me," proposed the little prince. "I am so unhappy."

"I cannot play with you," the fox said. "I am not tamed."

"Ah! Please excuse me," said the little prince.

But, after some thought, he added:

"What does that mean — 'tame'?"

"You do not live here," said the fox. "What is it that you are looking for?"

"I am looking for men," said the little prince. "What does that mean — 'tame'?"

"Men," said the fox. "They have guns, and they hunt. It is very disturbing. They also raise chickens. These are their only interests. Are you looking for chickens?"

"No," said the little prince. "I am looking for friends. What does that mean — 'tame'?"

"It is an act too often neglected," said the fox. "It means to establish ties."

""To establish 'ties'?"

"Just that," said the fox. "To me, you are still nothing more than a little boy who is just like a hundred thousand other little boys. And I have no need of you. And you, on your part, have no need of me. To you, I am nothing more than a fox like a hundred thousand other foxes. But if you tame me, then we shall need each other. To me, you will be unique in all the world. To you, I shall be unique in all the world…"

"I am beginning to understand," said the little prince. "There is a flower… I think that she has tamed me…"

"It is possible," said the fox. "On the Earth one sees all sorts of things."

[…]

***Tuck Everlasting* by Natalie Babbitt (1975)**

From Chapter 12

[…]

The sky was a ragged blaze of red and pink and orange, and its double trembled on the surface of the pond like color spilled from a paintbox. The sun was dropping fast now, a soft red sliding egg yolk, and already to the east there was a darkening to purple. Winnie, newly brave with her thoughts of being rescued, climbed boldly into the rowboat. The hard heels of her buttoned boots made a hollow banging sound against its wet boards, loud in the warm and breathless quiet. Across the pond a bullfrog spoke a deep note of warning. Tuck climbed in, too, pushing off, and, settling the oars into their locks, dipped them into the silty bottom in one strong pull. The rowboat slipped from the bank then, silently, and glided out, tall water grasses whispering away from its sides, releasing it.

Here and there the still surface of the water dimpled, and bright rings spread noiselessly and vanished. "Feeding time," said Tuck softly. And Winnie, looking down, saw hosts of tiny insects skittering and skating on the surface. "Best time of all for fishing," he said, "when they come up to feed."

He dragged on the oars. The rowboat slowed and began to drift gently toward the farthest end of the pond. It was so quiet that Winnie almost jumped when the bullfrog spoke again. And then, from the tall pines and birches that ringed the pond, a wood thrush caroled. The silver notes were pure and clear and lovely.

"Know what that is, all around us, Winnie?" said Tuck, his voice low. "Life. Moving, growing, changing, never the same two minutes together. This water, you look out at it every morning, and it *looks* the same, but it ain't. All night long it's been moving, coming in through the stream back there to the west, slipping out through the stream down east here, always quiet, always new, moving on. You can't hardly see the current, can you? And sometimes the wind makes it look like it's going the other way. But it's always there, the water's always moving on, and someday, after a long while, it comes to the ocean."

They drifted in silence for a time. The bullfrog spoke again, and from behind them, far back in some reedy, secret place, another bullfrog answered. In the fading light, the trees along the banks were slowly losing their dimensions, flattening into silhouettes clipped from black paper and pasted to the paling sky. The voice of a different frog, hoarser and not so deep, croaked from the nearest bank.

"Know what happens then?" said Tuck. "To the water? The sun sucks some of it up right out of the ocean and carries it back in clouds, and then it rains, and the rain falls into the stream, and the stream keeps moving on, taking it all back again. It's a wheel, Winnie. Everything's a wheel, turning and turning, never stopping. The frogs is part of it, and the bugs, and the fish, and the wood thrush, too. And people. But never the same ones. Always coming in new, always growing and changing, and always moving on. That's the way it's supposed to be. That's the way it *is*."

The rowboat had drifted at last to the end of the pond, but now its bow bumped into the rotting branches of a fallen tree that thrust thick fingers into the water. And though the current pulled at it, dragging its stern sidewise, the boat was wedged and could not follow. The water slipped past it, out between clumps of reeds and brambles, and gurgled down a narrow bed, over stones and pebbles, foaming a little, moving swiftly now after its slow trip between the pond's wide banks. And, farther down, Winnie could see that it hurried into a curve, around a leaning willow, and disappeared.

[…]

"Zlateh the Goat" by Isaac Bashevis Singer (1984)

[…]

The snow fell for three days, though after the first day it was not as thick and the wind quieted down. Sometimes Aaron felt that there could never have been a summer, that the snow had always fallen, ever since he could remember. He, Aaron, never had a father or mother or sisters. He was a snow child, born of the snow, and so was Zlateh. It was so quiet in the hay that his ears rang in the stillness. Aaron and Zlateh slept all night and a good part of the day. As for Aaron's dreams, they were all about warm weather. He dreamed of green fields, trees covered with blossoms, clear brooks, and singing birds. By the third night the snow had stopped, but Aaron did not dare to find his way home in the darkness. The sky became clear and the moon shone, casting silvery nets on the snow. Aaron dug his way out and looked at the world. It was all white, quiet, dreaming dreams of heavenly splendor. The stars were large and close. The moon swam in the sky as in a sea.

[…]

***M. C. Higgins, the Great* by Virginia Hamilton (1993)**

From Chapter 1

Mayo Cornelius Higgins raised his arms high to the sky and spread them wide. He glanced furtively around. It was all right. There was no one to see him greeting the coming sunrise. But the motion of his arms caused a flutter of lettuce leaves he had bound to his wrists with rubber bands. Like bracelets of green feathers, the leaves commenced to wave.

M.C., as he was called, felt warm, moist air surround him. Humidity trapped in the hills clung to the mountainside as the night passed on. In seconds, his skin grew clammy. But he paid no attention to the oppressive heat with its odors of summer growth and decay. For he was staring out over a grand sweep of hill, whose rolling outlines grew clearer by the minute. As he stood on the gallery of his home, the outcropping on which he lived on the mountainside seemed to fade out from under him.

I'm standing in midair, he thought.

He saw dim light touch clouds clustered behind the eastern hills.

Bounce the sun beside me if I want.

All others of his family were still asleep in the house. To be by himself in the perfect quiet was reason enough for him to wake up way early. Alone for half an hour, he could believe he had been chosen to remain forever suspended, facing the hills. He could pretend there was nothing terrible behind him, above his head. Arms outstretched, picture-framed by pine uprights supporting the gallery roof, he was M.C. Higgins, higher than everything.

M.C. smiled. Going to be my best day, he told himself. He let his arms fall, and sniffed a bracelet of cold, fresh vegetable. He bit gently into a lettuce stem, pulling at it until he had an entire leaf to chew.

Will it really be mine—this mountain? Daddy says it will one day.

He loved the mountain, its long, lingering dawns. But he frowned, squinting off at the hills with night still huddled in their folds.

Now it won't ever be mine.

He shivered as with a sudden chill, and stepped off the gallery.

Pay no mind to what Daddy says.

"We have to leave it," he said softly, "and that's a shame."

[…]

***The Birchbark House* by Louise Erdrich (1999)**

From Chapter 1: "The Birchbark House"

She was named Omakayas, or Little Frog, because her first step was a hop. She grew into a nimble young girl of seven winters, a thoughtful girl with shining brown eyes and a wide grin, only missing her two top front teeth. She touched her upper lip. She wasn't used to those teeth gone, and was impatient for new, grown-up teeth to complete her smile. Just like her namesake, Omakayas now stared long at a silky patch of bog before she gathered herself and jumped. One hummock. Safety. Omaykayas sprang wide again. This time she landed on the very tip-top of a pointed old stump. She balanced there, looking all around. The lagoon water moved in sparkling crescents. Thick swales of swamp grass rippled. Mud turtles napped in the sun. The world was so calm that Omakayas could hear herself blink. Only the sweet call of a solitary white-throated sparrow pierced the cool of the woods beyond.

All of a sudden Grandma yelled.

"I found it!"

Startled, Omakayas slipped and spun her arms in wheels. She teetered, but somehow kept her balance. Two big, skipping hops, another leap, and she was on dry land. She stepped over spongy leaves and moss, into the woods where the sparrows sang nesting songs in delicate relays.

"Where are you?" Nokomis yelled again. "I found the tree!"

"I'm coming," Omakayas called back to her grandmother.

It was spring, time to cut Birchbark.

[…]

***Bud, Not Buddy* by Christopher Paul Curtis (1999)**
[Also a read-aloud narrative at Grades 2–3]

From Chapter 1

Here we go again. We were all standing in line waiting for breakfast when one of the caseworkers came in and tap-tap-taped down the line. Uh-oh, this meant bad news, either they'd found a foster home for somebody or somebody was about to get paddled. All the kids watched the woman as she moved along the line, her high-heeled shoes sounding like little fire-crackers going off on the wooden floor.

Shoot! She stopped at me and said, "Are you Buddy Caldwell?"

I said, "It's Bud, not Buddy, ma'am."

She put her hand on my shoulder and took me out of the line. Then she pulled Jerry, one of the littler boys, over. "Aren't you Jerry Clark?" He nodded.

"Boys, good news! Now that the school year has ended, you both have been accepted in new temporary-care homes starting this afternoon!"

Jerry asked the same thing I was thinking, "Together?"

She said, "Why no, Jerry, you'll by in a family with three little girls…"

Jerry looked like he'd just found out they were going to dip him in a pot of boiling milk.

"…and Bud…" She looked at some papers she was holding. "Oh, yes, the Amoses, you'll be with Mr. and Mrs. Amos and their son, who's twelve years old, that makes him just two years older than, doesn't it, Bud?"

Yes, ma'am."

She said, "I'm sure you'll both be very happy."

Me and Jerry looked at each other.

The woman said, "Now, now, boys, no need to look so glum, I know you don't understand what it means, but there's a depression going on all over this country. People can't find jobs and these are very, very difficult times for everybody. We've been lucky enough to find two wonderful families who've opened their doors for you. I think it's best that we show our new foster families that we're very…"

She dragged out the word very, waiting for us to finish her sentence for her.

Jerry said, "Cheerful, helpful and grateful." I moved my lips and mumbled.

She smiled and said, "Unfortunately, you won't have time for breakfast. I'll have a couple of pieces of fruit put in a bag. In the meantime go to the sleep room and strip your beds and gather all of your things."

Here we go again. I felt like I was walking in my sleep as I followed Jerry back to the room where all the boys' beds were jim-jammed together. This was the third foster home I was going to and I'm used to packing up and leaving, but it still surprises me that there are always a few seconds, right after they tell you you've got to go, when my nose gets

all runny and my throat gets all choky and my eyes get all sting-y. But the tears coming out doesn't happen to me anymore, I don't know when it first happened, but is seems like my eyes don't cry anymore.

[…]

***Where the Mountain Meets the Moon* by Grace Lin (2009)**

From Chapter 1

Far away from here, following the Jade River, there was once a black mountain that cut into the sky like a jagged piece of rough metal. The villagers called it Fruitless Mountain because nothing grew on it and birds and animals did not rest there.

Crowded in the corner of where Fruitless Mountain and the Jade River met was a village that was a shade of faded brown. This was because the land around the village was hard and poor. To coax rice out of the stubborn land, the field had to be flooded with water. The villagers had to tramp in the mud, bending and stooping and planting day after day. Working in the mud so much made it spread everywhere and the hot sun dried it onto their clothes and hair and homes. Over time, everything in the village had become the dull color of dried mud.

One of the houses in this village was so small that its wood boards, held together by the roof, made one think of a bunch of matches tied with a piece of twine. Inside, there was barely enough room for three people to sit around the table—which was lucky because only three people lived there. One of them was a young girl called Minli.

Minli was not brown an dull like the rest of the village. She had glossy black hair with pink cheeks, shining eyes always eager for adventure, and a fast smile that flashed from her face. When people saw her lively and impulsive spirit, they thought her name, which meant *quick thinking*, suited her well. "Too well," her mother sighed, as Minli had a habit of quick acting as well.

[…]

Grades 4–5: Poetry

"The Echoing Green" from *Songs of Innocence* by William Blake (1789)

The sun does arise,
And make happy the skies;
The merry bells ring
To welcome the Spring;
The skylark and thrush,
The birds of the bush,
Sing louder around
To the bells' cheerful sound;
While our sports shall be seen
On the echoing green.

Old John, with white hair,
Does laugh away care,
Sitting under the oak,
Among the old folk.
They laugh at our play,
And soon they all say,
'Such, such were the joys
When we all--girls and boys--
In our youth-time were seen
On the echoing green.'

Till the little ones, weary,
No more can be merry:
The sun does descend,
And our sports have an end.
Round the laps of their mothers
Many sisters and brothers,
Like birds in their nest,
Are ready for rest,
And sport no more seen
On the darkening green.

"The New Colossus" by Emma Lazarus (1883)

Not like the brazen giant of Greek fame
With conquering limbs astride from land to land;
Here at our sea-washed, sunset gates shall stand
A mighty woman with a torch, whose flame
Is the imprisoned lightning, and her name
Mother of Exiles. From her beacon-hand
Glows world-wide welcome; her mild eyes command
The air-bridged harbor that twin cities frame.
"Keep, ancient lands, your storied pomp!" cries she
With silent lips. "Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tossed to me,
I lift my lamp beside the golden door!"

Media Text:

Photos, multimedia, and a virtual tour of the Statue of Liberty, hosted on the National Parks Service's Web site: http://www.nps.gov/stli/photosmultimedia/index.htm

"Casey at the Bat" by Ernest Lawrence Thayer (1888)

The outlook wasn't brilliant for the Mudville nine that day;
The score stood four to two with but one inning more to play.
And then when Cooney died at first, and Barrows did the same,
A sickly silence fell upon the patrons of the game.

A straggling few got up to go in deep despair. The rest
Clung to that hope which springs eternal in the human breast;
They thought if only Casey could but get a whack at that–
We'd put up even money now with Casey at the bat.

But Flynn preceded Casey, as did also Jimmy Blake,
And the former was a lulu and the latter was a cake;
So upon that stricken multitude grim melancholy sat,
For there seemed but little chance of Casey's getting to the bat.

But Flynn let drive a single, to the wonderment of all,
And Blake, the much despis-ed, tore the cover off the ball;
And when the dust had lifted, and the men saw what had occurred,
There was Johnnie safe at second and Flynn a-hugging third.

Then from 5,000 throats and more there rose a lusty yell;
It rumbled through the valley, it rattled in the dell;
It knocked upon the mountain and recoiled upon the flat,
For Casey, mighty Casey, was advancing to the bat.

There was ease in Casey's manner as he stepped into his place;
There was pride in Casey's bearing and a smile on Casey's face.
And when, responding to the cheers, he lightly doffed his hat,
No stranger in the crowd could doubt 'twas Casey at the bat.

Ten thousand eyes were on him as he rubbed his hands with dirt;
Five thousand tongues applauded when he wiped them on his shirt.
Then while the writhing pitcher ground the ball into his hip,
Defiance flashed in Casey's eye, a sneer curled Casey's lip.

And now the leather-covered sphere came hurtling through the air,
And Casey stood a-watching it in haughty grandeur there.
Close by the sturdy batsman the ball unheeded sped–
"That ain't my style," said Casey. "Strike one," the umpire said.

From the benches, black with people, there went up a muffled roar,
Like the beating of the storm-waves on a stern and distant shore.
"Kill him! Kill the umpire!" shouted some one on the stand;
And it's likely they'd have killed him had not Casey raised his hand.

With a smile of Christian charity great Casey's visage shone;
He stilled the rising tumult; he bade the game go on;
He signaled to the pitcher, and once more the sphereoid flew;
But Casey still ignored it, and the umpire said, "Strike two."

"Fraud!" cried the maddened thousands, and echo answered fraud;
But one scornful look from Casey and the audience was awed.
They saw his face grow stern and cold, they saw his muscles strain,
And they knew that Casey wouldn't let that ball go by again.

The sneer is gone from Casey's lip, his teeth are clenched in hate;
He pounds with cruel violence his bat upon the plate.
And now the pitcher holds the ball, and now he lets it go,
And now the air is shattered by the force of Casey's blow.

Oh, somewhere in this favored land the sun is shining bright;
The band is playing somewhere, and somewhere hearts are light,
And somewhere men are laughing, and somewhere children shout;
But there is no joy in Mudville–mighty Casey has struck out.

"A Bird Came Down the Walk" by Emily Dickinson (1893)

A Bird came down the walk—
He did not know I saw;
He bit an angleworm in halves
And ate the fellow, raw.

And then he drank a dew
From a convenient grass,
And then hopped sidewise to the wall
To let a beetle pass.

He glanced with rapid eyes
That hurried all abroad—
They looked like frightened beads, I thought—
He stirred his velvet head —

Like one in danger; cautious,
I offered him a crumb,
And he unrolled his feathers
And rowed him softer home

Than oars divide the ocean,
Too silver for a seam,
Or butterflies, off banks of noon,
Leap, plashless, as they swim.

"Fog" by Carl Sandburg (1916)

The fog comes
on little cat feet.

It sits looking
over harbor and city
on silent haunches
and then moves on.

"Dust of Snow" by Robert Frost (1923)

The way a crow
Shook down on me
The dust of snow
From a hemlock tree

Has given my heart
A change of mood
And saved some part
Of a day I had rued.

"Little Red Riding Hood and the Wolf" by Roald Dahl (1982)

As soon as Wolf began to feel
That he would like a decent meal,
He went and knocked on Grandma's door.

[…]

Media Text:

Audio samples of composer Paul Patterson's orchestral setting of Dahl's text:
http://www.paulpatterson.co.uk/red.htm

"They Were My People" by Grace Nichols (1988)

They were those who cut cane
to the rhythm of the sunbeat

[…]

"Words Free As Confetti" by Pat Mora (1996)

Come, words, come in your every color.
I'll toss you in storm or breeze.
I'll say, say, say you,
Taste you sweet as plump plums,
bitter as old lemons,

[…]

Grades 4–5: Informational Texts

***Discover Mars* by Melvin Berger (1992)**

[…]

Mars is very cold and very dry. Scattered across the surface are many giant volcanoes. Lava covers much of the land.

In Mars' northern half, or hemisphere, is a huge raised area. It is about 2,500 miles wide. Astronomers call this the Great Tharsis Bulge.

There are four mammoth volcanoes on the Great Tharsis Bulge. The largest one is Mount Olympus, or Olympus Mons. It is the biggest mountain on Mars. Some think it may be the largest mountain in the entire solar system.

Mount Olympus is 15 miles high. At its peak is a 50 mile wide basin. Its base is 375 miles across. That's nearly as big as the state of Texas!

Mauna Loa, in Hawaii, is the largest volcano on earth. Yet, compared to Mount Olympus, Mauna Loa looks like a little hill. The Hawaiian volcano is only 5½ miles high. Its base, on the bottom of the Pacific Ocean, is just 124 miles wide.

Each of the three other volcanoes in the Great Tharsis Bulge are over 10 miles high. They are named Arsia Mons, Pavonis Mons, and Ascraeus Mons.

[…]

Media Text:

NASA's illustrated fact sheet on Mars:
http://www.nasa.gov/worldbook/mars_worldbook.html

***Let's Investigate Marvelously Meaningful Maps* by Madelyn Wood Carlisle (1992)**

From "A Scale for Your Map"

One of the most important things the legend on a map tells is what scale was used in drawing the map. By scale we mean how much space on the map stands for how much space on the ground or in your house or your room.

If you want your map to be accurate, you will have to choose what scale you will use. We say maps are drawn "to scale," or, if they are just roughly sketched, "not to scale."

If you are drawing a map of your room you will chose a different scale from the one you would use if you were going to make a map of the United States or one showing how you would walk to school.

For the map of your room you might decide that one inch on your map will stand for one foot in your room. If your room measures 10 feet by 11 feet, your map will be 10 inches by 11 inches.

But the United States is 3,000 miles wide. To draw a map of the United States to the scale of one inch equals one mile, you would have to have a piece of paper 3,000 inches long!

If you want your map of the United States to fit on a sheet of paper ten inches wide, one inch on your paper will have to stand for 300 miles.

***Hurricanes: Earth's Mightiest Storms* by Patricia Lauber (1996)**

From "The Making of a Hurricane"

Great whirling storms roar out of the oceans in many parts of the world. They are called by several names—hurricane, typhoon, and cyclone are the three most familiar ones. But no matter what they are called, they are all the same sort of storm. They are born in the same way, in tropical waters. They develop the same way, feeding on warm, moist air. And they do the same kind of damage, both ashore and at sea. Other storms may cover a bigger area or have higher winds, but none can match both the size and the fury of hurricanes. They are earth's mightiest storms.

Like all storms, they take place in the atmosphere, the envelope of air that surrounds the earth and presses on its surface. The pressure at any one place is always changing. There are days when air is sinking and the atmosphere presses harder on the surface. These are the times of high pressure. There are days when a lot of air is rising and the atmosphere does not press down as hard. These are times of low pressure. Low-pressure areas over warm oceans give birth to hurricanes.

No one knows exactly what happens to start these storms. But when conditions are right, warm, moist air is set in motion. It begins to rise rapidly from the surface of the ocean in a low pressure area.

Like water in a hose, air flows from where there is more pressure to where there is less pressure. And so air over the surface of the ocean flows into the low pressure area, picking up moisture as it travels. This warm, moist air soars upward.

As the air rises above the earth, it cools. The cooling causes moisture to condense into tiny droplets of water that form clouds. As the moisture condenses, it gives off heat. Heat is one kind of energy. It is the energy that powers the storm. The clouds are the source of the storm's rain.

The low-pressure area acts like a chimney—warm air is drawn in at the bottom, rises in a column, cools, and spreads out. As the air inside rises and more air is drawn in, the storm grows.

The air being drawn in, however, does not travel in a straight line. The earth's surface is rotating, and the rotation causes the path to curve. The air travels in a spiral within the storm. In the Northern Hemisphere, the spiraling winds travel counterclockwise—the opposite of the way the hands of a clock move. In the Southern Hemisphere, they travel clockwise.

[…]

***The Kid's Guide to Money* by Steve Otfinoski (1996)**

From Chapter 2: "Spending Your Money"

Budgeting Your Spending

Spending your money on the things you want may be a lot of fun. But spending has its own set of responsibilities. You have to make sure you don't buy so many things you want that you don't have money for the things you need. One way to be sure you have enough money to pay for everything you need is to make a budget. A budget is a plan for managing your money on a regular basis. When you follow a **budget**, you have enough money to meet all your expenses.

Five Steps to Making a Budget

- Step 1: Figure out your weekly income, the money you receive from all sources. Count only the money you get regularly, for example, a weekly allowance or money earned from a steady job such as delivering newspapers.
- Step 2: Every week, make a list of the things you need to spend money on, such as bus fare, school supplies, and lunches.
- Step 3: Every week, make a list of the things you want but could get along without if you had to. These could include going to a movie or buying snacks [...]
- Step 4: Now list any things that you need to save for.
- Step 5: Subtract your needs (the total amount from step 2) from your income. You can spend or save whatever's left. This is your weekly budget.

Here is a sample weekly budget:

Total weekly income: $10.00			
NEEDS		WANTS	
lunch	$2.00	snacks	$3.00
bus fare	$1.50	movie	$3.50
Total needs:	$3.50	Total wants:	$6.50
Total weekly income	$10.00	Saving for	
Total weekly needs	$3.50	new bike	$2.00
Money remaining:	$6.50	Giving donation	$1.00
Budget notes: I need to rethink my "want" spending. I really want to go to the movies this week, so if I bring my own snacks to school I can cut that expense and still have enough money to save for the bike and make a donation to charity.			

***Toys: Amazing Stories Behind Some Great Inventions* by Don Wulffson (2000)**

From "Kites"

Invented in China, kites have been around for at least three thousand years. Since their beginning, they've been used primarily as toys. But kites have had other uses too, and that's the best part of their story.

Like fishing with kites. It sounds hard to believe, but that's one use to which they've long been put in China and other Asian countries. The fisherman stands on the shore maneuvering a kite far out over the water. From the tail dangles a hook, line and sinker. When a fish bites, the kite is jerked upward, then it—and the airborne fish—is reeled in.

Flying kites over houses is a Chinese custom that dates as far back at 1000 B.C.—and is still practiced today, especially at night. [...]

In China, dating to 1000 B.C., kites were used by the military as signaling devices, most often to warn of an enemy attack. Different colored kites indicated the number of troops and the direction from which they were coming. At night, for the same purpose, tiny lanterns of different colors were raised on the kites.

Around 500 B.C., the Chinese took this concept to a whole new level. Huge kites were built—kites big and strong enough to support a person! First, the soldier would lie with his legs extended across the kite and grab hold of special handgrips. Then, using a stout cord, several soldiers would tow the kite until it rose high in to the air. Once aloft, the man would have a clear view of the enemy on the ground, and, using flag and hand signals, relay information back to his officers.

[...]

"Good Pet, Bad Pet" by Elizabeth Schleichert from *Ranger Rick* (2002)

Are you thinking about getting a pet? Then read on to see which one might be best for you.

Where to Start

Pets can be great! Who else licks your face, chirps happily, or purrs in your lap? A pet can make you feel good and can calm you down when you're upset. And caring for a pet can help you learn about kindness and responsibility.

There are all sorts of pets. Some take a lot of time and attention and need a lot of space. Others can fit in a corner and don't need much care at all. Some live just a year or two. Others may still be alive when you leave home for good! Some may be happy to stay in a cage-others may mess on your carpets and scratch your couch.

So, before your family rushes out to get a pet, why not sit down and talk? Ask your parents how they feel about it. The pet you want has to be one that they want too. After all, a parent needs to be the one in charge of pet care and willing to take up the slack if necessary.

Here are some things to do before making a decision:

Talk to people who have a pet like the one you want. Ask them what they like and don't like about it. Find out what's fun and what's tough about having this pet. Check out how much time, money, space, and hard work the pet takes.

Read some pet books or go online to learn more.

Talk to a vet who treats the kind of pet you're thinking about getting.

Check to make sure nobody in the family is allergic to pets or to pet bedding.

Study the charts [...]. (These are, of course, just the opinions or recommendations of Ranger Rick.)

If you decide to get a pet, figure out how to divide the chores among family members.

Even if you don't end up with a pet, you can have fun reading about the possibilities!

[...]

"Ancient Mound Builders" by E. Barrie Kavash from *Cobblestone* (2003)

The ancestors of today's southeastern Indian peoples constructed many mounds out of the earth. These were used as tombs, temples, and chiefs' houses. Some of the mounds were very large, requiring the coordinated labor of many tribe members. Remember that this was a time well before the invention of any kind of vehicle, let alone construction vehicles: The mounds were built with literally - basketloads of soil!

Mounds were constructed by the peoples of several distinctive cultures whose existence spanned many centuries. For example, Louisiana's Poverty Point culture of 1000-100 B.C. erected some of the oldest known mounds in the Southeast. Another period of major mound building, from 200 B.C. to A.D. 500, witnessed the construction of conical burial mounds throughout the Southeast. The last important mound-building culture (about 1000-1600), known as Mississippian, lived in large towns along river floodplains and formed huge, flat-topped mounds.

About 2,800 years ago, at a place in northeastern Louisiana called Poverty Point, a group of Indians developed a complex society and trade center on the floodplain of the Mississippi River. These Indians established long distance trading networks. They sought steatite from Georgia and Alabama, galena from Missouri, copper from the Great Lakes, and diverse stones from Alabama, Tennessee, Kentucky, Ohio, Indiana, Arkansas, and Mississippi. These raw materials were made into cups, bowls, smoking pipes, and beads and other ornaments to wear.

The Poverty Point Indians were great craftsmen and engineers. They created a collection of mounds whose outlines formed the shape of a giant bird. It is a striking effigy, parts of which still can be seen today. The bird measures 640 by 700 feet and has outspread wings whose central mound stands 70 feet tall. It is connected to three smaller mounds and six concentric low ridges that were arranged in a crescent shape surrounding a curve of the Mississippi River. Millions of cubic feet of earth more than two-thirds of a mile long - were moved to build the latter. What purpose this construction served still is not clear today.

Later mounds were used as tombs for the dead. After the death of a very important member of the group, such as a warrior, elder, or religious leader, the person was placed in a pit or tomb made of logs. Sometimes, the burial structure was burned and covered over with earth. As additional significant people died, they were put on top of the original mound. Slowly, these mounds turned into hills of earth that sometimes joined other, similar mounds.

[…]

At the height of the Mississippian culture, around the years 1100-1250, hundreds of towns and smaller settlements covered the Southeast. But by 1400, many of the great ceremonial centers, including Moundville, were in a decline. Perhaps the large populations of these Indian cultures depleted the soils and forests, thus reducing their food and building supplies.

But there is quite a legacy from these diverse ancient people who engineered the enormous mounds we can still see today to honor their leaders and loved ones.

Media Text:

An overview of Poverty Point from the Louisiana Division of Archaeology, including illustrations and maps:
http://www.crt.state.la.us/archaeology/expeditions/overview2nancy.htm

***About Time: A First Look at Time and Clocks* by Bruce Koscielniak (2004)**

[…]

Sometime around 1440, the spring-powered clock was invented. Instead of depending on the pull of weights for power, this type of clock used a flat metal spring wound tightly into a coil. The escapement allowed the spring to unwind by turning one gear tooth at a time. With the use of a spring, smaller, truly portable clocks could be made.

The first well-known watches, made in Germany around 1510 by Peter Henlein, were so named because guards or "watchmen" carried small clocks to keep track of how long to stay at a particular duty post.

Many different skills went into making a clock, and new tools and methods were constantly being invented to make ever smaller, more complicated mechanisms that worked with greater precision.

Founders melted and poured metal into a mold to make clock parts.

Spring makers hand-forged (heated and pounded into shape) and polished steel clock springs.

Screw makers cut screws used to fasten clocks together by using a small lathe devised by a German clockmaker in 1480. Earlier, only wedges or pegs were used.

Gear-tooth cutting had been done by hand until the mid-1500s, when Giannelo Torriano of Cremona, Italy, invented a machine that could cut perfect gear teeth. Brass replaced iron for clock making.

Engravers, gilders, and enamellers decorated clock cases and dials.

Glass –making shops made and cut glass.

Woodworkers made clock cases.

[…]

***England the Land* by Erinn Banting (2004)**

"Living Fences"

Low fences, some of which are thousands of years old, divide much of England's countryside. These fences, called hedgerows, were fist build by the Anglo-Saxons, a group of warriors from Germany and Scandinavia who arrived in England around 410 A.D. As they gained control of sections of land, they protected their property with walls made from wooden stakes and spiny plants. Dead hedgerows, as these fences were called, were eventually replaced by fences made from live bushes and trees.

Recently, people building large farms and homes in the countryside have destroyed many live hedgerows. Other people are working to save the hedgerows, which are home to a variety of wildlife, including birds, butterflies, hedgehogs, and hares.

[…]

***A History of US* by Joy Hakim (2005)**

From *Book 1: The First Americans, Prehistory to 1600*, Chapter 7: "The Show-Offs"

In case you forgot, you're still in that time-and-space capsule, but you're not a baby anymore. You're 10 years old and able to work the controls yourself. So get going; we want to head northwest, to the very edge of the land, to the region that will be the states of Washington and Oregon. The time? We were in the 13th century; let's try the 14th century for this visit.

Life is easy for the Indians here in the Northwest near the great ocean. They are affluent (AF-flew-ent –it means "wealthy") Americans. For them the world is bountiful: the rivers hold salmon and sturgeon; the ocean is full of seals, whales, fish, and shellfish; the woods are swarming with game animals. And there are berries and nuts and wild roots to be gathered. They are not farmers. They don't need to farm.
Those Americans go to sea in giant canoes; some are 60 feet long. (How long is your bedroom? Your schoolroom?) Using stone tools and fire, Indians of the Northwest cut down gigantic fir trees and hollow out the logs to make their boats. The trees tower 200 feet and are 10 feet across at the base. There are so many of them, so close together, with a tangle of undergrowth, that it is sometimes hard for hunters to get through the forest. Tall as these trees are, there are not as big as the redwoods that grow in a vast forest to the south (in the land that will become California).

These Native Americans carve animal and human figures on tall fir poles, called "totem poles." The poles are painted and are symbols of a family's power and rank. The Indians' totem poles are colorful, but rough; finer poles will be carved after the Europeans come and bring metal knives.

Because food and wood are so easy to gather, the Northwest Indians have much leisure time. Their lives are full of playacting, dancing, and singing. In times of celebration, relatives and friends come from far villages. They beat drums made of animal skins that have been heated near a fire then stretched taut across a frame of birch. These people of the coastal forests gather in circles and dance and sing of the fish and animals they will hunt. They also sing of their ancestors, and of their fears and hopes, and they pray to the animals for forgiveness and for good luck in the hunt. Sometimes they have wrestling contests. Often they wrestle just for fun. Sometimes the best wrestler gets to marry a special girl.

Many Americans elsewhere in North America live in communities where almost everything is shared – sometimes even leadership. That is not true here. These Indians care about wealth, property, and prestige (press-TEEJ – it means "importance and reputation"). They value private property, and they pass their property on to their children and grandchildren. They own slaves and sometimes go to war with other Indians just to capture slaves. People are not treated as equals in this society. They are divided into ranks, or classes. There are slaves, commoners, and nobles. In times of strife, many of the men become warriors and wear wooden helmets and wood slat armor.

[…]

Media Text:

"American Indians of the Pacific Northwest Collection," a digital archive of images and documents hosted by the University of Washington:
http://content.lib.washington.edu/aipnw/

***My Librarian is a Camel* by Margriet Ruurs (2005)**

From "Peru"

Children in Peru can receive their book in several different, innovative ways.

CEDILI-IBBY Peru is an institution that delivers books in bags to families in Lima. Each bag contains twenty books, which families can keep for a month. The books come in four different reading levels so that children really learn how to read. This project in Spanish is called *El Libro Compartido en Familia* and enables parents to share the joy of books with their children.

In small, rural communities, books are delivered in wooden suitcases and plastic bags. These suitcases and bags contain books that the community can keep and share for the next three months. The number of book in each suitcase depends on the size of the community. There are no library buildings in these small towns, and people gather outside, in the plaza, to see books they can check out. In the coastal regions, books are sometimes delivered by donkey cart. The books are stored in the reading promoter's home.

In the ancient city of Cajamarca, reading promoters from various rural areas select and receive a large collection of books for their area. The program is called *Aspaderuc*. The reading promoter lends these books to his or her neighbors, and after three months, a new selection of books goes out to each area. Books in this system are for children and adults.

And last but not least, *Fe Y Alegria* brings a collection of children's books to rural schools. The books are brought from school to school by wagon. The children, who are excited about browsing through the books when they arrive, are turning into avid readers.

[…]

***Horses* by Seymour Simon (2006)**

[…]

Horses move in four natural ways, called gaits or paces. They walk, trot, canter, and gallop. The walk is the slowest gait and the gallop is the fastest.

When a horse walks, each hoof leaves the ground at a different time. It moves one hind leg first, and then the front leg on the same side; then the other hind leg and the other front leg, When a horse walks, its body swings gently with each stride.

When a horse trots, its legs move in pairs, left front leg with right hind leg, and right front leg. When a horse canters, the hind legs and one front leg move together, and then the hind legs and the other foreleg move together.

The gallop is like a much faster walk, where each hoof hits the ground one after another. When a horse gallops, all four of its hooves may be flying off the ground at the same time.

Horses are usually described by their coat colors and by the white markings on their faces, bodies, legs, and hooves.

Brown horses range in color from dark brown bays and chestnuts to golden browns, such as palominos, and lighter browns such as roans and duns.

Partly colored horses are called pintos or paints. Colorless, pure-white horses—albinos—are rare. Most horses that look white are actually gray.

Skewbalds have brown-and-white patches. Piebalds have black and white patches. Spotteds have dark spots on a white coat or white spots on a dark coat.

[…]

***Quest for the Tree Kangaroo* by Sy Montgomery (2006)**

From "Marsupial Mania"

Stuart Little, the small mouse with big parents, had nothing on baby marsupials. Marsupials ("mar-SOUP-ee-ulz") are special kinds of mammals. Even the biggest ones give birth to babies that are incredibly small. A two-hundred-pound six-foot mother kangaroo, for instance, gives birth to a baby as small as a lima bean. That's what makes marsupials marsupials. Their babies are born so tiny that in order to survive they must live in a pouch on the mother's tummy. The pouch is called a marsupium. (Don't you wish you had one?)

A baby marsupial lives hidden in the mother's warm moist pouch for months. There is sucks milk from a nipple like other baby mammals. One day it's big enough to poke its head out to see the world. The European explorers who saw kangaroos for the first time in Australia reported they had discovered a two-headed animal—with one head on the neck and another in the belly.

North America has only one marsupial. You may have seen it: The Virginia opossum actually lives in most of the United States, not just Virginia. South America also has marsupials. But most marsupials live in or near Australia. They include the koala (which is *not* a bear), two species of wombat, the toothy black Tasmania devil, four species of black and white spotted "native cats" (though they're not cats at all), and many others.

The most famous marsupials, however, are the kangaroos. All kangaroos hop—some of them six feet high and faster than forty miles an hour. More than fifty different species of kangaroo hop around on the ground—from the big red kangaroo to the musky rat kangaroo.

[…]

***Volcanoes* by Seymour Simon (2006)**

[…]

In early times, no one knew how volcanoes formed or why they spouted red-hot molten rock. In modern times, scientists began to study volcanoes. They still don't know all the answers, but they know much about how a volcano works.

Our planet made up of many layers of rock. The top layers of solid rock are called the crust. Deep beneath the crust is the mantle, where it is so hot that some rock melts. The melted, or molten, rock is called magma.

Volcanoes are formed when magma pushes its way up through the crack in Earth's crust. This is called a volcanic eruption. When magma pours forth on the surface, it is called lava.

[…]

***We Are the Ship: The Story of Negro League Baseball* by Kadir Nelson (2008)**

From "4th Inning: Racket Ball: Negro League Owners"

[…]

Most of the owners didn't make much money from their teams. Baseball was just a hobby for them, a way to make their illegal money look good. To save money, each team would only carry fifteen or sixteen players. The major league teams each carried about twenty-five. Average salary for each player started at roughly $125 per month back in '34, and went up to $500-$800 during the forties, though there were some who made much more than that, like Satchel Paige and Josh Gibson. The average major league player's salary back then was $7,000 per month. We also got around fifty cents to a dollar per day for food allowance. Back then you could get a decent meal for about twenty-five cents to seventy-five cents.

Some of the owners didn't treat their players very well. Didn't pay them enough or on time. That's why we would jump from team to team. Other owners would offer us more money, and we would leave our teams and go play for them. We were some of the first unrestricted free agents.

There were, however, a few owners who *did* know how to treat their ballplayers. Cum Posey was one of them. He always took care of his ballplayers, put them in the best hotels, and paid them well and on time. Buck Leonard said Posey never missed a payday in the seventeen years he played for the Grays.

[…]

"Kenya's Long Dry Season" by Nellie Gonzalez Cutler from *Time for Kids* (2009)

The East African nation of Kenya is experiencing a severe drought. Crops are failing. People are struggling to feed their families.

For the past three seasons, the rains have failed to come to Kenya. The East African nation's grasslands are dried out. Bare, leafless trees dot the landscape. Watering holes are almost dry.

The drought has caused cattle to die and crops to shrivel. This year's grain harvest is expected to be 28% less than last year's. Food prices have risen by as much as 130%.

Kenya is facing a severe food crisis. The United Nations World Food Program (WFP) says it will need to provide emergency food aid to 3.8 million Kenyans over the next six months.

Keeping Kids in School

Eunice Wairimu lives on a small farm north of Nairobi, Kenya's capital. Her maize, potato and bean crops have failed. "I can't remember the last time I ate meat," she says. She relies on aid from the WFP.

Gabrielle Menezes, of the WFP, says the drought is taking a heavy toll. The WFP is working to keep kids in school, where it provides them with nutritious meals. "In times of crisis, children are pulled out of school to go to work," she told TFK. "But in areas where the WFP has school meals, the dropout rates are very low."

The WFP says it needs $230 million in donations. "WFP is aiming to help almost one in every 10 Kenyans," says WFP's Burkard Oberle, "but we can't do it without money."

[…]

Media Text:

Fact page on Keyna from the World Food Programme, a nonprofit organization working to alleviate hunger: http://www.wfp.org/countries/kenya

"Seeing Eye to Eye" by Leslie Hall from *National Geographic Explorer* (2009)

A hungry falcon soars high above Earth. Its sharp eyes scan the ground. Suddenly, it spies something moving in the grass. The falcon dives toward it.

Far below, a gray field mouse scurries through the grass. Its dark, beady eyes search constantly for danger. With eyes on either side of its head, the mouse can see almost everything around it.

Will the mouse see the falcon in time to escape? Or, will the speedy falcon catch the prey it spied from far above? Whatever happens, one thing is clear: Without eyes, neither animal has a good chance.

Why? Eyes help many animals make sense of the world around them - and survive. Eyes can guide the falcon to dinner or help the mouse see a perfect place to hide.

Animal eyes come in many different shapes, sizes, colors, and even numbers. Yet they do the same job. They all catch light. With help from the brain, eyes turn light into sight.

Eyes work in the same way for people. Look at this page. You may think you see words and pictures. Believe it or not, you don't. All you see is light bouncing off the page. How is this possible? The secret is in the rules of light.

Light Rules

Light is a form of energy, like heat or sound. It can come from a natural source, like the sun, or artificial sources, like a lamp or a flashlight.

Light is the fastest known thing. It travels in waves and in nearly straight lines. In air, it can speed 299,700 kilometers (186,200 miles) per second. It can race from the sun to Earth in just over eight minutes! Light doesn't always travel so fast. For example, water or glass can slow light down, but just a bit.

Light may seem to break all driving speed laws. Yet there are certain rules it always follows. Light reflects, or bounces off objects. It also refracts, or bends. And it can be absorbed, or soaked up, by objects. These rules of light affect what, and how, we see.

Light! Eyes!

Imagine this scene: You're at your desk happily reading Explorer magazine. Light from your desk lamp scatters in all directions.

Light hits the page. Some bounces off the page, or reflects. It changes direction. It's a little like how sound bounces off a wall. Now some of this reflected light is traveling right toward your face. Don't duck! For you to see Explorer, some of this light has to enter your eyes. Objects become visible when light bounces off them.

Your eyes are light catchers. Yet it takes more than catching light to see an image. Your eyes also have to bend light. Here's how.

First, light hits your cornea. That's the clear covering on the front of your eyeball. The cornea refracts, or bends, light.

And Action!

Is your cornea super strong? No! Think about how light travels more slowly through water. The same thing happens in your cornea. As light passes through the cornea, it slows down. That makes the light change direction, or bend.

Next, light enters your pupil, the dark center part of your eye. It passes through your lens. The lens bends light, too. What's the big deal about bending light? That's how your eyes focus, or aim the light to make a clear image.

The image appears on your retina at the back of your eyeball. It's like a movie. Playing Today at a Theater in Your Eye: Explorer magazine! There's only one problem. The image is upside down. Luckily, your brain flips the image right side up. That's pretty smart!

[…]

"Computer" from *Britannica Junior Encyclopedia* (2010)

The word computer once meant a person who did computations, but now it almost always refers to automated electronic devices. Computers can do much more than calculate, however. They are now used in all sorts of ways to better control or automate products and processes. For example, computers are used in airplanes and automobiles to control the way that fuel is injected into the engine, and they are used to monitor every part of the production process in most modern factories. Computers help people write reports, draw pictures, and keep track of information. Since the invention of the Internet, computers are also used to gather information from digital libraries located all over the world, to send and receive electronic messages (e-mail), and to work, shop, and bank from home.

Computers come in many sizes and shapes. They range from small devices that perform one specific function, such as those in cameras that control the shutter speed, to supercomputers. Supercomputers are specially engineered to be able to perform trillions of operations per second. Because they are so powerful and therefore so expensive they are generally used only by government agencies and large research centers.

[...]

Parts of a Computer System
A computer system requires both hardware and software. Hardware includes all of the mechanical parts of a computer. Software consists of the instructions and data that the hardware uses to perform its tasks.

Hardware
All computers, no matter how large or small, have basically the same types of hardware. These include a central processing unit (CPU), memory, storage (secondary memory), input/output (I/O) devices, and some type of telecommunication device.

The CPU is the computer's "brain," where all computations are performed. The computer carries out its computations one step at a time, with each step occurring on each "beat" of its built-in clock. The fastest computer clocks now beat more than 3 GHz (gigahertz), or billions of times per second.
Memory is where instructions and data are held while being worked on. Read-only memory (ROM) is built into the computer and cannot be changed. ROM contains instructions that the computer needs to start up. Random-access memory (RAM), or one of its variants, is typically used for the main computer memory because of its speed. Information is stored temporarily in RAM as a computer processes data and instructions. Secondary memory is where instructions and data are saved for long-term storage. Most computers use a magnetic device called a hard drive for storage. A hard drive accesses data very quickly. Slower devices are often used to store files on magnetic tape or optical discs such as compact discs (CDs) and digital video discs (DVDs).

I/O devices enable communication between a computer and the person using it. Input devices allow the user to enter data or commands for processing by the CPU. They include the keyboard, mouse, joystick, scanner, and digital tablet. Output devices let the user see or hear the results of the computer's data processing. They include the monitor, printer, and speakers.

Telecommunication devices enable computers to send data through telephone lines or other channels. In this way computer users can exchange information with one another. These devices include regular telephone modems, digital subscriber line (DSL) telephone modems, cable modems, and various wireless modems.

[...]

"Telescopes" by Ronan, Colin A. from *The New Book of Knowledge* (2010)

You can see planets, stars, and other objects in space just by looking up on a clear night. But to really see them--to observe the craters on the moon, the rings around Saturn, and the countless other wonders in our sky--you must use a telescope.

A telescope is an instrument used to produce magnified (enlarged) images of distant objects. It does this by gathering and focusing the light or other forms of electromagnetic radiation emitted or reflected by those objects. The word "telescope" comes from two Greek words meaning "far" and "see."

Kinds of Telescopes

There are many different types of telescopes, both optical and non-optical. Optical telescopes are designed to focus visible light. Non-optical telescopes are designed to detect kinds of electromagnetic radiation that are invisible to the human eye. These include radio waves, infrared radiation, X rays, ultraviolet radiation, and gamma rays. The word "optical" means "making use of light."

Some telescopes are launched into space. These telescopes gain clearer views. And they can collect forms of electromagnetic radiation that are absorbed by the Earth's atmosphere and do not reach the ground.

Optical Telescopes

Different types of optical telescopes gather and focus light in different ways. Refracting telescopes, or refractors, use lenses. Reflecting telescopes, or reflectors, use mirrors. And catadioptric telescopes, or catadioptrics, use a combination of lenses and mirrors. The main lens or mirror in an optical telescope is called the objective.

Refracting Telescopes. A refracting telescope is typically a long, tube-shaped instrument. The objective is a system of lenses at the front end of the tube (the end facing the sky). When light strikes the lenses, it is bent and brought to a focus within the tube. This forms an image of a distant object. This image can be magnified by the eyepiece. This consists of a group of small lenses at the back of the tube. A camera can replace or be added to the eyepiece. Then photographs can be taken of celestial objects. For many years, these cameras used film. Today most are equipped with charge-coupled devices (CCD's). These devices use semiconductor chips to electronically capture images. CCD's are similar to the devices in home digital cameras and video camcorders. However, the CCD's used by astronomers are usually extremely sensitive to light.

[…]

"Underground Railroad" by Henrietta Buckmaster from *The New Book of Knowledge* (2010)

The Underground Railroad was not a railroad. And it did not run underground. It was a secret network of refuge stations in the United States operated by Northern abolitionists--both black and white--. It was created to help runaway slaves escape from the South, where they were held in bondage in the days before the Civil War.

Over a period of about 40 years, from the 1820's until the war began in 1861, many brave rescuers helped an estimated 40,000 slaves North to freedom. Many fugitives escaped to Pennsylvania, New York, and Massachusetts, but most ended up in Illinois, Indiana, and Ohio. They used the Mississippi and Ohio rivers as escape routes. Thousands more fled to Canada. There officials refused to turn them over to authorities in the United States. Others escaped to Mexico, where slavery had been abolished in 1829. And they escaped to colonies in the Caribbean, where slavery had been abolished by the British in 1833.

[…]

Exemplars of Reading Text Complexity and Quality, ELA 6–12

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.

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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.

Grades 6–8 Exemplar Texts

Narratives

Little Women 9
by Louisa May Alcott (1869)

The Adventures of Tom Sawyer 11
by Mark Twain (1876)

A Wrinkle in Time 14
by Madeline L'Engle (1962)

The Dark is Rising 15
by Susan Cooper (1973)

Dragonwings 17
by Laurence Yep (1975)

Roll of Thunder, Hear My Cry 18
by Mildred Taylor (1976)

"The People Could Fly" 19
from *The People Could Fly: American Black Folktales*
by Virginia Hamilton (1985)

The Tale of the Mandarin Ducks 20
by Katherine Paterson (1990)

"Eleven" from *Woman Hollering Creek: And Other Stories* 21
by Sandra Cisneros (1992)

Black Ships Before Troy: The Story of the Iliad 22
by Rosemary Sutcliff (1993)

Drama

A Midsummer Night's Dream 23
by William Shakespeare (1596)

The Diary of Anne Frank 25
by Frances Goodrich and Albert Hackett (1958)

Poetry

"Paul Revere's Ride" 26
by Henry Wadsworth Longfellow (1861)

"O Captain, My Captain" 30
by Walt Whitman (1865)

"Jabberwocky" 31
by Lewis Carroll (1872)

"Twelfth Song of Thunder" 32
from *The Mountain Chant:*
A Navajo Ceremony Navajo tradition (1887)

"The Railway Train" 33
by Emily Dickinson (1893)

"The Song of Wandering Aengus" 34

by W. B. Yeats (1899)

"Chicago" 35
from *Chicago Poems* (1914) by Carl Sandburg

"Stopping by Woods on a Snowy Evening" 36
by Robert Frost (1923)

"I, Too" 37
by Langston Hughes (1925)

"The Book of Questions" 38
by Pablo Neruda (1973) translated by William O'Daly

"Oranges" 39
from *Black Hair* (1985) by Gary Soto

"A Poem for My Librarian, Mrs. Long" 40
from *Acolytes* (2007) by Nikki Giovanni

Informational Texts (English Language Arts)

"Allegory of the Cave" 41
from *The Republic* by Plato (380 BCE)
translated by G.M.A. Grube

"Letter on Thomas Jefferson" 43
by John Adams (1822)

Narrative of the Life of Frederick Douglass an American Slave 44
by Frederick Douglass (1845)

"Gettysburg Address" 46
by Abraham Lincoln (1863)

"Lee Surrenders to Grant" 47
by Horace Porter (1865)

"Blood, Toil, Tears and Sweat" 48
by Winston Churchill (1940)

Travels with Charley: In Search of America 49
by John Steinbeck (1962)

"Address to the Nation on Civil Rights" 50
by John F. Kennedy (1963)

I Know Why the Caged Bird Sings 52
by Maya Angelou (1969)

"Address to Students at Moscow State University" 53
by Ronald Reagan (1988)

Grades 9-10 Exemplar Texts

Narratives

The Odyssey 55
by Homer (8th century B.C.E.) translated by Robert Fagles

"The Nose" 56
by Nikolai Gogol (1836) translated by Ronald Wilks

"The Gift of the Magi" 58
by O. Henry (1906)

The Grapes of Wrath 59
by John Steinbeck (1939)

Fahrenheit 451 61
by Ray Bradbury (1953)

"I Stand Here Ironing" 62
by Tillie Olsen (1956)

The Killer Angels 63
by Michael Shaara (1975)

The Joy Luck Club 65
by Amy Tan (1989)

In the Time of the Butterflies 66
by Julia Alvarez (1994)

The Book Thief 67
by Marcus Zusak (2005)

Drama

The Tragedy of Romeo and Juliet 68
by William Shakespeare (1592)

The Glass Menagerie 70
by Tennessee Williams (1944)

Rhinoceros 72
by Eugene Ionesco (1959) translated by Derek Prouse

Master Harold…and the Boys 75
by Athol Fugard (1982)

Poetry

"Song" 76
by John Donne (1635)

"Ozymandias" 77
by Percy Bysshe Shelley (1810)

"The Raven" 78
by Edgar Allen Poe (1845)

"We Grow Accustomed to the Dark" 81
by Emily Dickinson (1893)

"Loveliest of Trees" 82
by A. E. Houseman (1896)

"Lift Ev'ry Voice and Sing" 83
by James Weldon Johnson (1900)

"Domination of Black" 84
by Wallace Stevens (1916)

"Yet Do I Marvel" 85
by Countee Cullen (1925)

"Women" 86
by Alice Walker (1970)

"I Am Offering This Poem to You" 87
by Jimmy Santiago Baca (1977)

Informational Texts (English Language Arts)

"Speech to the Second Virginia Convention" 88
by Patrick Henry (1775)

"Second Inaugural Address" 90
by Abraham Lincoln (1865)

"State of the Union Address" 91
by Franklin Delano Roosevelt (1941)

"I Am an American Day Address" 93
by Learned Hand (1944)

"Remarks to the Senate in Support of a Declaration of Conscience" 94
by Margaret Chase Smith (1950)

"Address at the March on Washington" 97
by Martin Luther King, Jr. (1963)

"Nobel Prize Acceptance Speech" 100
by Elie Wiesel (1986)

"A Quilt of a Country" 101
by Anna Quindlen (2001)

Grades 11-12 Exemplar Texts

Narratives

Pride and Prejudice 102
by Jane Austen (1813)

Jane Eyre 105
by Charlotte Brontë (1848)

"At Home" 106
by Anton Chekov (1887) translated by Constance Garnett

The Great Gatsby 108
by F. Scott Fitzgerald (1925)

As I Lay Dying 109
by William Faulkner (1930)

Their Eyes Were Watching God 110
by Zora Neale Hurston (1937)

Black Boy 111
by Richard Wright (1945)

The Adventures of Augie March 112
by Saul Bellow (1949)

The Bluest Eye 113
by Toni Morrison (1970)

Dreaming in Cuban 114
by Cristina García (1992)

The Namesake 115
by Jhumpa Lahiri (2003)

Drama

Macbeth 116
by William Shakespeare (c1611)

The Importance of Being Earnest 118
by Oscar Wilde (1895)

Death of a Salesman 121
by Arthur Miller (1949)

A Raisin in the Sun 122
by Lorraine Hansberry (1959)

Poetry

"A Valediction Forbidding Mourning" 123
by John Donne (1633)

"Ode on a Grecian Urn" 124
by John Keats (1820)

"Song of Myself" 126
from *Leaves of Grass* by Walt Whitman (c1860)

"Because I Could Not Stop for Death" 127

by Emily Dickinson (1890)

"Mending Wall" 128
by Robert Frost (1914)

"Ode to My Suit" 129
by Pablo Neruda (1954) translated by Margaret Sayers Peden

"Sestina" 130
by Elizabeth Bishop (1983)

"The Latin Deli: An Ars Poetica" 131
by Judith Ortiz Cofer (1988)

"Demeter's Prayer to Hades" 132
by Rita Dove (1995)

"Man Listening to Disc" 133
by Billy Collins (2001)

Informational Texts (English Language Arts)

The Declaration of Independence 134
by Thomas Jefferson (1776)

The Crisis 137
by Thomas Paine (1776)

Walden 138
by Henry David Thoreau (1854)

"Society and Solitude" 139
by Ralph Waldo Emerson (1857)

"The Fallacy of Success" 141
by G.K. Chesterton (1909)

The American Language 143
by H.L. Mencken (1938)

"Politics and the English Language" 144
by George Orwell (1946)

"Abraham Lincoln and the Self-Made Myth" 146
by Richard Hofstadter (1948)

"Letter from Birmingham City Jail" 147
by Martin Luther King, Jr. (1963)

"Mother Tongue" 148
by Amy Tan (1990)

"Take the Tortillas Out of Your Poetry" 150
by Rudolfo Anaya (1995)

Grades 6–8

Grades 6-8: Narratives

***Little Women* by Louisa May Alcott (1869)**

"Merry Christmas, little daughters! I'm glad you began at once, and hope you will keep on. But I want to say one word before we sit down. Not far away from here lies a poor woman with a little newborn baby. Six children are huddled into one bed to keep from freezing, for they have no fire. There is nothing to eat over there, and the oldest boy came to tell me they were suffering hunger and cold. My girls, will you give them your breakfast as a Christmas present?"

They were all unusually hungry, having waited nearly an hour, and for a minute no one spoke, only a minute, for Jo exclaimed impetuously, "I'm so glad you came before we began!"

"May I go and help carry the things to the poor little children?" asked Beth eagerly.

"I shall take the cream and the muffings," added Amy, heroically giving up the article she most liked.

Meg was already covering the buckwheats, and piling the bread into one big plate.

"I thought you'd do it," said Mrs. March, smiling as if satisfied. "You shall all go and help me, and when we come back we will have bread and milk for breakfast, and make it up at dinnertime."

They were soon ready, and the procession set out. Fortunately it was early, and they went through back streets, so few people saw them, and no one laughed at the queer party.

A poor, bare, miserable room it was, with broken windows, no fire, ragged bedclothes, a sick mother, wailing baby, and a group of pale, hungry children cuddled under one old quilt, trying to keep warm.

How the big eyes stared and the blue lips smiled as the girls went in.

"Ach, mein Gott! It is good angels come to us!" said the poor woman, crying for joy.

"Funny angels in hoods and mittens," said Jo, and set them to laughing.

In a few minutes it really did seem as if kind spirits had been at work there. Hannah, who had carried wood, made a fire, and stopped up the broken panes with old hats and her own cloak. Mrs. March gave the mother tea and gruel, and comforted her with promises of help, while she dressed the little baby as tenderly as if it had been her own. The girls meantime spread the table, set the children round the fire, and fed them like so many hungry birds, laughing, talking, and trying to understand the funny broken English.

"Das ist gut!" "Die Engel-kinder!" cried the poor things as they ate and warmed their purple hands at the comfortable blaze. The girls had never been called angel children before, and thought it very agreeable, especially Jo, who had been considered a 'Sancho' ever since she was born. That was a very happy breakfast, though they didn't get any of it. And when they went away, leaving comfort behind, I think there were not in all the city four merrier people than the hungry little girls who gave away their breakfasts and contented themselves with bread and milk on Christmas morning.

"That's loving our neighbor better than ourselves, and I like it," said Meg, as they set out their presents while their mother was upstairs collecting clothes for the poor Hummels.

Media Text:

Composer Mark Adamo details for an *Opera America* online course the process of adapting the novel to operatic form: http://www.markadamo.com/course.pdf

***The Adventures of Tom Sawyer* by Mark Twain (1876)**

But Tom's energy did not last. He began to think of the fun he had planned for this day, and his sorrows multiplied. Soon the free boys would come tripping along on all sorts of delicious expeditions, and they would make a world of fun of him for having to work--the very thought of it burnt him like fire. He got out his worldly wealth and examined it--bits of toys, marbles, and trash; enough to buy an exchange of WORK, maybe, but not half enough to buy so much as half an hour of pure freedom. So he returned his straitened means to his pocket, and gave up the idea of trying to buy the boys. At this dark and hopeless moment an inspiration burst upon him! Nothing less than a great, magnificent inspiration.

He took up his brush and went tranquilly to work. Ben Rogers hove in sight presently--the very boy, of all boys, whose ridicule he had been dreading. Ben's gait was the hop-skip-and-jump--proof enough that his heart was light and his anticipations high. He was eating an apple, and giving a long, melodious whoop, at intervals, followed by a deep-toned ding-dong-dong, ding-dong-dong, for he was personating a steamboat. As he drew near, he slackened speed, took the middle of the street, leaned far over to starboard and rounded to ponderously and with laborious pomp and circumstance--for he was personating the Big Missouri, and considered himself to be drawing nine feet of water. He was boat and captain and engine-bells combined, so he had to imagine himself standing on his own hurricane-deck giving the orders and executing them:

"Stop her, sir! Ting-a-ling-ling!" The headway ran almost out, and he drew up slowly toward the sidewalk.

"Ship up to back! Ting-a-ling-ling!" His arms straightened and stiffened down his sides.

"Set her back on the stabboard! Ting-a-ling-ling! Chow! ch-chow-wow! Chow!" His right hand, meantime, describing stately circles--for it was representing a forty-foot wheel.

"Let her go back on the labboard! Ting-a-lingling! Chow-ch-chow-chow!" The left hand began to describe circles.

"Stop the stabboard! Ting-a-ling-ling! Stop the labboard! Come ahead on the stabboard! Stop her! Let your outside turn over slow! Ting-a-ling-ling! Chow-ow-ow! Get out that head-line! LIVELY now! Come--out with your spring-line--what're you about there! Take a turn round that stump with the bight of it! Stand by that stage, now--let her go! Done with the engines, sir! Ting-a-ling-ling! SH'T! S'H'T! SH'T!" (trying the gauge-cocks)."

Tom went on whitewashing--paid no attention to the steamboat. Ben stared a moment and then said: "Hi-YI! YOU'RE up a stump, ain't you!"

No answer. Tom surveyed his last touch with the eye of an artist, then he gave his brush another gentle sweep and surveyed the result, as before. Ben ranged up alongside of him. Tom's mouth watered for the apple, but he stuck to his work. Ben said:

"Hello, old chap, you got to work, hey?"

Tom wheeled suddenly and said:

"Why, it's you, Ben! I warn't noticing."

"Say--I'm going in a-swimming, I am. Don't you wish you could? But of course you'd druther WORK--wouldn't you? Course you would!"

Tom contemplated the boy a bit, and said:

"What do you call work?"

"Why, ain't THAT work?"

Tom resumed his whitewashing, and answered carelessly:

"Well, maybe it is, and maybe it ain't. All I know, is, it suits Tom Sawyer."

"Oh come, now, you don't mean to let on that you LIKE it?"

The brush continued to move.

"Like it? Well, I don't see why I oughtn't to like it. Does a boy get a chance to whitewash a fence every day?"

That put the thing in a new light. Ben stopped nibbling his apple. Tom swept his brush daintily back and forth--stepped back to note the effect--added a touch here and there--criticised the effect again—Ben watching every move and getting more and more interested, more and more absorbed. Presently he said:

"Say, Tom, let ME whitewash a little."

Tom considered, was about to consent; but he altered his mind:

"No--no--I reckon it wouldn't hardly do, Ben. You see, Aunt Polly's awful particular about this fence--right here on the street, you know--but if it was the back fence I wouldn't mind and SHE wouldn't. Yes, she's awful particular about this fence; it's got to be done very careful; I reckon there ain't one boy in a thousand, maybe two thousand, that can do it the way it's got to be done."

"No--is that so? Oh come, now--lemme just try. Only just a little--I'd let YOU, if you was me, Tom."

"Ben, I'd like to, honest injun; but Aunt Polly--well, Jim wanted to do it, but she wouldn't let him; Sid wanted to do it, and she wouldn't let Sid. Now don't you see how I'm fixed? If you was to tackle this fence and anything was to happen to it--"

"Oh, shucks, I'll be just as careful. Now lemme try. Say--I'll give you the core of my apple."

"Well, here--No, Ben, now don't. I'm afeard--"

"I'll give you ALL of it!"

Tom gave up the brush with reluctance in his face, but alacrity in his heart. And while the late steamer Big Missouri worked and sweated in the sun, the retired artist sat on a barrel in the shade close by, dangled his legs, munched his apple, and planned the slaughter of more innocents. There was no lack of material; boys happened along every little while; they came to jeer, but remained to whitewash. By the time Ben was fagged out, Tom had traded the next chance to Billy Fisher for a kite, in good repair; and when he played out, Johnny Miller bought in for a dead rat and a string to swing it with--and so on, and so on, hour after hour. And when the middle of the afternoon came, from being a poor poverty-stricken boy in the morning, Tom was literally rolling in wealth. He had besides the things before mentioned, twelve marbles, part of a jews-harp, a piece of blue bottle-glass to look through, a spool cannon, a key that wouldn't unlock anything, a fragment of chalk, a glass stopper of a decanter, a tin soldier, a couple of tadpoles, six fire-crackers, a kitten with only one eye, a brass doorknob, a dog-collar--but no dog--the handle of a knife, four pieces of orange-peel, and a dilapidated old window sash.

He had had a nice, good, idle time all the while--plenty of company--and the fence had three coats of whitewash on it! If he hadn't run out of whitewash he would have bankrupted every boy in the village.

Tom said to himself that it was not such a hollow world, after all. He had discovered a great law of human action, without knowing it--namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to attain. If he had been a great and wise philosopher, like the writer of this book, he would now have comprehended that Work consists of whatever a body is OBLIGED to do, and that Play consists of whatever a body is not obliged to do. And this would help him to understand why constructing artificial flowers or performing on a tread-mill is work, while rolling ten-pins or climbing Mont Blanc is only amusement. There are wealthy gentlemen in England who drive four-horse passenger-coaches twenty or thirty miles on a daily line, in the summer, because the privilege costs them considerable money; but if they were offered wages for the service, that would turn it into work and then they would resign.

The boy mused awhile over the substantial change which had taken place in his worldly circumstances, and then wended toward headquarters to report.

***A Wrinkle in Time* by Madeline L'Engle (1962)**

"If we knew ahead of time what was going to happen we'd be – we'd be like the people on Camazotz, with no lives of our own, with everything all planned and done for us. How can I explain it to you? Oh, I know. In your language you have a form of poetry called the sonnet."

"Yes, yes," Calvin said impatiently. "What's that got to do with the Happy Medium?"

"Kindly pay me the courtesy of listening to me." Mrs. Whatsit's voice was stern, and for a moment Calvin stopped pawing the ground like a nervous colt. "It is a very strict form of poetry, is it not?"

"Yes."

"There are fourteen lines, I believe, all in iambic pentameter. That's a very strict rhythm or meter, yes?"

"Yes." Calvin nodded.

"No."

"But within this strict form the poet has complete freedom to say whatever he wants, doesn't he?"

"Yes." Calvin nodded again.

"So," Mrs. Whatsit said.

"So what?"

"Oh, do not be stupid, boy!" Mrs. Whatsit scolded. "You know perfectly well what I am driving at!"

"You mean you're comparing our lives to a sonnet? A strict form, but freedom within it?"

"Yes." Mrs. Whatsit said. "You're given the form, but you have to write the sonnet yourself. What you say is completely up to you."

***The Dark is Rising* by Susan Cooper (1973)**

From Midwinter Day

He was woken by music. It beckoned him, lilting and insistent; delicate music, played by delicate instruments that he could not identify, with one rippling, bell-like phrase running through it in a gold thread of delight. There was in this music so much of the deepest enchantment of all his dreams and imaginings that he woke smiling in pure happiness at the sound. In the moment of his waking, it began to fade, beckoning as it went, and then as he opened his eyes it was gone. He had only the memory of that one rippling phrase still echoing in his head, and itself fading so fast that he sat up abruptly in bed and reached his arm out to the air, as if he could bring it back.

The room was very still, and there was no music, and yet Will knew that it had not been a dream.
He was in the twins' room still; he could hear Robin's breathing, slow and deep, from the other bed. Cold light glimmered round the edge of the curtains, but no one was stirring anywhere; it was very early. Will pulled on his rumpled clothes from the day before, and slipped out of the room. He crossed the landing to the central window, and looked down.
In the first shining moment he saw the whole strange-familial world, glistening white; the roofs of the outbuildings mounded into square towers of snow, and beyond them all the fields and hedge: buried, merged into one great flat expanse, unbroken white to the horizon's brim. Will drew in a long, happy breath, silently rejoicing. Then, very faintly, he heard the music again, the same phrase. He swung round vainly searching for it in the air, as if he might see it somewhere like a flickering light.

"Where are you?"

It had gone again. And when he looked back through the window, he saw that his own world had gone with it. In that flash, everything had changed. The snow was there as it had been a moment before, but not piled now on roofs or stretching flat over lawns and fields. There were no roofs, there were no fields. There were only trees. Will was looking over a great white forest: a forest of massive trees, sturdy as towers and ancient as rock. They were bare of leaves, clad only in the deep snow that lay untouched along every branch, each smallest twig. They were everywhere. They began so close to the house that he was looking out through the topmost branches of the nearest tree, could have reached out and shaken them if he had dared to open the window. All around him the trees stretched to the flat horizon of the valley. The only break in that white world of branches was away over to the south, where the Thames ran; he could see the bend in the river marked like a single stilled wave in this white ocean of forest, and the shape of it looked as though the river were wider than it should have been.

Will gazed and gazed, and when at last he stirred he found that he was clutching the smooth iron circle threaded onto his belt. The iron was warm to his touch.

He went back into the bedroom.

"Robin!" he said loudly. "Wake up!" But Robin breathed slowly and rhythmically as before, and did not stir.

He ran into the bedroom next door, the familiar small room that he had once shared with James, and shook James roughly by the shoulder. But when the shaking was done, James lay motionless, deeply asleep.

Will went out onto the landing again and took a long breath, and he shouted with all his might: "Wake up! Wake up, everyone!"

He did not now expect any response, and none came. There was a total silence, as deep and timeless as the blanketing snow; the house and everyone in it lay in a sleep that would not be broken.

Will went downstairs to pull on his boots, and the old sheepskin jacket that had belonged, before him, to two or three of his brothers in turn. Then he went out of the back door, closing it quietly behind him, and stood looking out through the quick white vapour of his breath.

The strange white world lay stroked by silence.. No birds sang. The garden was no longer there, in this forested land. Nor were the outbuildings nor the old crumbling walls. There lay only a narrow clearing round the house now, hummocked with unbroken snowdrifts, before the trees began, with a narrow path leading away. Will set out down the white tunnel of the path, slowly, stepping high to keep the snow out of his boots. As soon as he moved away from the house, he felt very much alone, and he made himself go on without looking back over his shoulder, because he knew that when he looked, he would find that the house was gone.

He accepted everything that came into his mind, without thought or question, as if he were moving through a dream. But a deeper part of him knew that he was not dreaming. He was crystal-clear awake, in a Midwinter Day that had been waiting for him to wake into it since the day he had been born, and, he somehow knew, for centuries before that. *Tomorrow will be beyond imagining....* Will came out of the white-arched path into the road, paved smooth with snow and edged everywhere by the great trees, and he looked up between the branches and saw a single black rook flap slowly past, high in the early sky.

***Dragonwings* by Laurence Yep (1975)**

From Chapter IX: The Dragon Wakes (December, 1905—April, 1906)

By the time the winter rains came to the city, we were not becoming rich, but we were doing well. Each day we put a little money away in our cold tin can. Father never said anything, but I knew he was thinking about the day when we might be able to afford to bring Mother over. You see, it was not simply a matter of paying her passage over on the boat. Father would probably have to go over after her and escort her across. There had to be money for bribes—tea money, Uncle called it—at both ends of the ocean. Now that we no longer belonged to the Company, we somehow had to acquire a thousand *dollars* worth of property, a faraway figure when you can only save *nickels* and *dimes*.

And yet the hope that we could start our own little fix-it shop and qualify as merchants steadily grew with the collection of coins in the tin can. I was happy most of the time, even when it became the time for the New Year by the Tang people's reckoning. [...]

We took the old picture of the Stove King and smeared some honey on it before we burned it in the stove. Later that evening we would hang up a new picture of the Stove King that we had bought in the Tang people's town. That was a sign the Stove King had returned to his place above our stove. After we had finished burning the old picture, we say down to a lunch of meat pastries and dumplings. Robin ate quietly—for her, that is. Actually, she monopolized only half the conversation. *"Look,"* she said. *"My aunt would never go in for those pagan customs—not in her house. But I could sneak the old picture out and tell her you wanted to replace it with a new one. Then you could smear honey on it for her."*

"But you no believe in the Stove King"

"Of course not," she snapped. She squirmed in her seat. *"But it might make you feel better."*

I could see that she really wanted to make herself feel better. No sense in taking chances with the supernatural, and so on. I could tell her train of thought because I sometimes carried the little cross she had given me in my pocket—just as insurance.

***Roll of Thunder, Hear My Cry* by Mildred Taylor (1976)**

"You were born blessed, boy, with land of your own. If you hadn't been, you'd cry out for it while you try to survive… like Mr. Lanier and Mr. Avery. Maybe even do what they doing now. It's hard on a man to give up, but sometimes it seems there just ain't nothing else he can do."

"I… I'm sorry, Papa," Stacey muttered.

After a moment, Papa reached out and draped his arm over Stacey's shoulder.

"Papa," I said, standing to join them, "we giving up too?"

Papa looked down at me and brought me closer, then waved his hand toward the drive. "You see that fig tree over yonder, Cassie? Them other trees all around… that oak and walnut, they're a lot bigger and they take up more room and give so much shade they almost overshadow that little ole fig. But that fig tree's got roots that run deep, and it belongs in that yard as much as that oak and walnut. It keeps blooming, bearing fruit year after year, knowing all the time it'll never get as big as them other trees. Just keeps on growing and doing what it gotta do. It don't give up. It give up, it'll die. There's a lesson to be learned from that little tree, Cassie girl, 'cause we're like it. We keep doing what we gotta do, and we don't give up. We can't."

"The People Could Fly" from The People Could Fly: American Black Folktales by Virginia Hamilton (1985)

They say the people could fly. Say that long ago in Africa, some of the people knew magic. And they would walk up on the air like climbin up on a gate. And they flew like blackbirds over the fields. Black, shiny wings flappin against the blue up there.

Then, many of the people were captured for Slavery. The ones that could fly shed their wings. They couldn't take their wings across the water on slave ships. Too crowded, don't you know.

The folks were full of misery, then. Got sick with the up and down of the sea. So they forgot about flyin when they could no longer breathe the sweet scent of Africa.

Say the people who could fly kept their power, although they shed their wings. They looked the same as the other people from Africa who had been coming over, who had dark skin. Say you couldn't tell anymore one who could fly from one who couldn't.

One such who could was an old man, call him Toby. And standin tall, yet afraid, was a young woman who once had wings. Call her Sarah. Now Sarah carried a babe tied to her back. She trembled to be so hard worked and scorned.

The slaves labored in the fields from sunup to sundown. The owner of the slaves callin himself their Master. Say he was a hard lump of clay. A hard, glinty coal. A hard rock pile, wouldn't be moved. His Overseer on horseback pointed out the slaves who were slowin down. So the one called Driver cracked his whip over the slow ones to make them move faster. That whip was a slice-open cut of pain. So they did move faster. Had to.

***The Tale of the Mandarin Ducks* by Katherine Paterson (1990)**

Long ago and far away in the Land of the Rising Sun, there lived together a pair of mandarin ducks. Now, the drake was a magnificent bird with plumage of colors so rich that the emperor himself would have envied it. But his mate, the duck, wore the quiet tones of the wood, blending exactly with the hole in the tree where the two had made their nest.

One day while the duck was sitting on her eggs, the drake flew down to a nearby pond to search for food. While he was there, a hunting party entered the woods. The hunters were led by the lord of the district, a proud and cruel man who believed that everything in the district belonged to him to do with as he chose. The lord was always looking for beautiful things to adorn his manor house and garden. And when he saw the drake swimming gracefully on the surface of the pond, he determined to capture him.

The lord's chief steward, a man named Shozo, tried to discourage his master. "The drake is a wild spirit, my lord," he said. "Surely he will die in captivity." But the lord pretended not to hear Shozo. Secretly he despised Shozo, because although Shozo had once been his mightiest samurai, the warrior had lost an eye in battle and was no longer handsome to look upon.

The lord ordered his servants to clear a narrow way through the undergrowth and place acorns along the path. When the drake came out of the water he saw the acorns. How pleased he was! He forgot to be cautious, thinking only of what a feast they would be to take home to his mate.

Just as he was bending to pick up an acorn in his scarlet beak, a net fell over him, and the frightened bird was carried back to the lord's manor and placed in a small bamboo cage.

"Eleven" from *Woman Hollering Creek: And Other Stories* by Sandra Cisneros (1992)

What they don't understand about birthdays and what they never tell you is that when you're eleven, you're also ten, and nine, and eight, and seven, and six, and five, and four, and three, and two, and one. And when you wake up on your eleventh birthday you expect to feel eleven, but you don't. You open your eyes and everything's just like yesterday, only it's today. And you don't feel eleven at all. You feel like you're still ten. And you are -- underneath the year that makes you eleven.

Like some days you might say something stupid, and that's the part of you that's still ten. Or maybe some days you might need to sit on your mama's lap because you're scared, and that's the part of you that's five.
And maybe one day when you're all grown up maybe you will need to cry like if you're three, and that's okay. That's what I tell Mama when she's sad and needs to cry. Maybe she's feeling three.

Because the way you grow old is kind of like an onion or like the rings inside a tree trunk or like my little wooden dolls that fit one inside the other, each year inside the next one. That's how being eleven years old is.

You don't feel eleven. Not right away. It takes a few days, weeks even, sometimes even months before you say Eleven when they ask you. And you don't feel smart eleven, not until you're almost twelve. That's the way it is.

***Black Ships Before Troy: The Story of the Iliad* by Rosemary Sutcliff (1993)**

In the high and far-off days when men were heroes and walked with the gods, Peleus, king of the Myrmidons, took for his wife a sea nymph called Thetis, Thetis of the Silver Feet. Many guests came to their wedding feast, and among the mortal guests came all the gods of high Olympus.

But as they sat feasting, one who had not been invited was suddenly in their midst: Eris, the goddess of discord, had been left out because wherever she went she took trouble with her; yet here she was, all the same, and in her blackest mood, to avenge the insult.
All she did—it seemed a small thing—was to toss down on the table a golden apple. Then she breathed upon the guests once, and vanished.

The apple lay gleaming among the piled fruits and the brimming wine cups; and bending close to look at it, everyone could see the words "To the fairest" traced on its side.

Then the three greatest of the goddesses each claimed that it was hers. Hera claimed it as wife to Zeus, the All-father, and queen of all the gods. Athene claimed that she had the better right, for the beauty of wisdom such as hers surpassed all else. Aphrodite only smiled, and asked who had a better claim to beauty's prize than the goddess of beauty herself.

They fell to arguing among themselves; the argument became a quarrel, and the quarrel grew more and more bitter, and each called upon the assembled guests to judge between them. But the other guests refused, for they knew well enough that, whichever goddess they chose to receive the golden apple, they would make enemies of the other two.

Grades 6-8: Drama

***A Midsummer Night's Dream* by William Shakespeare (1596)**

From Act I, Scene 1:

HERMIA
Godspeed, fair Helena. Wither away?
HELENA
Call you me "fair"? That "fair" again unsay.
Demetrius loves your fair. O happy fair!
Your eyes are lodestars and your tongue's sweet air
More tunable than lark to shepherd's ear
When wheat is green, when hawthorn buds appear.
Sickness is catching, O, were favor so!
Yours would I catch, fair Hermia, ere I go.
My ear should catch your voice, my eye your eye;
My tongue should catch your tongue's sweet melody.
Were the world mine, Demetrius being bated,
The rest I'd give to you to be translated.
O, teach me how you look and with what art
You sway the motion of Demetrius' heart!
HERMIA
I frown upon him, yet he loves me still.
HELENA
O, that your frowns would teach my smiles such skill!
HERMIA
I give him curses, yet he gives me love.
HELENA
O, that my prayers could such affection move!
HERMIA
The more I hate, the more he follows me.
HELENA
The more I love, the more he hateth me.
HERMIA
His folly, Helena, is no fault of mine.
HELENA
None but your beauty. Would that fault were mine!
HERMIA
Take comfort: he no more shall see my face.
Lysander and myself will fly this place.
Before the time I did Lysander see
Seemed Athens as a paradise to me.
O, then, what graces in my love do dwell
That he hath turned a heaven unto a hell!
LYSANDER
Helen, to you our minds we will unfold.
Tomorrow night when Phoebe doth behold
Her silver visage in the watery glass,
Decking with liquid pearl the bladed grass
(A time that lovers' flights doth still conceal),
Through Athens' gates have we devised to steal.

HERMIA

And in the wood where often you and I
Upon faint primrose beds were wont to lie,
Emptying our bosoms of their counsel sweet,
There my Lysander and myself shall meet,
And thence from Athens turn away our eyes
To seek new friends and stranger companies.
Farewell, sweet playfellow. Pray thou for us,
And good luck grant thee thy Demetrius.
Keep word, Lysander. We must starve our sight
From lovers' food till morrow deep midnight.

LYSANDER

I will, my Hermia. *Hermia exits.*
Helena, adieu.
As you on him, Demetrius dote on you!

HELENA

How happy some o'er other some can be!
Through Athens I was thought as fair as she.
But what of that? Demetrius thinks not so.
He will not know what all but he do know.
And, as he errs, doting on Hermia's eyes,
So I, admiring of his qualities,
Things base and vile, holding no quantity,
Love can transpose to form and dignity.
Love looks not with the eyes but with the mind;
And therefore is winged Cupid painted blind.
Nor hath Love's mind of any judgment taste.
Wings, and no eyes, figure unheedy haste.
And therefore is Love said to be a child
Because in choice he is so oft beguiled.
As waggish boys in game themselves forswear,
So the boy Love is perjured everywhere.
For, ere Demetrius looked on Hermia's eyne,
He hailed down oaths that he was only mine;
And when this hail some heat from Hermia felt,
So he dissolved, and show'rs of oaths did melt.
I will go tell him of fair Hermia's flight.
Then to the wood will he tomorrow night
Pursue her. And, for this intelligence
If I have thanks, it is a dear expense.
But herein mean I to enrich my pain,
To have his sight thither and back again.

***The Diary of Anne Frank* by Frances Goodrich and Albert Hackett (1958)**

From Act I, Scene 1:

MIEP But, Mr. Frank, there are letters, notes . . .

MR FRANK Burn them. All of them.

MIEP Burn this? (*She hands him a worn, velour-covered book.*)

MR FRANK (*quietly*) Anne's diary. (*He opens the diary and reads.*) 'Monday, the sixth of July, nineteen hundred and forty-two.' (*To* MIEP.) Nineteen hundred and forty-two. Is it possible, Miep? Only three years ago. (*He reads.*) 'Dear Diary, since you and I are going to be great friends, I will start by telling you about myself. My name is Anne Frank. I am thirteen years old. I was born in Germany the twelfth of June, nineteen twenty-nine. As my family is Jewish we emigrated to Holland when Hitler came to power.

Grades 6-8: Poetry

"Paul Revere's Ride" by Henry Wadsworth Longfellow (1861)

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five;
Hardly a man is now alive
Who remembers that famous day and year.

He said to his friend, "If the British march
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal light,--
One, if by land, and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country-folk to be up and to arm."

Then he said, "Good night!" and with muffled oar
Silently rowed to the Charlestown shore,
Just as the moon rose over the bay,
Where swinging wide at her moorings lay
The Somerset, British man-of-war;
A phantom ship, with each mast and spar
Across the moon like a prison bar,
And a huge black hulk, that was magnified
By its own reflection in the tide.

Meanwhile, his friend, through alley and street,
Wanders and watches with eager ears,
Till in the silence around him he hears
The muster of men at the barrack door,
The sound of arms, and the tramp of feet,
And the measured tread of the grenadiers,
Marching down to their boats on the shore.

Then he climbed to the tower of the church,
Up the wooden stairs, with stealthy tread,
To the belfry-chamber overhead,
And startled the pigeons from their perch
On the sombre rafters, that round him made
Masses and moving shapes of shade,--
Up the trembling ladder, steep and tall,
To the highest window in the wall,
Where he paused to listen and look down
A moment on the roofs of the town,
And the moonlight flowing over all.

Beneath, in the churchyard, lay the dead,

In their night-encampment on the hill,
Wrapped in silence so deep and still
That he could hear, like a sentinel's tread,
The watchful night-wind, as it went
Creeping along from tent to tent,
And seeming to whisper, "All is well!"
A moment only he feels the spell
Of the place and the hour, and the secret dread
Of the lonely belfry and the dead;
For suddenly all his thoughts are bent
On a shadowy something far away,
Where the river widens to meet the bay,--
A line of black that bends and floats
On the rising tide, like a bridge of boats.

Meanwhile, impatient to mount and ride,
Booted and spurred, with a heavy stride
On the opposite shore walked Paul Revere.
Now he patted his horse's side,
Now gazed at the landscape far and near,
Then, impetuous, stamped the earth,
And turned and tightened his saddle-girth;
But mostly he watched with eager search
The belfry-tower of the Old North Church,
As it rose above the graves on the hill,
Lonely and spectral and sombre and still.
And lo! as he looks, on the belfry's height
A glimmer, and then a gleam of light!
He springs to the saddle, the bridle he turns,
But lingers and gazes, till full on his sight
A second lamp in the belfry burns!

A hurry of hoofs in a village street,
A shape in the moonlight, a bulk in the dark,
And beneath, from the pebbles, in passing, a spark
Struck out by a steed flying fearless and fleet;
That was all! And yet, through the gloom and the light,
The fate of a nation was riding that night;
And the spark struck out by that steed, in his flight,
Kindled the land into flame with its heat.

He has left the village and mounted the steep,
And beneath him, tranquil and broad and deep,
Is the Mystic, meeting the ocean tides;
And under the alders, that skirt its edge,
Now soft on the sand, now loud on the ledge,
Is heard the tramp of his steed as he rides.

It was twelve by the village clock
When he crossed the bridge into Medford town.
He heard the crowing of the cock,
And the barking of the farmer's dog,
And felt the damp of the river fog,
That rises after the sun goes down.

It was one by the village clock,
When he galloped into Lexington.
He saw the gilded weathercock
Swim in the moonlight as he passed,
And the meeting-house windows, blank and bare,
Gaze at him with a spectral glare,
As if they already stood aghast
At the bloody work they would look upon.

It was two by the village clock,
When he came to the bridge in Concord town.
He heard the bleating of the flock,
And the twitter of birds among the trees,
And felt the breath of the morning breeze
Blowing over the meadows brown.
And one was safe and asleep in his bed
Who at the bridge would be first to fall,
Who that day would be lying dead,
Pierced by a British musket-ball.

You know the rest. In the books you have read,
How the British Regulars fired and fled,--
How the farmers gave them ball for ball,
From behind each fence and farm-yard wall,
Chasing the red-coats down the lane,
Then crossing the fields to emerge again
Under the trees at the turn of the road,
And only pausing to fire and load.

So through the night rode Paul Revere;
And so through the night went his cry of alarm
To every Middlesex village and farm,--
A cry of defiance and not of fear,
A voice in the darkness, a knock at the door,
And a word that shall echo forevermore!
For, borne on the night-wind of the Past,
Through all our history, to the last,

In the hour of darkness and peril and need,
The people will waken and listen to hear
The hurrying hoof-beats of that steed,
And the midnight message of Paul Revere.

Media Text:

"The Midnight Ride," an extensive resource, including audio, images, and maps, provided by the Paul Revere Memorial Association:
http://www.paulreverehouse.org/ride/

“O Captain! My Captain!” by Walt Whitman (1865)

O Captain! my Captain! our fearful trip is done;
The ship has weather'd every rack, the prize we sought is won;
The port is near, the bells I hear, the people all exulting,
While follow eyes the steady keel, the vessel grim and daring:
But O heart! heart! heart!
O the bleeding drops of red,
Where on the deck my Captain lies,
Fallen cold and dead.

O Captain! my Captain! rise up and hear the bells;
Rise up--for you the flag is flung--for you the bugle trills;
For you bouquets and ribbon'd wreaths--for you the shores a-crowding;
For you they call, the swaying mass, their eager faces turning;
Here Captain! dear father!
This arm beneath your head;
It is some dream that on the deck,
You've fallen cold and dead.

My Captain does not answer, his lips are pale and still;
My father does not feel my arm, he has no pulse nor will;
The ship is anchor'd safe and sound, its voyage closed and done;
From fearful trip, the victor ship, comes in with object won;
Exult, O shores, and ring, O bells!
But I, with mournful tread,
Walk the deck my Captain lies,
Fallen cold and dead.

“Jabberwocky” by Lewis Carroll (1872)

'Twas brillig, and the slithy toves
 Did gyre and gimble in the wabe;
All mimsy were the borogoves,
 And the mome raths outgrabe.

'Beware the Jabberwock, my son!
 The jaws that bite, the claws that catch!
Beware the Jubjub bird, and shun
 The frumious Bandersnatch!'

He took his vorpal sword in hand:
 Long time the manxome foe he sought—
So rested he by the Tumtum tree,
 And stood awhile in thought.

And as in uffish thought he stood,
 The Jabberwock, with eyes of flame,
Came whiffling through the tulgey wood,
 And burbled as it came!

One, two! One, two! And through and through
 The vorpal blade went snicker-snack!
He left it dead, and with its head
 He went galumphing back.

'And hast thou slain the Jabberwock?
 Come to my arms, my beamish boy!
O frabjous day! Callooh! Callay!'
 He chortled in his joy.

'Twas brillig, and the slithy toves
 Did gyre and gimble in the wabe;
All mimsy were the borogoves,
 And the mome raths outgrabe.

"Twelfth Song of Thunder" from *The Mountain Chant: A Navajo Ceremony* Navajo tradition (1887)

The voice that beautifies the land!
The voice above,
The voice of thunder
Within the dark cloud
Again and again it sounds,
The voice that beautifies the land.

The voice that beautifies the land!
The voice below,
The voice of the grasshopper
Among the plants
Again and again it sounds,
The voice that beautifies the land.

“The Railway Train” by Emily Dickinson (1893)

I like to see it lap the miles,
And lick the valleys up,
And stop to feed itself at tanks;
And then, prodigious, step

Around a pile of mountains,
And, supercilious, peer
In shanties by the sides of roads;
And then a quarry pare

To fit its sides, and crawl between,
Complaining all the while
In horrid, hooting stanza;
Then chase itself down hill

And neigh like Boanerges;
Then, punctual as a star,
Stop -- docile and omnipotent --
At its own stable door.

“The Song of Wandering Aengus” by W. B. Yeats (1899)

I WENT out to the hazel wood,
Because a fire was in my head,
And cut and peeled a hazel wand,
And hooked a berry to a thread;
And when white moths were on the wing,
And moth-like stars were flickering out,
I dropped the berry in a stream
And caught a little silver trout.

When I had laid it on the floor
I went to blow the fire a-flame,
But something rustled on the floor,
And someone called me by my name:
It had become a glimmering girl
With apple blossom in her hair
Who called me by my name and ran
And faded through the brightening air.

Though I am old with wandering
Through hollow lands and hilly lands,
I will find out where she has gone,
And kiss her lips and take her hands;
And walk among long dappled grass,
And pluck till time and times are done,
The silver apples of the moon,
The golden apples of the sun.

"Chicago" from *Chicago Poems* (1914) by Carl Sandburg

Hog Butcher for the World,
Tool Maker, Stacker of Wheat,
Player with Railroads and the Nation's Freight Handler;
Stormy, husky, brawling,
City of the Big Shoulders:

They tell me you are wicked and I believe them, for I have seen your painted
women under the gas lamps luring the farm boys.
And they tell me you are crooked and I answer: Yes, it is true I have seen
the gunman kill and go free to kill again.
And they tell me you are brutal and my reply is: On the faces of women and
children I have seen the marks of wanton hunger.
And having answered so I turn once more to those who sneer at this my city,
and I give them back the sneer and say to them:
Come and show me another city with lifted head singing so proud to be alive
and coarse and strong and cunning.
Flinging magnetic curses amid the toil of piling job on job, here is a tall bold
slugger set vivid against the little soft cities;
Fierce as a dog with tongue lapping for action, cunning as a savage pitted
against the wilderness,
Bareheaded,
Shoveling,
Wrecking,
Planning,
Building, breaking, rebuilding,
Under the smoke, dust all over his mouth, laughing with white teeth,
Under the terrible burden of destiny laughing as a young man laughs,
Laughing even as an ignorant fighter laughs who has never lost a battle,
Bragging and laughing that under his wrist is the pulse, and under his ribs
the heart of the people,
Laughing!
Laughing the stormy, husky, brawling laughter of Youth, half-naked,
sweating, proud to be Hog Butcher, Tool Maker, Stacker of Wheat,
Player with Railroads and Freight Handler to the Nation.

“Stopping by Woods on a Snowy Evening” by Robert Frost (1923)

Whose woods these are I think I know.
His house is in the village, though;
He will not see me stopping here
To watch his woods fill up with snow.

My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.

He gives his harness bells a shake
To ask if there is some mistake.
The only other sound’s the sweep
Of easy wind and downy flake.

The woods are lovely, dark, and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

“I, Too” by Langston Hughes (1925)

I, too, sing America.

I am the darker brother.
They send me to eat in the kitchen
When company comes,
But I laugh,
And eat well,
And grow strong.

[…]

“The Book of Questions” by Pablo Neruda (1973) translated by William O’Daly

VI

Why does the hat of night
fly so full of holes?

What does old ash say
when it passes near the fire?

[…]

"Oranges" from *Black Hair* (1985) by Gary Soto

The first time I walked
With a girl, I was twelve,
Cold, and weighted down
With two oranges in my jacket.
December. Frost cracking
Beneath my steps, my breath
Before me, then gone,
As I walked toward
Her house, the one whose
Porch light burned yellow
Night and day, in any weather.
Then released it to let
Her unwrap the chocolate.
I peeled my orange
That was so bright against
The gray of December
That, from some distance,
Someone might have thought
I was making a fire in my hands.

[…]

"A Poem for My Librarian, Mrs. Long" from *Acolytes* (2007) by Nikki Giovanni

A Poem for My Librarian, Mrs. Long
(You never know what troubled little girl needs a book)

At a time when there was not tv before 3:00 P.M.
And on Sunday none until 5:00
We sat on the front porches watching
The jfg sign go on and off greeting
The neighbors, discussion the political
Situation congratulating the preacher
On his sermon

[…]

Grades 6-8: Informational Texts (English Language Arts)

"Allegory of the Cave" from *The Republic* by Plato (380 BCE) translated by G. M. A. Grube

From Book VII

Next, I said, compare the effect of education and of the lack of it on our nature to an experience like this: Imagine human beings living in an underground, cavelike dwelling, with an entrance a long way up, which is both open to the light and as wide as the cave itself. They've been there since childhood, fixed in the same place, with their necks and legs fettered, able to see only in front of them, because their bonds prevent them from turning their heads around. Light is provided by a fire burning far above and behind them. Also behind them, but on higher ground, there is a path stretching between them and the fire. Imagine that along this path a low wall has been built, like the screen in front of puppeteers above which they show their puppets.

I'm imagining it.

Then also imagine that there are people along the wall, carrying all kinds of artifacts that project above it—statues of people and other animals, made out of stone, wood, and every material. And, as you'd expect, some of the carriers are talking, and some are silent.

It's a strange image you're describing, and strange prisoners.

They're like us. Do you suppose, first of all, that these prisoners see anything of themselves and one another besides the shadows that the fire casts on the wall in front of them?

How could they, if they have to keep their heads motionless throughout life?

What about the things being carried along the wall? Isn't the same true of them?

Of course.

And if they could talk to one another, don't you think they'd suppose that the names they used applied to the things they see passing before them?

They'd have to.

And what if their prison also had an echo from the wall facing them? Don't you think they'd believe that the shadows passing in front of them were talking whenever one of the carriers passing along the wall was doing so?

I certainly do.

Then the prisoners would in every way believe that the truth is nothing other than the shadows of those artifacts.

They must surely believe that.

Consider, then, what being released from their bonds and cured of their ignorance would naturally be like if something like this came to pass. When one of them was freed and suddenly compelled to stand up, turn his head, walk, and look up toward the light, he'd be pained and dazzled and unable to see the things whose shadows he'd seen before. What do you think he'd say, if we told him that what he'd seen before was inconsequential, but that now—because he is a bit closer to the things that are and is turned towards things that are more—he sees correctly? Or, to put it another way, if we pointed to each of the things passing by, asked him what each of them is, and compelled him to answer, don't you think he'd be at a loss and that he'd believe the things he saw earlier were truer than the ones he was now being shown?

Much truer.

And if someone compelled him to look at the light itself, wouldn't his eyes hurt, and wouldn't he turn around and flee towards the things he's able to see, believing that they're really clearer than the ones he's being shown?

He would.

And if someone dragged him away from there by force, up the rough, steep path, and didn't let him go until he had dragged him into the sunlight, wouldn't he be pained and irritated at being treated that way? And when he came into the light, with the sun filling his eyes, wouldn't he be unable to see a single one of the things now said to be true?

He would be unable to see them, at least at first.

I suppose, then, that he'd need time to get adjusted before he could see things in the world above. At first, he'd see shadows most easily, then images of men and other things in water, then the things themselves. Of these, he'd be able to study the things in the sky and the sky itself more easily at night, looking at the light of the stars and the moon, than during the day, looking at the sun and the light of the moon.

Of course.

Finally, I suppose, he'd be able to see the sun, not images of it in water or some alien place, but the sun itself, in its own place, and be able to study it.

Necessarily so.

And at this point he would infer and conclude that the sun provides the seasons and the years, governs everything in the visible world, and is in some way the cause of all the things that he used to see.

It's clear that would be his next step.

What about when he reminds himself of his first dwelling place, his fellow prisoners, and what passed for wisdom there? Don't you think that he'd count himself happy for the change and pity the others?

Certainly.

And if there had been any honors, praises, or prizes among them for the one who was sharpest at identifying the shadows as they passed by and who best remembered which usually came earlier, which later, and which simultaneously, and who could thus best divine the future, do you think that our man would desire these rewards or envy those among the prisoners who were honored and held power? Instead, wouldn't he feel, with Homer, that he'd much prefer to "work the earth as a serf to another, one without possessions," and go through any sufferings, rather than share their opinions and live as they do?

I suppose he would rather suffer anything than live like that.

Consider this too. If this man went down into the cave again and sat down in his same seat, wouldn't his eyes—coming suddenly out of the sun like that—be filled with darkness?

They certainly would.

“Letter on Thomas Jefferson” by John Adams (1822)

Mr. Jefferson came into Congress, in June, 1775, and brought with him a reputation for literature, science, science, and a happy talent of composition. Writings of his were handed about, remarkable for the peculiar felicity of expression. Though a silent member in Congress, he was so prompt, frank, explicit, and decisive upon committees and in conversation, not even Samuel Adams was more so, that he soon seized upon my heart; and upon this occasion I gave him my vote, and did all in my power to procure the votes of others. I think he had one more vote than any other, and that placed him at the head of the committee. I had the next highest number, and that placed me second. The committee met, discussed the subject, and then appointed Mr. Jefferson and me to make the draught, I suppose because we were the two first on the list.

The subcommittee met. Jefferson proposed to me to make the draft. I said, 'I will not,' 'You should do it.' 'Oh! no.' 'Why will you not? You ought to do it.' 'I will not.' 'Why?' 'Reasons enough.' 'What can be your reasons?' 'Reason first, you are a Virginian, and a Virginian ought to appear at the head of this business. Reason second, I am obnoxious, suspected, and unpopular. You are very much otherwise. Reason third, you can write ten times better than I can.' 'Well,' said Jefferson, 'if you are decided, I will do as well as I can.' 'Very well. When you have drawn it up, we will have a meeting.'

Media Text:

Adams Family Papers: An Electronic Archive, hosted by the Massachusetts Historical Society, includes transcriptions of letters between John and Abigail Adams as well as John Adams’s diary and autobiography: http://www.masshist.org/digitaladams/aea/index.html

***Narrative of the Life of Frederick Douglass an American Slave* by Frederick Douglass (1845)**

The plan which I adopted, and the one by which I was most successful, was that of making friends of all the little white boys whom I met in the street. As many of these as I could, I converted into teachers. With their kindly aid, obtained at different times and in different places, I finally succeeded in learning to read. When I was sent of errands, I always took my book with me, and by going one part of my errand quickly, I found time to get a lesson before my return. I used also to carry bread with me, enough of which was always in the house, and to which I was always welcome; for I was much better off in this regard than many of the poor white children in our neighborhood. This bread I used to bestow upon the hungry little urchins, who, in return, would give me that more valuable bread of knowledge. I am strongly tempted to give the names of two or three of those little boys, as a testimonial of the gratitude and affection I bear them; but prudence forbids;—not that it would injure me, but it might embarrass them; for it is almost an unpardonable offence to teach slaves to read in this Christian country. It is enough to say of the dear little fellows, that they lived on Philpot Street, very near Durgin and Bailey's ship-yard. I used to talk this matter of slavery over with them. I would sometimes say to them, I wished I could be as free as they would be when they got to be men. "You will be free as soon as you are twenty-one, *but I am a slave for life!* Have not I as good a right to be free as you have?" These words used to trouble them; they would express for me the liveliest sympathy, and console me with the hope that something would occur by which I might be free.

I was now about twelve years old, and the thought of being *a slave for life* began to bear heavily upon my heart. Just about this time, I got hold of a book entitled "The Columbian Orator." Every opportunity I got, I used to read this book. Among much of other interesting matter, I found in it a dialogue between a master and his slave. The slave was represented as having run away from his master three times. The dialogue represented the conversation which took place between them, when the slave was retaken the third time. In this dialogue, the whole argument in behalf of slavery was brought forward by the master, all of which was disposed of by the slave. The slave was made to say some very smart as well as impressive things in reply to his master—things which had the desired though unexpected effect; for the conversation resulted in the voluntary emancipation of the slave on the part of the master.

In the same book, I met with one of Sheridan's mighty speeches on and in behalf of Catholic emancipation. These were choice documents to me. I read them over and over again with unabated interest. They gave tongue to interesting thoughts of my own soul, which had frequently flashed through my mind, and died away for want of utterance. The moral which I gained from the dialogue was the power of truth over the conscience of even a slaveholder. What I got from Sheridan was a bold denunciation of slavery, and a powerful vindication of human rights. The reading of these documents enabled me to utter my thoughts, and to meet the arguments brought forward to sustain slavery; but while they relieved me of one difficulty, they brought on another even more painful than the one of which I was relieved. The more I read, the more I was led to abhor and detest my enslavers. I could regard them in no other light than a band of successful robbers, who had left their homes, and gone to Africa, and stolen us from our homes, and in a strange land reduced us to slavery. I loathed them as being the meanest as well as the most wicked of men. As I read and contemplated the subject, behold! that very discontentment which Master Hugh had predicted would follow my learning to read had already come, to torment and sting my soul to unutterable anguish. As I writhed under it, I would at times feel that learning to read had been a curse rather than a blessing. It had given me a view of my wretched condition, without the remedy. It opened my eyes to the horrible pit, but to no ladder upon which to get out. In moments of agony, I envied my fellow-slaves for their stupidity. I have often wished myself a beast. I preferred the condition of the meanest reptile to my own. Any thing, no matter what, to get rid of thinking! It was this everlasting thinking of my condition that tormented me. There was no getting rid of it. It was pressed upon me by every object within sight or hearing, animate or inanimate. The silver trump of freedom had roused my soul to eternal wakefulness. Freedom now appeared, to disappear no more forever. It was heard in every sound, and seen in every thing. It was ever present to torment me with a sense of my wretched condition. I saw nothing without seeing it, I heard nothing without hearing it, and felt nothing without feeling it. It looked from every star, it smiled in every calm, breathed in every wind, and moved in every storm.

“Gettysburg Address” by Abraham Lincoln (1863)

Fourscore and seven years ago, our fathers brought forth upon this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We are met to dedicate a portion of it as the final resting-place of those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But in a large sense we cannot dedicate,—we cannot consecrate,— we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work that they have thus far so nobly carried on. It is, rather for us to be here dedicated to the great task remaining before us, that from these honored dead we take increased devotion to that cause for which they here gave the last full measure of devotion; that we here highly resolve that these dead shall not have died in vain; that this nation, under God, shall have a new birth of freedom, and that Government of the people, by the people and for the people, shall not perish from the earth.

“Lee Surrenders to Grant” by Horace Porter (1865)

When Lee came to the sentence about the officers’ side-arms, private horses & baggage, he showed for the first time during the reading of the letter a slight change of countenance & was evidently touched by this act of generosity. It was doubtless the condition mentioned to which he particularly alluded when he looked toward General Grant, as he finished reading & said with some degree of warmth in his manner, ‘This will have a very happy effect upon my army.’”

General Grant then said: "Unless you have some suggestions to make in regard to the form in which I have stated the terms, I will have a copy of the letter made in ink, and sign it."

"There is one thing I should like to mention," Lee replied, after a short pause. "The cavalrymen and artillerists own their own horses in our army. Its organization in this respect differs from that of the United States." This expression attracted the notice of our officers present, as showing how firmly the conviction was grounded in his mind that we were two distinct countries. He continued: "I should like to understand whether these men will be permitted to retain their horses."

“You will find that the terms as written do not allow this," General Grant replied; "only the officers are permitted to take their private property."

Lee read over the second page of the letter again, and then said: “No, I see the terms do not allow it; that is clear." His face showed plainly that he was quite anxious to have this concession made; and Grant said very promptly, and without giving Lee time to make a direct request:

"Well, the subject is quite new to me. Of course I did not know that any private soldiers owned their animals; but I think we have fought the last battle of the war, — I sincerely hope so, — and that the surrender of this army will be followed soon by that of all the others; and I take it that most of the men in the ranks are small farmers, and as the country has been so raided by the two armies, it is doubtful whether they will be able to put in a crop to carry themselves and their families through the next winter without the aid of the horses they are now riding, and I will arrange it in this way: I will not change the terms as now written, but I will instruct the officers I shall appoint to receive the paroles to let all the men who claim to own a horse or mule take the animals home with them to work their little farms."

“Blood, Toil, Tears and Sweat” by Winston Churchill (1940)

I say to the House as I said to ministers who have joined this government, I have nothing to offer but blood, toil, tears, and sweat. We have before us an ordeal of the most grievous kind. We have before us many, many months of struggle and suffering.

You ask, what is our policy? I say it is to wage war by land, sea, and air. War with all our might and with all the strength God has given us, and to wage war against a monstrous tyranny never surpassed in the dark and lamentable catalogue of human crime. That is our policy.

You ask, what is our aim? I can answer in one word. It is victory. Victory at all costs - Victory in spite of all terrors - Victory, however long and hard the road may be, for without victory there is no survival.

[…]

I take up my task in buoyancy and hope. I feel sure that our cause will not be suffered to fail among men. I feel entitled at this juncture, at this time, to claim the aid of all and to say, "Come then, let us go forward together with our united strength."

***Travels with Charley: In Search of America* by John Steinbeck (1962)**

I soon discovered that if a wayfaring stranger wishes to eavesdrop on a local population the places for him to slip in and hold his peace are bars and churches. But some New England towns don't have bars, and church is only on Sunday. A good alternative is the roadside restaurant where men gather for breakfast before going to work or going hunting. To find these places inhabited one must get up very early. And there is a drawback even to this. Early-rising men not only do not talk much to strangers, they barely talk to one another. Breakfast conversation is limited to a series of laconic grunts. The natural New England taciturnity reaches its glorious perfection at breakfast.

[…]

I am not normally a breakfast eater, but here I had to be or I wouldn't see anybody unless I stopped for gas. At the first lighted roadside restaurant I pulled in and took my seat at a counter. The customers were folded over their coffee cups like ferns. A normal conversation is as follows:

WAITRESS: "Same?"
CUSTOMER: "Yep."
WAITRESS: "Cold enough for you?"
CUSTOMER: "Yep."
(Ten minutes.)
WAITRESS: "Refill?"
CUSTOMER: "Yep."

This is a really talkative customer.

"Address to the Nation on Civil Rights" by John F. Kennedy (1963)

Good evening, my fellow citizens:

This afternoon, following a series of threats and defiant statements, the presence of Alabama National Guardsmen was required on the University of Alabama to carry out the final and unequivocal order of the United States District Court of the Northern District of Alabama. That order called for the admission of two clearly qualified young Alabama residents who happened to have been born Negro. That they were admitted peacefully on the campus is due in good measure to the conduct of the students of the University of Alabama, who met their responsibilities in a constructive way.

I hope that every American, regardless of where he lives, will stop and examine his conscience about this and other related incidents. This Nation was founded by men of many nations and backgrounds. It was founded on the principle that all men are created equal, and that the rights of every man are diminished when the rights of one man are threatened.

Today, we are committed to a worldwide struggle to promote and protect the rights of all who wish to be free. And when Americans are sent to Vietnam or West Berlin, we do not ask for whites only. It ought to be possible, therefore, for American students of any color to attend any public institution they select without having to be backed up by troops. It ought to be possible for American consumers of any color to receive equal service in places of public accommodation, such as hotels and restaurants and theaters and retail stores, without being forced to resort to demonstrations in the street, and it ought to be possible for American citizens of any color to register and to vote in a free election without interference or fear of reprisal. It ought to be possible, in short, for every American to enjoy the privileges of being American without regard to his race or his color. In short, every American ought to have the right to be treated as he would wish to be treated, as one would wish his children to be treated. But this is not the case.

The Negro baby born in America today, regardless of the section of the State in which he is born, has about one-half as much chance of completing a high school as a white baby born in the same place on the same day, one-third as much chance of completing college, one-third as much chance of becoming a professional man, twice as much chance of becoming unemployed, about one-seventh as much chance of earning $10,000 a year, a life expectancy which is 7 years shorter, and the prospects of earning only half as much.

This is not a sectional issue. Difficulties over segregation and discrimination exist in every city, in every State of the Union, producing in many cities a rising tide of discontent that threatens the public safety. Nor is this a partisan issue. In a time of domestic crisis men of good will and generosity should be able to unite regardless of party or politics. This is not even a legal or legislative issue alone. It is better to settle these matters in the courts than on the streets, and new laws are needed at every level, but law alone cannot make men see right. We are confronted primarily with a moral issue. It is as old as the Scriptures and is as clear as the American Constitution.

The heart of the question is whether all Americans are to be afforded equal rights and equal opportunities, whether we are going to treat our fellow Americans as we want to be treated. If an American, because his skin is dark, cannot eat lunch in a restaurant open to the public, if he cannot send his children to the best public school available, if he cannot vote for the public officials who will represent him, if, in short, he cannot enjoy the full and free life which all of us want, then who among us would be content to have the color of his skin changed and stand in his place? Who among us would then be content with the counsels of patience and delay?

One hundred years of delay have passed since President Lincoln freed the slaves, yet their heirs, their grandsons, are not fully free. They are not yet freed from the bonds of injustice. They are not yet freed from social and economic oppression. And this Nation, for all its hopes and all its boasts, will not be fully free until all its citizens are free.

We preach freedom around the world, and we mean it, and we cherish our freedom here at home, but are we to say to the world, and much more importantly, to each other that this is the land of the free except for the Negroes; that

we have no second-class citizens except Negroes; that we have no class or caste system, no ghettoes, no master race except with respect to Negroes?

Now the time has come for this Nation to fulfill its promise. The events in Birmingham and elsewhere have so increased the cries for equality that no city or State or legislative body can prudently choose to ignore them. The fires of frustration and discord are burning in every city, North and South, where legal remedies are not at hand. Redress is sought in the streets, in demonstrations, parades, and protests which create tensions and threaten violence and threaten lives.

We face, therefore, a moral crisis as a country and a people. It cannot be met by repressive police action. It cannot be left to increased demonstrations in the streets. It cannot be quieted by token moves or talk. It is a time to act in the Congress, in your State and local legislative body and, above all, in all of our daily lives. It is not enough to pin the blame on others, to say this a problem of one section of the country or another, or deplore the facts that we face. A great change is at hand, and our task, our obligation, is to make that revolution, that change, peaceful and constructive for all. Those who do nothing are inviting shame, as well as violence. Those who act boldly are recognizing right, as well as reality.

[...]

This is one country. It has become one country because all of us and all the people who came here had an equal chance to develop their talents. We cannot say to ten percent of the population that you can't have that right; that your children cannot have the chance to develop whatever talents they have; that the only way that they are going to get their rights is to go in the street and demonstrate. I think we owe them and we owe ourselves a better country than that.

Therefore, I'm asking for your help in making it easier for us to move ahead and to provide the kind of equality of treatment which we would want ourselves; to give a chance for every child to be educated to the limit of his talents.

As I've said before, not every child has an equal talent or an equal ability or equal motivation, but they should have the equal right to develop their talent and their ability and their motivation, to make something of themselves.
We have a right to expect that the Negro community will be responsible, will uphold the law, but they have a right to expect that the law will be fair, that the Constitution will be color blind, as Justice Harlan said at the turn of the century.

This is what we're talking about and this is a matter which concerns this country and what it stands for, and in meeting it I ask the support of all our citizens.

Thank you very much.

***I Know Why the Caged Bird Sings* by Maya Angelou (1969)**

She said she was going to give me some books and that I not only must read them, I must read them aloud. She suggested that I try to make a sentence sound in as many different ways as possible.

"I'll accept no excuse if you return a book to me that has been badly handled." My imagination boggled at the punishment I would deserve if in fact I did abuse a book of Mrs. Flowers'. Death would be too kind and brief.

The odors in the house surprised me. Somehow I had never connected Mrs. Flowers with food or eating or any other common experience of common people. There must have been an outhouse, too, but my mind never recorded it.

The sweet scent of vanilla had met us as she opened the door.

"I made tea cookies this morning. You see, I had planned to invite you for cookies and lemonade so we could have this little chat. The lemonade is in the icebox."

It followed that Mrs. Flowers would have ice on an ordinary day, when most families in our town bought ice late on Saturdays only a few times during the summer to be used in the wooden ice-cream freezers.

She took the bags from me and disappeared through the kitchen door. I looked around the room that I had never in my wildest fantasies imagined I would see. Browned photographs leered or threatened from the walls and the white, freshly done curtains pushed against themselves and against the wind. I wanted to gobble up the room entire and take it to Bailey, who would help me analyze and enjoy it.

"Have a seat, Marguerite. Over there by the table." She carried a platter covered with a tea towel. Although she warned that she hadn't tried her hand at baking sweets for some time, I was certain that like everything else about her the cookies would be perfect.

They were flat round wafers, slightly browned on the edges and butter-yellow in the center. With the cold lemonade they were sufficient for childhood's lifelong diet. Remembering my manners, I took nice little lady-like bites off the edges. She said she had made them expressly for me and that she had a few in the kitchen that I could take home to my brother. So I jammed one whole cake in my mouth and the rough crumbs scratched the insides of my jaws, and if I hadn't had to swallow, it would have been a dream come true.

As I ate she began the first of what we later called "my lessons in living." She said that I must always be intolerant of ignorance but understanding of illiteracy. That some people, unable to go to school, were more educated and even more intelligent than college professors. She encouraged me to listen carefully to what country people called mother wit. That in those homely sayings was couched the collective wisdom of generations.

“Address to Students at Moscow State University” by Ronald Reagan (1988)

But progress is not foreordained. The key is freedom -- freedom of thought, freedom of information, freedom of communication. The renowned scientist, scholar, and founding father of this university, Mikhail Lomonosov, knew that. ``It is common knowledge," he said, ``that the achievements of science are considerable and rapid, particularly once the yoke of slavery is cast off and replaced by the freedom of philosophy." [...]

The explorers of the modern era are the entrepreneurs, men with vision, with the courage to take risks and faith enough to brave the unknown. These entrepreneurs and their small enterprises are responsible for almost all the economic growth in the United States. They are the prime movers of the technological revolution. In fact, one of the largest personal computer firms in the United States was started by two college students, no older than you, in the garage behind their home. Some people, even in my own country, look at the riot of experiment that is the free market and see only waste. What of all the entrepreneurs that fail? Well, many do, particularly the successful ones; often several times. And if you ask them the secret of their success, they'll tell you it's all that they learned in their struggles along the way; yes, it's what they learned from failing. Like an athlete in competition or a scholar in pursuit of the truth, experience is the greatest teacher. [...]

We Americans make no secret of our belief in freedom. In fact, it's something of a national pastime. Every 4 years the American people choose a new President, and 1988 is one of those years. At one point there were 13 major candidates running in the two major parties, not to mention all the others, including the Socialist and Libertarian candidates -- all trying to get my job.

About 1,000 local television stations, 8,500 radio stations, and 1,700 daily newspapers -- each one an independent, private enterprise, fiercely independent of the Government -- report on the candidates, grill them in interviews, and bring them together for debates. In the end, the people vote; they decide who will be the next President.

But freedom doesn't begin or end with elections. Go to any American town, to take just an example, and you'll see dozens of churches, representing many different beliefs -- in many places, synagogues and mosques -- and you'll see families of every conceivable nationality worshiping together. Go into any schoolroom, and there you will see children being taught the Declaration of Independence, that they are endowed by their Creator with certain unalienable rights -- among them life, liberty, and the pursuit of happiness -- that no government can justly deny; the guarantees in their Constitution for freedom of speech, freedom of assembly, and freedom of religion.

Go into any courtroom, and there will preside an independent judge, beholden to no government power. There every defendant has the right to a trial by a jury of his peers, usually 12 men and women -- common citizens; they are the ones, the only ones, who weigh the evidence and decide on guilt or innocence. In that court, the accused is innocent until proven guilty, and the word of a policeman or any official has no greater legal standing than the word of the accused.

Go to any university campus, and there you'll find an open, sometimes heated discussion of the problems in American society and what can be done to correct them. Turn on the television, and you'll see the legislature conducting the business of government right there before the camera, debating and voting on the legislation that will become the law of the land. March in any demonstration, and there are many of them; the people's right of assembly is guaranteed in the Constitution and protected by the police. Go into any union hall, where the members know their right to strike is protected by law.

But freedom is more even than this. Freedom is the right to question and change the established way of doing things. It is the continuing revolution of the marketplace. It is the understanding that allows us to recognize shortcomings and seek solutions. It is the right to put forth an idea, scoffed at by the experts, and watch it catch fire among the people. It is the right to dream -- to follow your dream or stick to your conscience, even if you're the only one in a sea of doubters. Freedom is the recognition that no single person, no single authority or government has a monopoly on the truth, but that every individual life is infinitely precious, that every one of us put on this world has been put there for a reason and has something to offer.

Grades 9–10

Grades 9-10: Narratives

The Odyssey by Homer (eighth century BCE) translated by Robert Fagles

From Book One

Sing to me of the man, Muse, the man of twists and turns
driven time and again off course, once he had plundered
the hallowed heights of Troy.
Many cities of men he saw and learned their minds,
many pains he suffered, heartsick on the open sea,
fighting to save his life and bring his comrades home.
But he could not save them from disaster, hard as he strove—
the recklessness of their own ways destroyed them all,
the blind fools, they devoured the cattle of the Sun
and the Sungod blotted out the day of their return.
Launch out on his story, Muse, daughter of Zeus.
Start from where you will—sing for our time too.
By now,
all the survivors, all who avoided headlong death
were safe at home, escaped the wars and waves.
But one man alone…
his heart set on his wife and his return—Calypso,
the bewitching nymph, the lustrous goddess, held him back,
deep in her arching caverns, craving him for a husband.
But then, when the wheeling seasons brought the year around.
That year spun out by the gods when he should reach his home,
Ithaca—though not even there would he be free of trials,
even among his loved ones—then every god took pity,
all except Poseidon. He raged on, seething against
the great Odysseus till he reached his native land.

“The Nose” by Nikolai Gogol (1836) translated by Ronald Wilks

An extraordinarily strange thing happened in St. Petersburg on 25 March. Ivan Yakovlevich, a barber who lived on Voznesensky Avenue (his surname has got lost and all that his shop-front signboard shows is a gentleman with a lathered cheek and the inscription ‘We also let blood’) woke up rather early one morning and smelt hot bread. As he sat up in bed he saw his wife, who was a quite respectable lady and a great coffee-drinker, taking some freshly baked rolls out of the oven.

‘I don’t want any coffee today, Praskovya Osipovna,’ said Ivan Yakovlevich. ‘I’ll make do with some hot rolls and onion instead.’ (Here I must explain that Ivan Yakovlevich would really have liked to have had some coffee as well, but knew it was quite out of the question to expect both coffee and rolls, since Praskovya Osipovna did not take very kindly to these whims of his.) ‘Let the old fool have his bread, I don’t mind,’ she thought. ‘That means extra coffee for me!’ And she threw a roll on to the table.

Ivan pulled his frock-coat over his nightshirt for decency’s sake, sat down at the table, poured out some salt, peeled two onions, took a knife and with a determined expression on his face started cutting one of the rolls.
When he had sliced the roll in two, he peered into the middle and was amazed to see something white there. Ivan carefully picked at it with his knife, and felt it with his finger. ‘Quite thick,’ he said to himself. ‘What on earth can it be?’

He poked two fingers in and pulled out—a nose!

He flopped back in his chair, and began rubbing his eyes and feeling around in the roll again. Yes, it was a nose all right, no mistake about that. And, what’s more, it seemed a very familiar nose. His face filled with horror. But this horror was nothing compared with his wife’s indignation.

‘You beast, whose nose is that you’ve cut off?’ she cried furiously. ‘You scoundrel! You drunkard! I’ll report it to the police myself, I will. You thief! Come to think of it, I’ve heard three customers say that when they come in for a shave you start pulling their noses about so much it’s a wonder they stay on at all!’
But Ivan felt more dead than alive. He knew that the nose belonged to none other than Collegiate Assessor Kovalyov, whom he shaved on Wednesdays and Sundays.

‘Wait a minute, Praskovya! I’ll wrap it up in a piece of cloth and dump it in the corner. Let’s leave it there for a bit, then I’ll try and get rid of it.’

‘I don’t want to know! Do you think I’m going to let a sawn-off nose lie about in *my* room … you fathead! All you can do is strop that blasted razor of yours and let everything else go to pot. Layabout! Night-bird! And you expect me to cover up for you with the police! You filthy pig! Blockhead! Get that nose out of here, out! Do what you like with it, but I don’t want that thing hanging around here a minute longer!’

Ivan Yakovlevich was absolutely stunned. He thought and thought, but just didn’t know what to make of it.
‘I’m damned if I know what’s happened!’ he said at last, scratching the back of his ear. ‘I can’t say for certain if I came home drunk or not last night. All I know is, it’s crazy. After all, bread is baked in an oven, and you don’t get noses in bakeries. Can’t make head or tail of it! …’

Ivan Yakovlevich lapsed into silence. The thought that the police might search the place, find the nose and afterwards bring a charge against him, very nearly sent him out of his mind. Already he could see that scarlet collar beautifully embroidered with silver, that sword … and he began shaking all over. Finally he put on his scruffy old trousers and shoes and with Praskovya Osipovna’s vigorous invective ringing in his ears, wrapped the nose up in a piece of cloth and went out into the street.

All he wanted was to stuff it away somewhere, either hiding it between two curb-stones by someone’s front door or else ‘accidentally’ dropping it and slinking off down a side street. But as luck would have it, he kept bumping into

friends, who would insist on asking: 'Where are *you* off to?' or 'It's a bit early for shaving customers, isn't it?' with the result that he didn't have a chance to get rid of it. Once he *did* manage to drop it, but a policeman pointed with his halberd and said: 'Pick that up! Can't you see you dropped something!' And Ivan Yakovlevich had to pick it up and hide it in his pocket. Despair gripped him, especially as the streets were getting more and more crowded now as the shops and stalls began to open.

He decided to make his way to St. Isaac's Bridge and see if he could throw the nose into the River Neva without anyone seeing him. But here I am rather at fault for not telling you before something about Ivan Yakovlevich, who in many ways was a man you could respect.

“The Gift of the Magi” by O. Henry (1906)

White fingers and nimble tore at the string and paper. And then an ecstatic scream of joy; and then, alas! a quick feminine change to hysterical tears and wails, necessitating the immediate employment of all the comforting powers of the lord of the flat.

For there lay The Combs—the set of combs, side and back, that Della had worshipped long in a Broadway window. Beautiful combs, pure tortoise shell, with jewelled rims—just the shade to wear in the beautiful vanished hair. They were expensive combs, she knew, and her heart had simply craved and yearned over them without the least hope of possession. And now, they were hers, but the tresses that should have adorned the coveted adornments were gone.

But she hugged them to her bosom, and at length she was able to look up with dim eyes and a smile and say: “My hair grows so fast, Jim!”

And then Della leaped up like a little singed cat and cried, “Oh, oh!”

Jim had not yet seen his beautiful present. She held it out to him eagerly upon her open palm. The dull precious metal seemed to flash with a reflection of her bright and ardent spirit.

“Isn’t it a dandy, Jim? I hunted all over town to find it. You’ll have to look at the time a hundred times a day now. Give me your watch. I want to see how it looks on it.”

Instead of obeying, Jim tumbled down on the couch and put his hands under the back of his head and smiled.

“Dell,” said he, “let’s put our Christmas presents away and keep ’em a while. They’re too nice to use just at present. I sold the watch to get the money to buy your combs. And now suppose you put the chops on.”

The magi, as you know, were wise men—wonderfully wise men—who brought gifts to the Babe in the manger. They invented the art of giving Christmas presents. Being wise, their gifts were no doubt wise ones, possibly bearing the privilege of exchange in case of duplication. And here I have lamely related to you the uneventful chronicle of two foolish children in a flat who most unwisely sacrificed for each other the greatest treasures of their house. But in a last word to the wise of these days let it be said that of all who give gifts these two were the wisest. Of all who give and receive gifts, such as they are wisest. Everywhere they are wisest. They are the magi.

***The Grapes of Wrath* by John Steinbeck (1939)**

The man took off his dark, stained hat and stood with a curious humility in front of the screen. "Could you see your way to sell us a loaf of bread, ma'am?"

Mae said, "This ain't a grocery store. We got bread to make san'widges."

"I know, ma'am." His humility was insistent. "We need bread and there ain't nothin' for quite a piece, they say."

"'F we sell bread we gonna run out." Mae's tone was faltering.

"We're hungry," the man said.

"Whyn't you buy a san'widge? We got nice san'widges, hamburgs."

"We'd sure admire to do that, ma'am. But we can't. We got to make a dime do all of us." And he said embarrassedly, "We ain't got but a little."

Mae said, "You can't get no loaf a bread for a dime. We only got fifteen-cent loafs."

From behind her Al growled, "God Almighty, Mae, give 'em bread."

"We'll run out 'fore the bread truck comes."

"Run out then, goddamn it," said Al. He looked sullenly down at the potato salad he was mixing.

Mae shrugged her plump shoulders and looked to the truck drivers to show them what she was up against.

She held the screen door open and the man came in, bringing a smell of sweat with him. The boys edged behind him and they went immediately to the candy case and stared in—not with craving or with hope or even with desire, but just with a kind of wonder that such things could be. They were alike in size and their faces were alike. One scratched his dusty ankle with the toe nails of his other foot. The other whispered some soft message and then they straightened their arms so that their clenched fists in the overall pockets showed through the thin blue cloth.

Mae opened a drawer and took out a long waxpaper-wrapped loaf. "This here is a fifteen-cent loaf."

The man put his hat back on his head. He answered with inflexible humility, "Won't you—can't you see your way to cut off ten cents' worth?"

Al said snarlingly, "Goddamn it, Mae. Give 'em the loaf."

The man turned toward Al. "No, we want ta buy ten cents' worth of it. We got it figgered awful close, mister, to get to California."

Mae said resignedly, "You can have this for ten cents."

"That'd be robbin' you, ma'am."

"Go ahead—Al says to take it." She pushed the waxpapered loaf across the counter. The man took a deep leather pouch from his rear pocket, untied the strings, and spread it open. It was heavy with silver and with greasy bills.

"May soun' funny to be so tight," he apologized. "We got a thousan' miles to go, an' we don' know if we'll make it." He dug in the pouch with a forefinger, located a dime, and pinched in for it. When he put it down on the counter he

had a penny with it. He was about to drop the penny back into the pouch when his eye fell on the boys frozen before the candy counter. He moved slowly down to them. He pointed in the case at big long sticks of striped peppermint. "Is them penny candy, ma'am?"

Mae moved down and looked in. "Which ones?"

"There, them stripy ones."

The little boys raised their eyes to her face and they stopped breathing; their mouths were partly opened, their half-naked bodies were rigid.

"Oh—them. Well, no—them's two for a penny."

"Well, gimme two then, ma'am." He placed the copper cent carefully on the counter. The boys expelled their held breath softly. Mae held the big sticks out.

***Fahrenheit 451* by Ray Bradbury (1953)**

It was a pleasure to burn.

It was a special pleasure to see things eaten, to see things blackened and *changed*. With the brass nozzle in his fists, with this great python spitting its venomous kerosene upon the world, the blood pounded in his head, and his hands were the hands of some amazing conductor playing all the symphonies of blazing and burning to bring down the tatters and charcoal ruins of history. With his symbolic helmet numbered 451 on his stolid head, and his eyes all orange flame with the thought of what came next, he flicked the igniter and the house jumped up in a gorging fire that burned the evening sky red and yellow and black. He strode in a swarm of fireflies. He wanted above all, like the old joke, to shove a marshmallow on a stick in the furnace, while the flapping pigeon-winged books died on the porch and lawn of the house. While the books went up in sparkling whirls and blew away on a wind turned dark with burning.

Montag grinned the fierce grin of all men singed and driven back by flame.

He knew that when he returned to the firehouse, he might wink at himself, a minstrel man, burnt-corked, in the mirror. Later, going to sleep, he would feel the fiery smile still gripped by his face muscles, in the dark. It never went away, that smile, it never ever went away, as long as he remembered.

“I Stand Here Ironing” by Tillie Olsen (1956)

I stand here ironing, and what you asked me moves tormented back and forth with the iron.

“I wish you would manage the time to come in and talk with me about your daughter. I’m sure you can help me understand her. She’s a youngster who needs help and whom I’m deeply interested in helping.”

“Who needs help”…Even if I came, what good would it do? You think because I am her mother I have a key, or that in some way you could use me as a key? She has lived for nineteen years. There is all that like that has happened outside of me, beyond me.

And when is there time to remember, to sift, to weigh, to estimate, to total? I will start and there will be an interruption and I will have to gather it all together again. Or I will become engulfed with all I did or did not do, with what should have been and what cannot be helped.

She was a beautiful baby. The first and only one of our five that was beautiful at birth. You do not guess how new and uneasy her tenancy in her now-loveliness. You did not know her all those years she was thought homely, or see her peering over her baby pictures, making me tell her over and over how beautiful she had been—and would be, I would tell her—and was now, to the seeing eye. But the seeing eyes were few or non-existent. Including mine.

I nursed her. They feel that’s important nowadays. I nursed all the children, but with her, with all the fierce rigidity of first motherhood, I did like the books then said. Though her cries battered me to trembling and my breasts ached with swollenness, I waited till the clock decreed.

Why do I put that first? I do not even know if it matters or if it explains anything.

She was a beautiful baby. She blew shining bubbles of sound. She loved motion, loved light, loved color and music and textures. She would lie on the floor in her blue overalls patting the surface so hard in ecstasy her hands and feet would blur. She was a miracle to me, but when she was eight months old I had to leave her daytimes with the woman downstairs to whom she was no miracle at all, for I worked or looked for work and for Emily’s father, who “could no longer endure” (he wrote us in his good-bye note) “sharing want with us.”

***The Killer Angels* by Michael Shaara (1975)**

". . . have no doubt," Fremantle was saying, "that General Lee shall become the world's foremost authority on military matters when this war is over, which would appear now to be only a matter of days, or at most a few weeks. I suspect all Europe will be turning to him for lessons."

Lessons?

"I have been thinking, I must confess, of setting some brief thoughts to paper," Fremantle announced gravely. "Some brief remarks of my own, appended to an account of this battle, and perhaps others this army has fought. Some notes as to tactics."

Tactics?

"General Lee's various stratagems will be most instructive, most illuminating. I wonder, sir, if I might enlist your aid in this, ah, endeavor. As one most closely concerned? That is, to be brief, may I come to you when in need?"

"Sure," Longstreet said. Tactics? He chuckled. The tactics were simple: find the enemy, fight him. He shook his head, snorting. Fremantle spoke softly, in tones of awe.

"One would not think of General Lee, now that one has met him, now that one has looked him, so to speak, in the *eye*, as it were, one would not think him, you know, to be such a *devious* man."

"Devious?" Longstreet swung to stare at him, aghast.

"Oh my word," Fremantle went on devoutly, "but he's a tricky one. The Old Gray Fox, as they say. Charming phrase. American to the hilt."

"Devious?" Longstreet stopped dead in the road. "Devious." He laughed aloud. Fremantle stared an owlish stare.

"Why, Colonel, bless your soul, there ain't a devious bone in Robert Lee's body, don't you know that?"

"My dear sir."

"By damn, man, if there is one human being in the world *less* devious than Robert Lee, I aint yet met him. By God and fire, Colonel, but you amuse me." And yet Longstreet was not amused. He leaned forward blackly across the pommel of the saddle. "Colonel, let me explain something. The secret of General Lee is that men love him and follow him with faith in him. That's one secret. The next secret is that General Lee makes a decision and he *moves*, with guts, and he's been up against a lot of sickly generals who don't know how to make decisions, although some of them have guts but whose men don't love them. That's why we win, mostly. Because we move with speed, and faith, and because we usually have the good ground. Tactics? God, man, we don't win because of tricks. What were the tactics at Malvern Hill? What were the tactics at Fredericksburg, where we got down behind a bloody stone wall and shot the bloody hell out of them as they came up, wave after wave, bravest thing you ever saw, because, listen, there are some damn good boys across the way, make no mistake on that. I've fought with those boys, and they know how to fight when they've got the ground, but tactics? Tactics?" He was stumbling for words, but it was pouring out of him in hot clumps out of the back of the brain, the words like falling coals, and Fremantle stared openmouthed.

"God in Heaven," Longstreet said, and repeated it, "there's no strategy to this bloody war. What it is is old Napoleon and a hell of a lot of chivalry. That's all it is. What were the tactics at Chancellorsville, where we divided the army, *divided* it, so help me God, in the face of the enemy, and got away with it because Joe Hooker froze cold in his stomach? What were the tactics yesterday? What were they today? And what will be the blessed tactics tomorrow? I'll tell you the tactics tomorrow. Devious? Christ in Heaven. Tomorrow we will attack an enemy that outnumbers us, an enemy that outguns us, an enemy dug in on the high ground, and let me tell you, if we win that one it will not

be because of tactics or because we are great strategists or because there is anything even remotely intelligent about the war at all. It will be a bloody miracle, a bloody miracle."

***The Joy Luck Club* by Amy Tan (1989)**

From "Jing-Mei Woo: Two Kinds"

My mother believed you could be anything you wanted to be in America. You could open a restaurant. You could work for the government and get good retirement. You could buy a house with almost no money down. You could become rich. You could become instantly famous.

"Of course you can be prodigy, too," my mother told me when I was nine. "You can be best anything. What does Auntie Lindo know? Her daughter, she is only best tricky."

America was where all my mother's hopes lay. She had come here in 1949 after losing everything in China: her mother and father, her family home, her first husband, and two daughters, twin baby girls. But she never looked back with regret. There were so many ways for things to get better.

We didn't immediately pick the right kind of prodigy. At first my mother thought I could be a Chinese Shirley Temple. We'd watch Shirley's old movies on TV as though they were training films. My mother would poke my arm and say, "*Ni kan*"—You watch. And I would see Shirley tapping her feet, or singing a sailor song, or pursing her lips into a very round O while saying, "Oh my goodness."

"*Ni kan*," said my mother as Shirley's eyes flooded with tears. "You already know how. Don't need talent for crying!"

***In the Time of the Butterflies* by Julia Alvarez (1994)**

She remembers a clear moonlit night before the future began. They are sitting in the cool darkness under the anacahuita tree in the front yard, in the rockers, telling stories, drinking guanabana juice. Good for the nerves, Mamá always says.

They're all there, Mamá, Papá, Patria-Minerva-Dedé. Bang-bang-bang, their father likes to joke, aiming a pistol finger at each one, as if he were shooting them, not boasting about having sired them, Three girls, each born within a year of each other! And then, nine years later, Maria Teresa, his final desperate attempt at a boy misfiring.

Their father has his slippers on, one foot hooked behind the other. Every once in a while Dedé hears the clink of the rum bottle against the rim of his glass.

Many a night, and this night is no different, a shy voice calls out of the darkness, begging their pardon. Could they spare a *calmante* for a sick child out of their stock of kindness? Would they have some tobacco for a tired old man who spent the day grating yucca?

Their father gets up, swaying a little with drink and tiredness, and opens up the store. The *campesino* goes off with his medicine, a couple of cigars, a few mints for the godchildren. Dedé tells her father that she doesn't know how they do as well as they do, the way he gives everything away. But her father just puts his arm around her, and says, "*Ay*, Dedé, that's why I have you. Every soft foot needs a hard shoe."

She'll bury us all," her father adds, laughing, "in silk and pearls." Dedé hears again the clink of the rum bottle. "Yes, for sure, our Dedé here is going to be the millionaire in the family."

***The Book Thief* by Marcus Zusak (2005)**

From "The Flag"

The last time I saw her was red. The sky was like soup, boiling and stirring. In some places it was burned. There were black crumbs, and pepper, streaked amongst the redness.

Earlier, kids had been playing hopscotch there, on the street that looked like oil-stained pages. When I arrived I could still hear the echoes. The feet tapping the road. The children-voices laughing, and the smiles like salt, but decaying fast.

Then, bombs.

This time, everything was too late.

The sirens. The cuckoo shrieks in the radio. All too late.

Within minutes, mounds of concrete and earth were stacked and piled. The streets were ruptured veins. Blood streamed till it was dried on the road, and the bodies were stuck there, like driftwood after the flood.

They were glued down, every last one of them. A packet of souls.

Was it fate?

Misfortune?

Is that what glued them down like that?

Of course not.

Let's not be stupid.

It probably had more to do with the hurled bombs, thrown down by humans hiding in the clouds.

For hours, the sky remained a devastating, home-cooked red. The small German town had been flung apart one more time. Snowflakes of ash fell so *lovelily* you were tempted to stretch out your tongue to catch them, taste them. Only, they would have scorched your lips. They would have cooked your mouth.

Clearly, I see it.

I was just about to leave when I found her kneeling there.

A mountain range of rubble was written, designed, erected around her. She was clutching at a book.

Apart from everything else, the book thief wanted desperately to go back to the basement, to write, or read through her story one last time. In hindsight, I see it so obviously on her face. She was dying for it—the safety, the home of it—but she could not move. Also, the basement no longer existed. It was part of the mangled landscape.

Grades 9–10: Drama

The Tragedy of Romeo and Juliet by William Shakespeare (1592)

From Act II Scene 1

Romeo: He jests at scars that never felt a wound.
But soft, what light through yonder window breaks?
It is the East and Juliet is the sun.
Arise fair Sun and kill the envious Moon,
Who is already sick and pale with grief
That thou her maid art far for fair than she.
Be not her maid, since she is envious,
Her vestal liv'ry is but sick and green,
And none but fools do wear it, cast is off.

[Enter Juliet at the window]

It is my lady! O it is my love!
O that she knew she were!
She speaks yet she says nothing, what of that?
Her eye discourses, I will answer it.
I am too bold, 'tis not to me she speaks.
Two of the fairest stars in all the heaven,
Having some business, do entreat her eyes
To twinkle in their spheres till they return.
What if her eyes were there, they in her head?
The brightness of her cheek would shame those stars
As daylight doth a lamp, her eye in heaven
Would through the airy region stream so bright
That birds would sing and think it were not night.
See how she leans her cheek upon her hand!
O that I were a glove upon that hand
That I might touch that cheek.

Juliet: Ay me!

Romeo: She speaks.
O speak again, bright angel, for thou art
As glorious to this night, being o'er my head,
As is a winged messenger of Heaven
Unto the white-upturned wond'ring eyes
Of mortals that fall back to gaze on him
When he bestrides the lazy puffing clouds
And sails upon the bosom of the air.

Juliet: O Romeo, Romeo, wherefore art thou Romeo?
Deny thy father and refuse thy name;
Or if thou wilt not, be but sworn my love
And I'll no longer be a Capulet.

Romeo: Shall I hear more or shall I speak at this?

Juliet: 'Tis but thy name that is my enemy,
Thou art thyself, though not a Montague.
What's Montague? it is nor hand nor foot
Nor arm nor face, o be some other name
Belonging to a man.
What's in a name? that which we call a rose
By any other word would smell as sweet.
So Romeo would, were he not Romeo call'd,
Retain that dear perfection which he owes
Without that title. Romeo, doff thy name,
And for thy name, which is not part of thee,
Take all myself.

Romeo: I take thee at thy word.
Call me but Love and I'll be new baptiz'd,
Henceforth I never will be Romeo.

***The Glass Menagerie* by Tennessee Williams (1944)**

From Scene 5

TOM: What are you doing?
AMANDA: I'm brushing that cowlick down! [*She attacks his hair with the brush.*] What is this young man's position at the warehouse?
TOM [*submitting grimly to the brush and interrogation*]: This young man's position is that of a shipping clerk, Mother.
AMANDA: Sounds to me like a fairly responsible job, the sort of a job *you* would be in if you had more *get-up*. What is his salary? Have you any idea?
TOM: I would judge it to be approximately eighty-five dollars a month.
AMANDA: Well—not princely—but—
TOM: Twenty more than I make.
AMANDA: Yes, how well I know! But for a family man, eighty-five dollars a month is not much more than you can just get by on….
TOM: Yes, but Mr. O'Connor is not a family man.
AMANDA: He might be, mightn't he? Some time in the future?
TOM: I see. Plans and provisions.
AMANDA: You are the only young man that I know of who ignores the fact that the future becomes the present, the present the past, and the past turns into everlasting regret if you don't plan for it!
TOM: I will think that over and see what I can make of it.
AMANDA: Don't be supercilious with your mother! Tell me some more about this—what do you call him?
TOM: James D. O'Connor. The D. is for Delaney.
AMANDA: Irish on *both* sides! *Gracious!* And doesn't drink?
TOM: Shall I call him up and ask him right this minute?
AMANDA: The only way to find out about those things is to make discreet inquiries at the proper moment. When I was a girl in Blue Mountain and it was suspected that a young man drank, the girl whose attentions he had been receiving, if any girl *was*, would sometimes speak to the minister of his church, or rather her father would if her father was living, and sort of feel him out on the young man's character. That is the way such things are discreetly handled to keep a young woman from making a tragic mistake!
TOM: Then how did you happen to make a tragic mistake?
AMANDA: That innocent look of your father's had everyone fooled! He *smiled*—the world was *enchanted!* No girl can do worse than put herself at the mercy of a handsome appearance! I hope that Mr. O'Connor is not too good-looking.
TOM: No, he's not too good-looking. He's covered with freckles and hasn't too much of a nose.
AMANDA: He's not right-down homely, though?
TOM: Not right-down homely. Just medium homely, I'd say.
AMANDA: Character's what to look for in a man.
TOM: That's what I've always said, Mother.
AMANDA: You've never said anything of the kind and I suspect you would never give it a thought.
TOM: Don't be so suspicious of me.
AMANDA: At least I hope he's the type that's up and coming.
TOM: I think he really goes in for self-improvement.
AMANDA: What reason have you to think so?
TOM: He goes to night school.
AMANDA [*beaming*]: Splendid! What does he do, I mean study?
TOM: Radio engineering and public speaking!
AMANDA: Then he has visions of being advanced in the world! Any young man who studies public speaking is aiming to have an executive job some say! And radio engineering? A think for the future! Both of these facts are very illuminating. Those are the sort of things that a mother should know concerning any young man who comes to call on her daughter. Seriously or—not.
TOM: One little warning. He doesn't know about Laura. I didn't let on that we had dark ulterior motives. I just said, why don't you come and have dinner with us? He said okay and that was the whole conversation.

AMANDA: I bet it was! You're eloquent as an oyster. However, he'll know about Laura when he gets here. When he sees how lovely and sweet and pretty she is, he'll thank his lucky stars he was asked to dinner.
TOM: Mother, you mustn't expect too much of Laura.
AMANDA: What do you mean?
TOM: Laura seems all those things to you and me because she's out and we love her. We don't even notice she's crippled any more.
AMANDA: Don't say crippled! You know that I never allow that word to be used!
TOM: But face facts, Mother. She is and—that's not all—
AMANDA: What do you mean "not all"?
TOM: Laura is very different from other girls.
AMANDA: I think the difference is all to her advantage.
TOM: Not quite all—in the eyes of others—strangers—she's terribly shy and lives in a world of her own and those things make her seem a little peculiar to people outside the house.
AMANDA: Don't say peculiar.
TOM: Face the facts. She is.
[*The dance hall music changes to a tango that has a minor and somewhat ominous tone.*]
AMANDA: In what way is she peculiar—may I ask?
TOM [*gently*]: She lives in a world of her own—a world of little glass ornaments, Mother....
[*He gets up. Amanda remains holding the brush, looking at him, troubled.*]
She plays old phonograph records and—that's about all—
[*He glances at himself in the mirror and crosses to the door.*]
AMANDA [*sharply*]: Where are you going?
TOM: I'm going to the movies. [*He goes out the screen door.*]
AMANDA: Not to the movies, every night to the movies! [*She follows quickly to the screen door.*] I don't believe you always go to the movies!
[*He is gone. Amanda looks worriedly after him for a moment. Then vitality and optimism return and she turns from the door, crossing to the portieres.*]
Laura! Laura!
[*Laura answers from the kitchenette.*]
LAURA: Yes, Mother.
AMANDA: Let those dishes go and come in front!
[*Laura appears with a dish towel. Amanda speaks to her gaily.*]
Laura, come here and make a wish on the moon!
[*Screen image*: The Moon.]
LAURA [*entering*]: Moon—moon?
AMANDA: A little silver slipper of a moon. Look over your left shoulder, Laura, and make a wish!
[*Laura looks faintly puzzled as if called out of sleep. Amanda seizes her shoulders and turns her at an angle by the door.*]
Now! Now, darling, *wish*!
LAURA: What shall I wish for, Mother?
AMANDA [*her voice trembling and her eyes suddenly filling with tears*]: Happiness! Good fortune!
[*The sound of the violin rises and the stage dims out.*]

***Rhinoceros* by Eugene Ionesco (1959) translated by Derek Prouse**

From Act Two

BERENGER: [*coming in*] Hello Jean!
JEAN: [*in bed*] What time is it? Aren't you at the office?
BERENGER: You're still in bed; you're not at the office, then? Sorry if I'm disturbing you.
JEAN: [*still with his back turned*] Funny, I didn't recognize your voice.
BERENGER: I didn't recognize yours either.
JEAN: [*still with his back turned*] Sit down!
BERENGER: Aren't you feeling well?
[JEAN *replies with a grunt*.]
You know, Jean, it was stupid of me to get so upset yesterday over a thing like that.
JEAN: A thing like what?
BERENGER: Yesterday …
JEAN: When yesterday? Where yesterday?
BERENGER: Don't you remember? It was about that wretched rhinoceros.
JEAN: What rhinoceros?
BERENGER: The rhinoceros, or rather, the two wretched rhinoceroses we saw.
JEAN: Oh yes, I remember … How do you know they were wretched?
BERENGER: Oh I just said that.
JEAN: Oh. Well let's not talk any more about it.
BERENGER: That's very nice of you.
JEAN: Then that's that.
BERENGER: But I would like to say how sorry I am for being so insistent … and so obstinate … and getting so angry … in fact … I acted stupidly.
JEAN: That's not surprising with you.
BERENGER: I'm very sorry.
JEAN: I don't feel very well. [*He coughs*.]
BERENGER: That's probably why you're in bed. [*With a change of tone:*] You know, Jean, as it turned out, we were both right.
JEAN: What about?
BERENGER: About … well, you know, the same thing. Sorry to bring it up again, but I'll only mention it briefly. I just wanted you to know that in our different ways we were both right. It's been proved now. There are some rhinoceroses in the town with two horns and some with one.
JEAN: That's what I told you! Well, that's just too bad.
BERENGER: Yes, too bad.
JEAN: Or maybe it's all to the good; it depends.
BERENGER: [*continuing*] In the final analysis it doesn't much matter which comes from where. The important thing, as I see it is the fact that they're there at all, because …
JEAN: [*turning and sitting on his unmade bed, facing* BERENGER] I don't feel well, I don't feel well at all!
BERENGER: Oh I am sorry! What do you think it is?
JEAN: I don't know exactly, there's something wrong somewhere …
BERENGER: Do you feel weak?
JEAN: Not at all. On the contrary, I feel full of beans.
BERENGER: I meant just a passing weakness. It happens to everybody.
JEAN: It never happens to me.
BERENGER: Perhaps you're too healthy then. Too much energy can be a bad thing. It unsettles the nervous system.
JEAN: My nervous system is in perfect order. [*His voice has become more and more hoarse*.] I'm sound in mind and limb. I come from a long line of …
BERENGER: I know you do. Perhaps you've just caught a chill. Have you got a temperature?
JEAN: I don't know. Yes, probably I have a touch of fever. My head aches.
BERENGER: Just a slight migraine. Would you like me to leave you alone?

JEAN: No, stay. You don't worry me.
BERENGER: Your voice is hoarse, too.
JEAN: Hoarse?
BERENGER: A bit hoarse, yes. That's why I didn't recognize it.
JEAN: Why should I be hoarse? My voice hasn't changed; it's yours that's changed!
BERENGER: Mine?
JEAN: Why not?
BERENGER: It's possible. I hadn't noticed.
JEAN: I sometimes wonder if you're capable of noticing anything. [*Putting his hand to his forehead.*] Actually it's my forehead that hurts. I must have given it a knock. [*His voice is even hoarser.*]
BERENGER: When did you do that?
JEAN: I don't know. I don't remember it happening.
BERENGER: But it must have hurt you.
JEAN: I must have done it while I was asleep.
BERENGER: The shock would have wakened you up. You must have just dreamed you knocked yourself.
JEAN: I never dream …
BERENGER: [*continuing*] Your headache must have come on while you were asleep. You've forgotten you dreamed, or rather you only remember subconsciously.
JEAN: Subconsciously, me? I'm master of my own thoughts, my mind doesn't wander. I think straight, I always think straight.
BERENGER: I know that. I haven't made myself clear.
JEAN: Then make yourself clearer. And you needn't bother to make any of your unpleasant observations to me.
BERENGER: One often has the impression that one has knocked oneself when one has a headache. [*Coming closer to* JEAN.] If you'd really knocked yourself, you'd have a bump. [*Looking at* JEAN.] Oh, you've got one, you do have a bump, in fact.
JEAN: A bump?
BERENGER: Just a tiny one.
JEAN: Where?
BERENGER: [*pointing to* JEAN's *forehead*] There, it starts just above your nose.
JEAN: I've no bump. We've never had bumps in my family.
BERENGER: Have you got a mirror?
JEAN: That's the limit! [*Touching his forehead.*] I can feel something. I'm going to have a look, in the bathroom. [*He gets up abruptly and goes to the bathroom.* BERENGER *watches him as he goes. Then, from the bathroom*:] It's true, I have got a bump. [*He comes back; his skin has become greener.*] So you see I did knock myself.
BERENGER: You don't look well, your skin is quite green.
JEAN: You seem to delight in saying disagreeable things to me. Have you taken a look at yourself lately?
BERENGER: Forgive me. I didn't mean to upset you.
JEAN: [*very hoarse*] That's hard to believe.
BERENGER: Your breathing's very heavy. Does your throat hurt?
[*Jean goes and sits on his bed again.*]
If your throat hurts, perhaps it's a touch of quinsy.
JEAN: Why should I have quinsy?
BERENGER: It's nothing to be ashamed of—I sometimes get it. Let me feel your pulse. [*He rises and takes Jean's pulse.*]
JEAN: [*in an even hoarser voice*] Oh, it'll pass.
BERENGER: Your pulse is normal. You needn't get alarmed.
JEAN: I'm not alarmed in the slightest—why should I be?

***Master Harold…and the Boys* by Athol Fugard (1982)**

Sam: Of course it is. That's what I've been trying to say to you all afternoon. And it's beautiful because that is what we want life to be like. But instead, like you said, Hally, we're bumping into each other all the time. Look at the three of us this afternoon: I've bumped into Willie, the two of us have bumped into you, you've bumped into your mother, she bumping into your Dad. . . . None of us knows the steps and there's no music playing. And it doesn't stop with us. The whole world is doing it all the time. Open a newspaper and what do you read? America has bumped into Russia, England is bumping into India, rich man bumps into poor man. Those are big collisions, Hally. They make for a lot of bruises. People get hurt in all that bumping, and we're sick and tired of it now. It's been going on for too long. Are we never going to get it right? . . . Learn to dance life like champions instead of always being just a bunch of beginners at it?

Hally: (*Deep and sincere admiration of the man*) You've got a vision, Sam!

Sam: Not just me. What I'm saying to you is that everybody's got it. That's why there's only standing room left for the Centenary Hall in two weeks' time. For as long as the music lasts, we are going to see six couples get it right, the way we want life to be.

Hally: But is that the best we can do, Sam . . . watch six finalists dreaming about the way it should be?

Sam: I don't know. But it starts with that. Without the dream we won't know what we're going for. And anyway I reckon there are a few people who have got past just dreaming about it and are trying for something real. Remember that thing we read once in the paper about the Mahatma Gandhi? Going without food to stop those riots in India?

Grades 9–10: Poetry

"Song" by John Donne (1635)

Goe, and catche a falling starre,
    Get with child a mandrake roote,
Tell me, where all past yeares are,
    Or who cleft the Divels foot,
Teach me to heare Mermaides singing,
Or to keep off envies stinging,
        And finde
        What winde
Serves to advance an honest minde.

If thou beest borne to strange sights,
    Things invisible to see,
Ride ten thousand daies and nights,
    Till age snow white haires on thee,
Thou, when thou return'st, wilt tell mee
All strange wonders that befell thee,
        And sweare
        No where
Lives a woman true, and faire.

If thou findst one, let mee know,
    Such a Pilgrimage were sweet;
Yet doe not, I would not goe,
    Though at next doore wee might meet,
Though shee were true, when you met her,
And last, till you write your letter,
        Yet shee
        Will bee
False, ere I come, to two, or three.

“Ozymandias” by Percy Bysshe Shelley (1810)

I met a traveller from an antique land
Who said—“Two vast and trunkless legs of stone
Stand in the desert … Near them, on the sand,
Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them, and the heart that fed;
And on the pedestal these words appear:
’My name is Ozymandias, King of Kings:
Look on my works, ye Mighty, and despair!’
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.”

“The Raven” by Edgar Allen Poe (1845)

Once upon a midnight dreary, while I pondered, weak and weary,
Over many a quaint and curious volume of forgotten lore —
While I nodded, nearly napping, suddenly there came a tapping,
As of some one gently rapping, rapping at my chamber door.
""T is some visiter," I muttered, "tapping at my chamber door —
Only this and nothing more."

Ah, distinctly I remember it was in the bleak December;
And each separate dying ember wrought its ghost upon the floor.
Eagerly I wished the morrow; — vainly I had sought to borrow
From my books surcease of sorrow — sorrow for the lost Lenore —
For the rare and radiant maiden whom the angels name Lenore —
Nameless *here* for evermore.

And the silken, sad, uncertain rustling of each purple curtain
Thrilled me — filled me with fantastic terrors never felt before;
So that now, to still the beating of my heart, I stood repeating
""T is some visiter entreating entrance at my chamber door —
Some late visiter entreating entrance at my chamber door; —
This it is and nothing more."

Presently my soul grew stronger; hesitating then no longer,
"Sir," said I, "or Madam, truly your forgiveness I implore;
But the fact is I was napping, and so gently you came rapping,
And so faintly you came tapping, tapping at my chamber door,
That I scarce was sure I heard you" — here I opened wide the door;—
Darkness there and nothing more.

Deep into that darkness peering, long I stood there wondering, fearing,
Doubting, dreaming dreams no mortal ever dared to dream before;
But the silence was unbroken, and the stillness gave no token,
And the only word there spoken was the whispered word, "Lenore?"
This I whispered, and an echo murmured back the word, "Lenore!"
Merely this and nothing more.

Back into the chamber turning, all my soul within me burning,
Soon again I heard a tapping somewhat louder than before.
"Surely," said I, "surely that is something at my window lattice;
Let me see, then, what thereat is, and this mystery explore —
Let my heart be still a moment and this mystery explore; —
'Tis the wind and nothing more!"

Open here I flung the shutter, when, with many a flirt and flutter,
In there stepped a stately Raven of the saintly days of yore;

Not the least obeisance made he; not a minute stopped or stayed he;
But with mien of lord or lady, perched above my chamber door —
Perched upon a bust of Pallas just above my chamber door —
Perched, and sat, and nothing more.

Then this ebony bird beguiling my sad fancy into smiling,
By the grave and stern decorum of the countenance it wore,
"Though thy crest be shorn and shaven, thou," I said, "art sure no craven,
Ghastly grim and ancient Raven wandering from the Nightly shore —
Tell me what thy lordly name is on the Night's Plutonian shore!"
Quoth the Raven "Nevermore."

Much I marvelled this ungainly fowl to hear discourse so plainly,
Though its answer little meaning — little relevancy bore;
For we cannot help agreeing that no living human being
Ever yet was blessed with seeing bird above his chamber door —
Bird or beast upon the sculptured bust above his chamber door,
With such name as "Nevermore."

But the Raven, sitting lonely on the placid bust, spoke only
That one word, as if his soul in that one word he did outpour.
Nothing farther then he uttered — not a feather then he fluttered —
Till I scarcely more than muttered "Other friends have flown before —
On the morrow *he* will leave me, as my Hopes have flown before."
Then the bird said "Nevermore."

Startled at the stillness broken by reply so aptly spoken,
"Doubtless," said I, "what it utters is its only stock and store
Caught from some unhappy master whom unmerciful Disaster
Followed fast and followed faster till his songs one burden bore —
Till the dirges of his Hope that melancholy burden bore
Of 'Never — nevermore.'"

But the Raven still beguiling my sad fancy into smiling,
Straight I wheeled a cushioned seat in front of bird, and bust and door;
Then, upon the velvet sinking, I betook myself to linking
Fancy unto fancy, thinking what this ominous bird of yore —
What this grim, ungainly, ghastly, gaunt, and ominous bird of yore
Meant in croaking "Nevermore."

This I sat engaged in guessing, but no syllable expressing
To the fowl whose fiery eyes now burned into my bosom's core;
This and more I sat divining, with my head at ease reclining
On the cushion's velvet lining that the lamp-light gloated o'er,
But whose velvet-violet lining with the lamp-light gloating o'er,
She shall press, ah, nevermore!

Then, methought, the air grew denser, perfumed from an unseen censer
Swung by seraphim whose foot-falls tinkled on the tufted floor.
"Wretch," I cried, "thy God hath lent thee — by these angels he hath sent thee
Respite — respite and nepenthe from thy memories of Lenore;
Quaff, oh quaff this kind nepenthe and forget this lost Lenore!"
Quoth the Raven "Nevermore."

"Prophet!" said I, "thing of evil! — prophet still, if bird or devil! —
Whether Tempter sent, or whether tempest tossed thee here ashore,
Desolate yet all undaunted, on this desert land enchanted —
On this home by Horror haunted — tell me truly, I implore —
Is there — *is* there balm in Gilead? — tell me — tell me, I implore!"
Quoth the Raven "Nevermore."

"Prophet!" said I, "thing of evil! — prophet still, if bird or devil!
By that Heaven that bends above us — by that God we both adore —
Tell this soul with sorrow laden if, within the distant Aidenn,
It shall clasp a sainted maiden whom the angels name Lenore —
Clasp a rare and radiant maiden whom the angels name Lenore."
Quoth the Raven "Nevermore."

"Be that word our sign of parting, bird or fiend!" I shrieked, upstarting —
"Get thee back into the tempest and the Night's Plutonian shore!
Leave no black plume as a token of that lie thy soul hath spoken!
Leave my loneliness unbroken! — quit the bust above my door!
Take thy beak from out my heart, and take thy form from off my door!"
Quoth the Raven "Nevermore."

And the Raven, never flitting, still is sitting, *still* is sitting
On the pallid bust of Pallas just above my chamber door;
And his eyes have all the seeming of a demon's that is dreaming,
And the lamp-light o'er him streaming throws his shadow on the floor;
And my soul from out that shadow that lies floating on the floor
Shall be lifted — nevermore!

“We Grow Accustomed to the Dark” by Emily Dickinson (1893)

We grow accustomed to the Dark,
When Light is put away,
As when the Neighbor holds the Lamp
To witness her Goodbye.

A Moment—We uncertain step
For newness of the night,
Then fit our Vision to the Dark,
And meet the Road erect.

And so of larger Darknesses,
Those Evenings of the Brain,
When not a Moon disclose a sign,
Or Star, come out, within.

The Bravest grope a little
And sometimes hit a Tree
Directly in the Forehead,
But as they learn to see,

Either the Darkness alters
Or something in the sight
Adjusts itself to Midnight,
And Life steps almost straight.

“Loveliest of Trees” by A. E. Houseman (1896)

Loveliest of Trees, the cherry now
Is hung with bloom along the bough,
And stands about the woodland ride
Wearing white for Eastertide.

Now, of my threescore years and ten,
Twenty will not come again,
And take from seventy springs a score,
It only leaves me fifty more.

And since to look at things in bloom
Fifty springs are little room,
About the woodlands I will go
To see the cherry hung with snow.

“Lift Ev’ry Voice and Sing” by James Weldon Johnson (1900)

Lift ev’ry voice and sing,
Till earth and heaven ring,
Ring with the harmonies of Liberty,
Let our rejoicing rise
High as the list’ning skies,
Let it resound loud as the rolling sea.
Sing a song full of the faith that the dark past has taught us
Sing a song full of the hope that the present has brought us
Facing the rising sun of our new day begun,
Let us march on till victory is won.

Stony the road we trod
Bitter the chast'ning rod,
Felt in the days when hope unborn had died;
Yet with a steady beat
Have not our weary feet
Come to the place for which our fathers sighed?
We have come over a way that with tears has been watered
We have come, treading our path thro' the blood of the slaughtered,
Out from the gloomy past, till now we stand at last
Where the white gleam of our bright star is cast.

God of our weary years,
God of our silent tears,
Thou who hast brought us thus far on the way;
Thou who hast by Thy might,
Led us into the light, Keep us forever in the path, we pray.
Lest our feet stray from the places, our God, where we meet Thee,
Lest our hearts, drunk with the wine of the world we forget Thee;
Shadowed beneath Thy hand, may we forever stand,
True to our God, true to our native land.

“Domination of Black” by Wallace Stevens (1916)

At night, by the fire,
The colors of the bushes
And of the fallen leaves,
Repeating themselves,
Turned in the room,
Like the leaves themselves
Turning in the wind.
Yes: but the color of the heavy hemlocks
Came striding.
And I remembered the cry of the peacocks.

The colors of their tails
Were like the leaves themselves
Turning in the wind,
In the twilight wind.
They swept over the room,
Just as they flew from the boughs of the hemlocks
Down to the ground.
I heard them cry—the peacocks.
Was it a cry against the twilight,
Or against the leaves themselves
Turning in the wind,
Turning as the flames
Turned in the fire,
Turning as the tails of the peacocks
Turned in the loud fire,
Loud as the hemlocks
Full of the cry of the peacocks?
Or was it a cry against the hemlocks?

Out of the window,
I saw how the planets gathered
Like the leaves themselves
Turning in the wind.
I saw how the night came,
Came striding like the color of the heavy hemlocks.
I felt afraid.
And I remembered the cry of the peacocks.

“Yet Do I Marvel” by Countee Cullen (1925)

I doubt not God is good, well-meaning, kind,
And did He stoop to quibble could tell why
The little buried mole continues blind,
Why flesh that mirrors Him must some day die,
Make plain the reason tortured Tantalus
Is baited by the fickle fruit, declare
If merely brute caprice dooms Sisyphus
To struggle up a never-ending stair.
Inscrutable His ways are, and immune
To catechism by a mind too strewn
With petty cares to slightly understand
What awful brain compels His awful hand.
Yet do I marvel at this curious thing:
To make a poet black, and bid him sing!

“Women” by Alice Walker (1970)

They were women then
My mama’s generation
Husky of voice—Stout of
Step
[…]

“I Am Offering This Poem to You” by Jimmy Santiago Baca (1977)

I am offering this poem to you,
since I have nothing else to give.
Keep it like a warm coat
when winter comes to cover you,
or like a pair of thick socks
the cold cannot bite through,

I love you,

[…]

Grades 9–10: Informational Text (English Language Arts)

"Speech to the Second Virginia Convention" by Patrick Henry (1775)

MR. PRESIDENT: No man thinks more highly than I do of the patriotism, as well as abilities, of the very worthy gentlemen who have just addressed the House. But different men often see the same subject in different lights; and, therefore, I hope it will not be thought disrespectful to those gentlemen if, entertaining as I do, opinions of a character very opposite to theirs, I shall speak forth my sentiments freely, and without reserve. This is no time for ceremony. The question before the House is one of awful moment to this country. For my own part, I consider it as nothing less than a question of freedom or slavery; and in proportion to the magnitude of the subject ought to be the freedom of the debate. It is only in this way that we can hope to arrive at truth, and fulfill the great responsibility which we hold to God and our country. Should I keep back my opinions at such a time, through fear of giving offence, I should consider myself as guilty of treason towards my country, and of an act of disloyalty toward the majesty of heaven, which I revere above all earthly kings.

Mr. President, it is natural to man to indulge in the illusions of hope. We are apt to shut our eyes against a painful truth, and listen to the song of that siren till she transforms us into beasts. Is this the part of wise men, engaged in a great and arduous struggle for liberty? Are we disposed to be of the number of those who, having eyes, see not, and, having ears, hear not, the things which so nearly concern their temporal salvation? For my part, whatever anguish of spirit it may cost, I am willing to know the whole truth; to know the worst, and to provide for it.

I have but one lamp by which my feet are guided; and that is the lamp of experience. I know of no way of judging of the future but by the past. And judging by the past, I wish to know what there has been in the conduct of the British ministry for the last ten years, to justify those hopes with which gentlemen have been pleased to solace themselves, and the House? Is it that insidious smile with which our petition has been lately received? Trust it not, sir; it will prove a snare to your feet. Suffer not yourselves to be betrayed with a kiss. Ask yourselves how this gracious reception of our petition comports with these war-like preparations which cover our waters and darken our land. Are fleets and armies necessary to a work of love and reconciliation? Have we shown ourselves so unwilling to be reconciled, that force must be called in to win back our love? Let us not deceive ourselves, sir. These are the implements of war and subjugation; the last arguments to which kings resort. I ask, gentlemen, sir, what means this martial array, if its purpose be not to force us to submission? Can gentlemen assign any other possible motive for it? Has Great Britain any enemy, in this quarter of the world, to call for all this accumulation of navies and armies? No, sir, she has none. They are meant for us; they can be meant for no other. They are sent over to bind and rivet upon us those chains which the British ministry have been so long forging. And what have we to oppose to them? Shall we try argument? Sir, we have been trying that for the last ten years. Have we anything new to offer upon the subject? Nothing. We have held the subject up in every light of which it is capable; but it has been all in vain. Shall we resort to entreaty and humble supplication? What terms shall we find which have not been already exhausted? Let us not, I beseech you, sir, deceive ourselves. Sir, we have done everything that could be done, to avert the storm which is now coming on. We have petitioned; we have remonstrated; we have supplicated; we have prostrated ourselves before the throne, and have implored its interposition to arrest the tyrannical hands of the ministry and Parliament. Our petitions have been slighted; our remonstrances have produced additional violence and insult; our supplications have been disregarded; and we have been spurned, with contempt, from the foot of the throne. In vain, after these things, may we indulge the fond hope of peace and reconciliation. There is no longer any room for hope. If we wish to be free, if we mean to preserve inviolate those inestimable privileges for which we have been so long contending, if we mean not basely to abandon the noble struggle in which we have been so long engaged, and which we have pledged ourselves never to abandon until the glorious object of our contest shall be obtained, we must fight! I repeat it, sir, we must fight! An appeal to arms and to the God of Hosts is all that is left us!

They tell us, sir, that we are weak; unable to cope with so formidable an adversary. But when shall we be stronger? Will it be the next week, or the next year? Will it be when we are totally disarmed, and when a British guard shall be stationed in every house? Shall we gather strength by irresolution and inaction? Shall we acquire the means of effectual resistance, by lying supinely on our backs, and hugging the delusive phantom of hope, until our enemies shall have bound us hand and foot? Sir, we are not weak if we make a proper use of those means which the God of nature hath

placed in our power. Three millions of people, armed in the holy cause of liberty, and in such a country as that which we possess, are invincible by any force which our enemy can send against us. Besides, sir, we shall not fight our battles alone. There is a just God who presides over the destinies of nations; and who will raise up friends to fight our battles for us. The battle, sir, is not to the strong alone; it is to the vigilant, the active, the brave. Besides, sir, we have no election. If we were base enough to desire it, it is now too late to retire from the contest. There is no retreat but in submission and slavery! Our chains are forged! Their clanking may be heard on the plains of Boston! The war is inevitable and let it come! I repeat it, sir, let it come.

It is in vain, sir, to extenuate the matter. Gentlemen may cry, Peace, Peace but there is no peace. The war is actually begun! The next gale that sweeps from the north will bring to our ears the clash of resounding arms! Our brethren are already in the field! Why stand we here idle? What is it that gentlemen wish? What would they have? Is life so dear, or peace so sweet, as to be purchased at the price of chains and slavery? Forbid it, Almighty God! I know not what course others may take; but as for me, give me liberty or give me death!

“Second Inaugural Address” by Abraham Lincoln (1865)

Fellow-Countrymen:

At this second appearing to take the oath of the Presidential office there is less occasion for an extended address than there was at the first. Then a statement somewhat in detail of a course to be pursued seemed fitting and proper. Now, at the expiration of four years, during which public declarations have been constantly called forth on every point and phase of the great contest which still absorbs the attention and engrosses the energies of the nation, little that is new could be presented. The progress of our arms, upon which all else chiefly depends, is as well known to the public as to myself, and it is, I trust, reasonably satisfactory and encouraging to all. With high hope for the future, no prediction in regard to it is ventured.

On the occasion corresponding to this four years ago all thoughts were anxiously directed to an impending civil war. All dreaded it, all sought to avert it. While the inaugural address was being delivered from this place, devoted altogether to saving the Union without war, urgent agents were in the city seeking to destroy it without war—seeking to dissolve the Union and divide effects by negotiation. Both parties deprecated war, but one of them would make war rather than let the nation survive, and the other would accept war rather than let it perish, and the war came.

One-eighth of the whole population were colored slaves, not distributed generally over the Union, but localized in the southern part of it. These slaves constituted a peculiar and powerful interest. All knew that this interest was somehow the cause of the war. To strengthen, perpetuate, and extend this interest was the object for which the insurgents would rend the Union even by war, while the Government claimed no right to do more than to restrict the territorial enlargement of it. Neither party expected for the war the magnitude or the duration which it has already attained. Neither anticipated that the cause of the conflict might cease with or even before the conflict itself should cease. Each looked for an easier triumph, and a result less fundamental and astounding. Both read the same Bible and pray to the same God, and each invokes His aid against the other. It may seem strange that any men should dare to ask a just God's assistance in wringing their bread from the sweat of other men's faces, but let us judge not, that we be not judged. The prayers of both could not be answered. That of neither has been answered fully. The Almighty has His own purposes. "Woe unto the world because of offenses; for it must needs be that offenses come, but woe to that man by whom the offense cometh." If we shall suppose that American slavery is one of those offenses which, in the providence of God, must needs come, but which, having continued through His appointed time, He now wills to remove, and that He gives to both North and South this terrible war as the woe due to those by whom the offense came, shall we discern therein any departure from those divine attributes which the believers in a living God always ascribe to Him? Fondly do we hope, fervently do we pray, that this mighty scourge of war may speedily pass away. Yet, if God wills that it continue until all the wealth piled by the bondsman's two hundred and fifty years of unrequited toil shall be sunk, and until every drop of blood drawn with the lash shall be paid by another drawn with the sword, as was said three thousand years ago, so still it must be said "the judgments of the Lord are true and righteous altogether."

With malice toward none, with charity for all, with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in, to bind up the nation's wounds, to care for him who shall have borne the battle and for his widow and his orphan, to do all which may achieve and cherish a just and lasting peace among ourselves and with all nations.

"State of the Union Address" by Franklin Delano Roosevelt (1941)

For there is nothing mysterious about the foundations of a healthy and strong democracy. The basic things expected by our people of their political and economic systems are simple. They are:

Equality of opportunity for youth and for others.

Jobs for those who can work.

Security for those who need it.

The ending of special privilege for the few.

The preservation of civil liberties for all.

The enjoyment of the fruits of scientific progress in a wider and constantly rising standard of living.

These are the simple, basic things that must never be lost sight of in the turmoil and unbelievable complexity of our modern world. The inner and abiding strength of our economic and political systems is dependent upon the degree to which they fulfill these expectations.

Many subjects connected with our social economy call for immediate improvement. As examples:

We should bring more citizens under the coverage of old-age pensions and unemployment insurance.

We should widen the opportunities for adequate medical care.

We should plan a better system by which persons deserving or needing gainful employment may obtain it.

I have called for personal sacrifice. I am assured of the willingness of almost all Americans to respond to that call.

A part of the sacrifice means the payment of more money in taxes. In my Budget Message I shall recommend that a greater portion of this great defense program be paid for from taxation than we are paying today. No person should try, or be allowed, to get rich out of this program; and the principle of tax payments in accordance with ability to pay should be constantly before our eyes to guide our legislation.

If the Congress maintains these principles, the voters, putting patriotism ahead of pocketbooks, will give you their applause.

In the future days, which we seek to make secure, we look forward to a world founded upon four essential human freedoms.

The first is freedom of speech and expression--everywhere in the world.

The second is freedom of every person to worship God in his own way--everywhere in the world.

The third is freedom from want--which, translated into world terms, means economic understandings which will secure to every nation a healthy peacetime life for its inhabitants-everywhere in the world.

The fourth is freedom from fear--which, translated into world terms, means a world-wide reduction of armaments to such a point and in such a thorough fashion that no nation will be in a position to commit an act of physical aggression against any neighbor--anywhere in the world.

"I Am an American Day Address" by Learned Hand (1944)

We have gathered here to affirm a faith, a faith in a common purpose, a common conviction, a common devotion. Some of us have chosen America as the land of our adoption; the rest have come from those who did the same. For this reason we have some right to consider ourselves a picked group, a group of those who had the courage to break from the past and brave the dangers and the loneliness of a strange land. What was the object that nerved us, or those who went before us, to this choice? We sought liberty; freedom from oppression, freedom from want, freedom to be ourselves. This we then sought; this we now believe that we are by way of winning. What do we mean when we say that first of all we seek liberty? I often wonder whether we do not rest our hopes too much upon constitutions, upon laws and upon courts. These are false hopes; believe me, these are false hopes. Liberty lies in the hearts of men and women; when it dies there, no constitution, no law, no court can even do much to help it. While it lies there it needs no constitution, no law, no court to save it. And what is this liberty which must lie in the hearts of men and women? It is not the ruthless, the unbridled will; it is not freedom to do as one likes. That is the denial of liberty, and leads straight to its overthrow. A society in which men recognize no check upon their freedom soon becomes a society where freedom is the possession of only a savage few; as we have learned to our sorrow.

What then is the spirit of liberty? I cannot define it; I can only tell you my own faith. The spirit of liberty is the spirit which is not too sure that it is right; the spirit of liberty is the spirit which seeks to understand the mind of other men and women; the spirit of liberty is the spirit which weighs their interests alongside its own without bias; the spirit of liberty remembers that not even a sparrow falls to earth unheeded; the spirit of liberty is the spirit of Him who, near two thousand years ago, taught mankind that lesson it has never learned but never quite forgotten; that there may be a kingdom where the least shall be heard and considered side by side with the greatest. And now in that spirit, that spirit of an America which has never been, and which may never be; nay, which never will be except as the conscience and courage of Americans create it; yet in the spirit of that America which lies hidden in some form in the aspirations of us all; in the spirit of that America for which our young men are at this moment fighting and dying; in that spirit of liberty and of America I ask you to rise and with me pledge our faith in the glorious destiny of our beloved country.

"Remarks to the Senate in Support of a Declaration of Conscience" by Margaret Chase Smith (1950)

Mr. President:

I would like to speak briefly and simply about a serious national condition. It is a national feeling of fear and frustration that could result in national suicide and the end of everything that we Americans hold dear. It is a condition that comes from the lack of effective leadership in either the Legislative Branch or the Executive Branch of our Government.

That leadership is so lacking that serious and responsible proposals are being made that national advisory commissions be appointed to provide such critically needed leadership.

I speak as briefly as possible because too much harm has already been done with irresponsible words of bitterness and selfish political opportunism. I speak as briefly as possible because the issue is too great to be obscured by eloquence. I speak simply and briefly in the hope that my words will be taken to heart.

I speak as a Republican. I speak as a woman. I speak as a United States Senator. I speak as an American.

The United States Senate has long enjoyed worldwide respect as the greatest deliberative body in the world. But recently that deliberative character has too often been debased to the level of a forum of hate and character assassination sheltered by the shield of congressional immunity.

It is ironical that we Senators can in debate in the Senate directly or indirectly, by any form of words, impute to any American who is not a Senator any conduct or motive unworthy or unbecoming an American—and without that non-Senator American having any legal redress against us—yet if we say the same thing in the Senate about our colleagues we can be stopped on the grounds of being out of order.

It is strange that we can verbally attack anyone else without restraint and with full protection and yet we hold ourselves above the same type of criticism here on the Senate Floor. Surely the United States Senate is big enough to take self-criticism and self-appraisal. Surely we should be able to take the same kind of character attacks that we "dish out" to outsiders.

I think that it is high time for the United States Senate and its members to do some soul-searching—for us to weigh our consciences—on the manner in which we are performing our duty to the people of America—on the manner in which we are using or abusing our individual powers and privileges.

I think that it is high time that we remembered that we have sworn to uphold and defend the Constitution. I think that it is high time that we remembered that the Constitution, as amended, speaks not only of the freedom of speech but also of trial by jury instead of trial by accusation.

Whether it be a criminal prosecution in court or a character prosecution in the Senate, there is little practical distinction when the life of a person has been ruined.

Those of us who shout the loudest about Americanism in making character assassinations are all too frequently those who, by our own words and acts, ignore some of the basic principles of Americanism:

The right to criticize;

The right to hold unpopular beliefs;

The right to protest;

The right of independent thought.

The exercise of these rights should not cost one single American citizen his reputation or his right to a livelihood nor should he be in danger of losing his reputation or livelihood merely because he happens to know someone who holds unpopular beliefs. Who of us doesn't? Otherwise none of us could call our souls our own. Otherwise thought control would have set in.

The American people are sick and tired of being afraid to speak their minds lest they be politically smeared as "Communists" or "Fascists" by their opponents. Freedom of speech is not what it used to be in America. It has been so abused by some that it is not exercised by others.

The American people are sick and tired of seeing innocent people smeared and guilty people whitewashed. But there have been enough proved cases, such as the Amerasia case, the Hiss case, the Coplon case, the Gold case, to cause the nationwide distrust and strong suspicion that there may be something to the unproved, sensational accusations.

I doubt if the Republican Party could—simply because I don't believe the American people will uphold any political party that puts political exploitation above national interest. Surely we Republicans aren't that desperate for victory.

I don't want to see the Republican Party win that way. While it might be a fleeting victory for the Republican Party, it would be a more lasting defeat for the American people. Surely it would ultimately be suicide for the Republican Party and the two-party system that has protected our American liberties from the dictatorship of a one party system.

As members of the Minority Party, we do not have the primary authority to formulate the policy of our Government. But we do have the responsibility of rendering constructive criticism, of clarifying issues, of allaying fears by acting as responsible citizens.

As a woman, I wonder how the mothers, wives, sisters, and daughters feel about the way in which members of their families have been politically mangled in the Senate debate—and I use the word "debate" advisedly.

As a United States Senator, I am not proud of the way in which the Senate has been made a publicity platform for irresponsible sensationalism. I am not proud of the reckless abandon in which unproved charges have been hurled from the side of the aisle. I am not proud of the obviously staged, undignified countercharges that have been attempted in retaliation from the other side of the aisle.

I don't like the way the Senate has been made a rendezvous for vilification, for selfish political gain at the sacrifice of individual reputations and national unity. I am not proud of the way we smear outsiders from the Floor of the Senate and hide behind the cloak of congressional immunity and still place ourselves beyond criticism on the Floor of the Senate.

As an American, I am shocked at the way Republicans and Democrats alike are playing directly into the Communist design of "confuse, divide, and conquer." As an American, I don't want a Democratic Administration "whitewash" or "cover-up" any more than a want a Republican smear or witch hunt.

As an American, I condemn a Republican "Fascist" just as much I condemn a Democratic "Communist." I condemn a Democrat "Fascist" just as much as I condemn a Republican "Communist." They are equally dangerous to you and me and to our country. As an American, I want to see our nation recapture the strength and unity it once had when we fought the enemy instead of ourselves.

It is with these thoughts that I have drafted what I call a "Declaration of Conscience." I am gratified that Senator Tobey, Senator Aiken, Senator Morse, Senator Ives, Senator Thye, and Senator Hendrickson have concurred in that declaration and have authorized me to announce their concurrence.

[...]

“Address at the March on Washington” by Martin Luther King, Jr. (1963)

Five score years ago, a great American, in whose symbolic shadow we stand today, signed the Emancipation Proclamation. This momentous decree came as a great beacon light of hope to millions of Negro slaves who had been seared in the flames of withering injustice. It came as a joyous daybreak to end the long night of their captivity.

But one hundred years later, the Negro still is not free. One hundred years later, the life of the Negro is still sadly crippled by the manacles of segregation and the chains of discrimination. One hundred years later, the Negro lives on a lonely island of poverty in the midst of a vast ocean of material prosperity. One hundred years later, the Negro is still languished in the corners of American society and finds himself an exile in his own land. And so we've come here today to dramatize a shameful condition.

In a sense we've come to our nation's capital to cash a check. When the architects of our republic wrote the magnificent words of the Constitution and the Declaration of Independence, they were signing a promissory note to which every American was to fall heir. This note was a promise that all men, yes, black men as well as white men, would be guaranteed the "unalienable Rights" of "Life, Liberty and the pursuit of Happiness."

It is obvious today that America has defaulted on this promissory note, insofar as her citizens of color are concerned. Instead of honoring this sacred obligation, America has given the Negro people a bad check, a check which has come back marked "insufficient funds." But we refuse to believe that the bank of justice is bankrupt. We refuse to believe that there are insufficient funds in the great vaults of opportunity of this nation. And so, we've come to cash this check, a check that will give us upon demand the riches of freedom and the security of justice.

We have also come to this hallowed spot to remind America of the fierce urgency of *now*. This is no time to engage in the luxury of cooling off or to take the tranquilizing drug of gradualism. *Now* is the time to make real the promises of democracy. *Now* is the time to rise from the dark and desolate valley of segregation to the sunlit path of racial justice. *Now* is the time to lift our nation from the quicksands of racial injustice to the solid rock of brotherhood. *Now* is the time to make justice a reality for all of God's children.

It would be fatal for the nation to overlook the urgency of the moment. This sweltering summer of the Negro's legitimate discontent will not pass until there is an invigorating autumn of freedom and equality. Nineteen sixty-three is not an end, but a beginning. And those who hope that the Negro needed to blow off steam and will now be content will have a rude awakening if the nation returns to business as usual. And there will be neither rest nor tranquility in America until the Negro is granted his citizenship rights. The whirlwinds of revolt will continue to shake the foundations of our nation until the bright day of justice emerges.

But there is something that I must say to my people, who stand on the warm threshold which leads into the palace of justice: In the process of gaining our rightful place, we must not be guilty of wrongful deeds. Let us not seek to satisfy our thirst for freedom by drinking from the cup of bitterness and hatred. We must forever conduct our struggle on the high plane of dignity and discipline. We must not allow our creative protest to degenerate into physical violence. Again and again, we must rise to the majestic heights of meeting physical force with soul force.

The marvelous new militancy which has engulfed the Negro community must not lead us to a distrust of all white people, for many of our white brothers, as evidenced by their presence here today, have come to realize that their destiny is tied up with our destiny. And they have come to realize that their freedom is inextricably bound to our freedom. We cannot walk alone.

And as we walk, we must make the pledge that we shall always march ahead.
We cannot turn back. There are those who are asking the devotees of civil rights, "When will you be satisfied?"

We can never be satisfied as long as the Negro is the victim of the unspeakable horrors of police brutality.

We can never be satisfied as long as our bodies, heavy with the fatigue of travel, cannot gain lodging in the motels of the highways and the hotels of the cities.

We cannot be satisfied as long as the negro's basic mobility is from a smaller ghetto to a larger one.

We can never be satisfied as long as our children are stripped of their self-hood and robbed of their dignity by signs stating: "For Whites Only."

We cannot be satisfied as long as a Negro in Mississippi cannot vote and a Negro in New York believes he has nothing for which to vote.

No, no, we are not satisfied, and we will not be satisfied until "justice rolls down like waters, and righteousness like a mighty stream."

I am not unmindful that some of you have come here out of great trials and tribulations. Some of you have come fresh from narrow jail cells. And some of you have come from areas where your quest -- quest for freedom left you battered by the storms of persecution and staggered by the winds of police brutality. You have been the veterans of creative suffering. Continue to work with the faith that unearned suffering is redemptive.

Go back to Mississippi, go back to Alabama, go back to South Carolina, go back to Georgia, go back to Louisiana, go back to the slums and ghettos of our northern cities, knowing that somehow this situation can and will be changed. Let us not wallow in the valley of despair.

I say to you today, my friends, that in spite of the difficulties and frustrations of the moment, I still have a dream. It is a dream deeply rooted in the American dream.

I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident, that all men are created equal."

I have a dream that one day on the red hills of Georgia, the sons of former slaves and the sons of former slave owners will be able to sit down together at the table of brotherhood.

I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.

I have a *dream* today!

I have a dream that one day, down in Alabama, with its vicious racists, with its governor having his lips dripping with the words of "interposition" and "nullification" -- one day right there in Alabama little black boys and black girls will be able to join hands with little white boys and white girls as sisters and brothers.

I have a *dream* today!

I have a dream that one day every valley shall be exalted, and every hill and mountain shall be made low, the rough places will be made plain, and the crooked places will be made straight; "and the glory of the Lord shall be revealed and all flesh shall see it together."

This is our hope, and this is the faith with which I return to the South. With this faith, we will be able to hew out of the mountain of despair a stone of hope. With this faith, we will be able to transform the jangling discords of our nation into a beautiful symphony of brotherhood.

With this faith, we will be able to work together, to pray together, to struggle together, to go to jail together, to stand up for freedom together, knowing that we will be free one day.

And this will be the day -- this will be the day when all of God's children will be able to sing with new meaning:

My country 'tis of thee, sweet land of liberty, of thee I sing.
Land where my fathers died, land of the Pilgrim's pride,
From every mountainside, let freedom ring!

And if America is to be a great nation, this must become true.

And so let freedom ring from the prodigious hilltops of New Hampshire.

Let freedom ring from the mighty mountains of New York.

Let freedom ring from the heightening Alleghenies of Pennsylvania.

Let freedom ring from the snow-capped Rockies of Colorado.

Let freedom ring from the curvaceous slopes of California.

But not only that:

Let freedom ring from Stone Mountain of Georgia.

Let freedom ring from Lookout Mountain of Tennessee.

Let freedom ring from every hill and molehill of Mississippi.

From every mountainside, let freedom ring.

And when this happens, when we allow freedom ring, when we let it ring from every village and every hamlet, from every state and every city, we will be able to speed up that day when *all* of God's children, black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old Negro spiritual:

Free at last! Free at last! Thank God Almighty, we are free at last!

“Nobel Prize Acceptance Speech” by Elie Wiesel (1986)

It is with a profound sense of humility that I accept the honor - the highest there is - that you have chosen to bestow upon me. I know your choice transcends my person.

Do I have the right to represent the multitudes who have perished? Do I have the right to accept this great honor on their behalf? I do not. No one may speak for the dead, no one may interpret their mutilated dreams and visions. And yet, I sense their presence. I always do - and at this moment more than ever. The presence of my parents, that of my little sister. The presence of my teachers, my friends, my companions…
This honor belongs to all the survivors and their children and, through us to the Jewish people with whose destiny I have always identified.

I remember: it happened yesterday, or eternities ago. A young Jewish boy discovered the Kingdom of Night. I remember his bewilderment, I remember his anguish. It all happened so fast. The ghetto. The deportation. The sealed cattle car. The fiery altar upon which the history of our people and the future of mankind were meant to be sacrificed.

I remember he asked his father: "Can this be true? This is the twentieth century, not the Middle Ages. Who would allow such crimes to be committed? How could the world remain silent?"

And now the boy is turning to me. "Tell me," he asks, "what have you done with my future, what have you done with your life?" And I tell him that I have tried. That I have tried to keep memory alive, that I have tried to fight those who would forget. Because if we forget, we are guilty, we are accomplices.

And then I explain to him how naïve we were, that the world did know and remained silent. And that is why I swore never to be silent whenever wherever human beings endure suffering and humiliation. We must take sides. Neutrality helps the oppressor, never the victim. Silence encourages the tormentor, never the tormented. Sometimes we must interfere. When human lives are endangered, when human dignity is in jeopardy, national borders and sensitivities become irrelevant. Wherever men and women are persecuted because of their race, religion, or political views, that place must - at that moment - become the center of the universe.

“A Quilt of a Country” by Anna Quindlen (2001)

America is an improbable idea. A mongrel nation built of ever-changing disparate parts, it is held together by a notion, the notion that all men are created equal, though everyone knows that most men consider themselves better than someone. "Of all the nations in the world, the United States was built in nobody's image," the historian Daniel Boorstin wrote. That's because it was built of bits and pieces that seem discordant, like the crazy quilts that have been one of its great folk-art forms, velvet and calico and checks and brocades. Out of many, one. That is the ideal.

The reality is often quite different, a great national striving consisting frequently of failure. Many of the oft-told stories of the most pluralistic nation on earth are stories not of tolerance, but of bigotry. Slavery and sweatshops, the burning of crosses and the ostracism of the other. Children learn in social-studies class and in the news of the lynching of blacks, the denial of rights to women, the murders of gay men. It is difficult to know how to convince them that this amounts to "crown thy good with brotherhood," that amid all the failures is something spectacularly successful. Perhaps they understand it at this moment, when enormous tragedy, as it so often does, demands a time of reflection on enormous blessings.

This is a nation founded on a conundrum, what Mario Cuomo has characterized as "community added to individualism." These two are our defining ideals; they are also in constant conflict. Historians today bemoan the ascendancy of a kind of prideful apartheid in America, saying that the clinging to ethnicity, in background and custom, has undermined the concept of unity. These historians must have forgotten the past, or have gilded it. The New York of my children is no more Balkanized, probably less so, than the Philadelphia of my father, in which Jewish boys would walk several blocks out of their way to avoid the Irish divide of Chester Avenue. (I was the product of a mixed marriage, across barely bridgeable lines: an Italian girl, an Irish boy. How quaint it seems now, how incendiary then.) The Brooklyn of Francie Nolan's famous tree, the Newark of which Portnoy complained, even the uninflected WASP suburbs of Cheever's characters: they are ghettos, pure and simple. Do the Cambodians and the Mexicans in California coexist less easily today than did the Irish and Italians of Massachusetts a century ago? You know the answer.

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Grades 11–12

Grades 11–12: Narratives

Pride and Prejudice by Jane Austen (1813)

From Chapter 1

It is a truth universally acknowledged that a single man in possession of a good fortune, must be in want of a wife.

However little known the feelings or views of such a man may be on his first entering a neighbourhood, this truth is so well fixed in the minds of the surrounding families that he is considered as the rightful property of someone or other of their daughters.

"My dear Mr. Bennet," said his lady to him one day, "have you heard that Netherfield Park is let at last?"

Mr. Bennet replied that he had not.

"But it is," returned she; "for Mrs. Long has just been here, and she told me all about it."

Mr. Bennet made no answer.

"Do not you want to know who has taken it?" cried his wife impatiently.

"*You* want to tell me, and I have no objection to hearing it."

This was invitation enough.

"Why, my dear, you must know, Mrs. Long says that Netherfield is taken by a young man of large fortune from the north of England; that he came down on Monday in a chaise and four to see the place, and was so much delighted with it, that he agreed with Mr. Morris immediately; that he is to take possession before Michaelmas, and some of his servants are to be in the house by the end of next week."

"What is his name?"

"Bingley."

"Is he married or single?"

"Oh! single, my dear, to be sure! A single man of large fortune; four or five thousand a year. What a fine thing for our girls!"

"How so? how can it affect them?"

"My dear Mr. Bennet," replied his wife, "how can you be so tiresome! You must know that I am thinking of his marrying one of them."

"Is that his design in settling here?"

"Design! nonsense, how can you talk so! But it is very likely that he *may* fall in love with one of them, and therefore you must visit him as soon as he comes."

"I see no occasion for that. You and the girls may go, or you may send them by themselves, which perhaps will be still better, for as you are as handsome as any of them, Mr. Bingley might like you the best of the party."

"My dear, you flatter me. I certainly *have* had my share of beauty, but I do not pretend to be anything extraordinary now. When a woman has five grown-up daughters she ought to give over thinking of her own beauty."

"In such cases a woman has not often much beauty to think of."

"But, my dear, you must indeed go and see Mr. Bingley when he comes into the neighbourhood."

"It is more than I engage for, I assure you."

"But consider your daughters. Only think what an establishment it would be for one of them. Sir William and Lady Lucas are determined to go, merely on that account, for in general, you know, they visit no new-comers. Indeed you must go, for it will be impossible for us to visit him if you do not."

"You are over-scrupulous surely. I dare say Mr. Bingley will be very glad to see you; and I will send a few lines by you to assure him of my hearty consent to his marrying whichever he chooses of the girls: though I must throw in a good word for my little Lizzy."

"I desire you will do no such thing. Lizzy is not a bit better than the others; and I am sure she is not half so handsome as Jane, nor half so good-humoured as Lydia. But you are always giving *her* the preference."

"They have none of them much to recommend them," replied he; "they are all silly and ignorant, like other girls; but Lizzy has something more of quickness than her sisters."

"Mr. Bennet, how can you abuse your own children in such a way! You take delight in vexing me. You have no compassion on my poor nerves."

"You mistake me, my dear. I have a high respect for your nerves. They are my old friends. I have heard you mention them with consideration these twenty years at least."

"Ah! you do not know what I suffer."

"But I hope you will get over it, and live to see many young men of four thousand a year come into the neighbourhood."

"It will be no use to us if twenty such should come, since you will not visit them."

"Depend upon it, my dear, that when there are twenty, I will visit them all."

Mr. Bennet was so odd a mixture of quick parts, sarcastic humour, reserve, and caprice, that the experience of three-and-twenty years had been insufficient to make his wife understand his character. *Her* mind was less difficult to develop. She was a woman of mean understanding, little information, and uncertain temper. When she was discontented she fancied herself nervous. The business of her life was to get her daughters married; its solace was visiting and news.

[...]

***Jane Eyre* by Charlotte Brontë (1848)**

There was no possibility of taking a walk that day. We had been wandering, indeed, in the leafless shrubbery an hour in the morning; but since dinner (Mrs. Reed, when there was no company, dined early) the cold winter wind had brought with it clouds so sombre, and a rain so penetrating, that further out-door exercise was now out of the question.

I was glad of it: I never liked long walks, especially on chilly afternoons: dreadful to me was the coming home in the raw twilight, with nipped fingers and toes, and a heart saddened by the chidings of Bessie, the nurse, and humbled by the consciousness of my physical inferiority to Eliza, John, and Georgiana Reed.

The said Eliza, John, and Georgiana were now clustered round their mama in the drawing-room: she lay reclined on a sofa by the fireside, and with her darlings about her (for the time neither quarrelling nor crying) looked perfectly happy. Me, she had dispensed from joining the group; saying, "She regretted to be under the necessity of keeping me at a distance; but that until she heard from Bessie, and could discover by her own observation, that I was endeavouring in good earnest to acquire a more sociable and childlike disposition, a more attractive and sprightly manner—something lighter, franker, more natural, as it were—she really must exclude me from privileges intended only for contented, happy, little children."

"What does Bessie say I have done?" I asked.

"Jane, I don't like cavillers or questioners; besides, there is something truly forbidding in a child taking up her elders in that manner. Be seated somewhere; and until you can speak pleasantly, remain silent."

A breakfast-room adjoined the drawing-room, I slipped in there. It contained a bookcase: I soon possessed myself of a volume, taking care that it should be one stored with pictures. I mounted into the window-seat: gathering up my feet, I sat cross-legged, like a Turk; and, having drawn the red moreen curtain nearly close, I was shrined in double retirement.

Folds of scarlet drapery shut in my view to the right hand; to the left were the clear panes of glass, protecting, but not separating me from the drear November day. At intervals, while turning over the leaves of my book, I studied the aspect of that winter afternoon. Afar, it offered a pale blank of mist and cloud; near a scene of wet lawn and storm-beat shrub, with ceaseless rain sweeping away wildly before a long and lamentable blast.

“At Home” by Anton Chekov (1887) translated by Constance Garnett

‘Somebody came from the Grigorievs’ to fetch a book, but I said you were not at home. The postman has brought the newspapers and two letters. And, by the way, sir, I wish you would give your attention to Seriozha. I saw him smoking today and also the day before yesterday. When I told him how wrong it was he put his fingers in his ears, as he always does, and began to sing loudly so as to drown my voice.’

Eugene Bilovsky, an attorney of the circuit court, who had just come home from a session and was taking off his gloves in his study, looked at the governess who was making this statement and laughed.

‘So Seriozha has been smoking!’ he said with a shrug of his shoulders. ‘Fancy the little beggar with a cigarette in his mouth! How old is he?’

‘Seven years old. It seems of small consequence to you, but at his age smoking is a bad, a harmful habit; and bad habits should be nipped in the bud.’

‘You are absolutely right. Where does he get the tobacco?’

‘From your table.’

‘He does? In that case, send him to me.’

When the governess had gone, Bilovsky sat down in an easy-chair before his writing-table and began to think. For some reason he pictured to himself his Seriozha enveloped in clouds of tobacco smoke, with a huge, yard-long cigarette in his mouth, and this caricature made him smile. At the same time the earnest, anxious face of the governess awakened in him memories of days long past and half-forgotten, when smoking at school and in the nursery aroused in masters and parents a strange, almost incomprehensible horror. It really was horror. Children were unmercifully flogged, and expelled from school, and their lives were blighted, although not one of the teachers nor fathers knew exactly what constituted the harm and offence of smoking. Even very intelligent people did not hesitate to combat the vice they did not understand. Bilovsky called to mind the principal of his school, a highly educated, good-natured old man, who was so shocked when he caught a scholar with a cigarette that he would turn pale and immediately summon a special session of the school board and sentence the offender to expulsion. No doubt that is one of the laws of society—the less an evil is understood the more bitterly and harshly it is attacked.

The attorney thought of the two or three boys who had been expelled and of their subsequent lives, and could not but reflect that punishment is, in many cases, more productive of evil than crime itself. The living organism possesses the faculty of quickly adapting itself to every condition; if it were not so man would be conscious every moment of the unreasonable foundations on which his reasonable actions rest and how little of justice and assurance are to be found even in those activities which are fraught with so much responsibility and which are so appalling in their consequences, such as education, literature, the law—

And thoughts such as these came floating into Bilovsky’s head; light, evanescent thoughts such as only enter weary, resting brains. One knows not whence they are nor why they come; they stay but a short while and seem to spread across the surface of the brain without ever sinking very far into its depths. For those whose minds for hours and days together are forced to be occupied with business and to travel always along the same lines, these homelike, untrammelled musings bring a sort of comfort and a pleasant restfulness of their own.

It was nine o’clock. On the floor overhead someone was pacing up and down, and still higher up, on the third storey, four hands were playing scales on the piano. The person who was pacing the floor seemed, from his nervous strides, to be the victim of tormenting thoughts or of the toothache; his footsteps and the monotonous scales added to the quiet of the evening something somnolent that predisposed the mind to idle reveries.

In the nursery, two rooms away, Seriozha and his governess were talking.

‘Pa–pa has come!” sang the boy. “Papa has co–ome! Pa! Pa! Pa!’

‘Votre père vous appelle, allez vite!’ cried the governess, twittering like a frightened bird.

‘What shall I say to him?’ thought Bilovsky.

But before he had time to think of anything to say his son Seriozha had already entered the study. This was a little person whose sex could only be divined from his clothes—he was so delicate, and fair, and frail. His body was as languid as a hot-house plant and everything about him looked wonderfully dainty and soft—his movements, his curly hair, his glance, his velvet tunic.

‘Good evening, papa,’ he said in a gentle voice, climbing on to his father’s knee and swiftly kissing his neck. ‘Did you send for me?’

‘Wait a bit, wait a bit, master,’ answered the lawyer, putting him aside. ‘Before you and I kiss each other we must have a talk, a serious talk. I am angry with you, and I don’t love you any more; do you understand that, young man? I don’t love you, and you are no son of mine.’

Seriozha looked steadfastly at his father and then turned his regard to the table and shrugged his shoulders.

‘What have I done?’ he asked, perplexed, and blinked. ‘I didn’t go into your study once today, and I haven’t touched a thing.’

‘Miss Natalie has just been complaining to me that you have been smoking; is that so? Have you been smoking?’

‘Yes, I smoked once. That is so.’

‘There! So now you have told a lie into the bargain!’ said the lawyer, disguising his smile by a frown. ‘Miss Natalie saw you smoking twice. That means that you have been caught doing three naughty things: smoking, taking tobacco that doesn’t belong to you off my table, and telling a lie. Three accusations!’

***The Great Gatsby* by F. Scott Fitzgerald (1925)**

There was music from my neighbor's house through the summer nights. In his blue gardens men and girls came and went like moths among the whisperings and the champagne and the stars. At high tide in the afternoon I watched his guests diving from the tower of his raft, or taking the sun on the hot sand of his beach while his two motorboats slit the waters of the Sound, drawing aquaplanes over cataracts of foam. On week ends his Rolls-Royce became an omnibus, bearing parties to and from the city between nine in the morning and long past midnight, while his station wagon scampered like a brisk yellow bug to meet all trains. And on Mondays eight servants, including an extra gardener, toiled all day with mops and scrubbing brushes and hammers and garden shears, repairing the ravages of the night before.

Every Friday five crates of oranges and lemons arrived from a fruiterer in New York – every Monday these same oranges and lemons left his back door in a pyramid of pulpless halves. There was a machine in the kitchen which could extract the juice of two hundred oranges in half an hour if a little button was pressed two hundred times by a butler's thumb.

At least once a fortnight a corps of caterers came down with several hundred feet of canvas and enough colored lights to make a Christmas tree of Gatsby's enormous garden. On buffet tables, garnished with glistening hors d'oeuvres, spiced baked hams crowded against salads of harlequin designs and pastry pigs and turkeys bewitched to a dark gold. In the main hall a bar with a real brass rail was set up, and stocked with gins and liquors and with cordials so long forgotten that most of his female guests were too young to know one from another.

By seven o'clock the orchestra has arrived, no thin five piece affair, but a whole pitful of oboes and trombones and saxophones and viols and cornets and piccolos, and low and high drums. The last swimmers have come in from the beach now and are dressing upstairs; the cars from New York are parked five deep in the drive, and already the halls and salons and verandas are gaudy with primary colors, and hair bobbed in strange new ways, and shawls beyond the dreams of Castile. The bar is in full swing, and floating rounds of cocktails permeate the garden outside, until the air is alive with chatter and laughter, and casual innuendo and introductions forgotten on the spot, and enthusiastic meetings between women who never knew each other's names.

The lights grow brighter as the earth lurches away from the sun, and now the orchestra is playing yellow cocktail music, and the opera of voices pitches a key higher. Laughter is easier minute by minute, spilled with prodigality, tipped out at a cheerful word. The groups change more swiftly, swell with new arrivals, dissolve and form in the same breath; already there are wanderers, confident girls who weave here and there among the stouter and more stable, become for a sharp, joyous moment the center of the group, and then, excited with triumph, glide on through the sea change of faces and voices and color under the constantly changing light.

Suddenly one of these gypsies, in trembling opal, seizes a cocktail out of the air, dumps it down for courage and, moving her hands like Frisco, dances out alone on the canvas platform. A momentary hush; the orchestra leader varies his rhythm obligingly for her, and there is a burst of chatter as the erroneous news goes around that she is Gilda Gray's understudy from the Follies. The party has begun.

***As I Lay Dying* by William Faulkner (1930)**

Jewel and I come up from the field, following the path in single file. Although I am fifteen feet ahead of him, anyone watching us from the cottonhouse can see Jewel's frayed and broken straw hat a full head above my own.

The path runs straight as a plumb-line, worn smooth by feet and baked brick-hard by July, between the green rows of laidby cotton, to the cottonhouse at four soft right angles and goes on across the field again, worn so by feet in fading precision.

The cottonhouse is of rough logs, from between which the chinking has long fallen. Square, with a broken roof set at a single pitch, it leans in empty and shimmering dilapidation in the sunlight, a single broad window in two opposite walls giving onto the approaches of the path. When we reach it I turn and follow the path which circles the house. Jewel, fifteen feet behind me, looking straight ahead, steps in a single stride through the window. Still staring straight ahead, his pale eyes like wood set into his wooden face, he crosses the floor in four strides with the rigid gravity of a cigar store Indian dressed in patched overalls and endued with life from the hips down, and steps in a single stride through the opposite window and into the path again just as I come around the corner. In single file and five feet apart and Jewel now in front, we go on up the path toward the foot of the bluff.

Tull's wagon stands beside the spring, hitched to the rail, the reins wrapped about the seat stanchion. In the wagon bed are two chairs. Jewel stops at the spring and takes the gourd from the willow branch and drinks. I pass him and mount the path, beginning to hear Cash's saw.

When I reach the top he has quit sawing. Standing in a litter of chips, he is fitting two of the boards together. Between the shadow spaces they are yellow as gold, like soft gold, bearing on their flanks in smooth undulations the marks of the adze blade: a good carpenter, Cash is. He holds the two planks on the trestle, fitted along the edges in a quarter of the finished box. He kneels and squints along the edge of them, then he lowers them and takes up the adze. A good carpenter. Addie Bundren could not want a better one, a better box to lie in. It will give her confidence and comfort. I go on to the house, followed by the

Chuck. Chuck. Chuck.

of the adze.

***Their Eyes Were Watching God* by Zora Neale Hurston (1937)**

Ships at a distance have every man's wish on board. For some they come in with the tide. For others they sail forever on the horizon, never out of sight, never landing until the Watcher turns his eyes away in resignation, his dreams mocked to death by Time. That is the life of men.

Now, women forget all those things they don't want to remember, and remember everything they don't want to forget. The dream is the truth. Then they act and do things accordingly.

So the beginning of this was a woman and she had come back from burying the dead. Not the dead of sick and ailing with friends at the pillow and the feet. She had come back from the sodden and the bloated; the sudden dead, their eyes flung wide open in judgment.

The people all saw her come because it was sundown. The sun was gone, but he had left his footprints in the sky. It was the time for sitting on porches beside the road. It was the time to hear things and talk. These sitters had been tongueless, earless, eyeless conveniences all day long. Mules and other brutes had occupied their skins. But now, the sun and the bossman were gone, so the skins felt powerful and human. They became lords of sounds and lesser things. They passed nations through their mouths. They sat in judgment.

Seeing the woman as she was made them remember the envy they had stored up from other times. So they chewed up the back parts of their minds and swallowed with relish. They made burning statements with questions, and killing tools out of laughs. It was mass cruelty. A mood come alive, Words walking without masters; walking altogether like harmony in a song.

"What she doin coming back here in dem overhalls? Can't she find no dress to put on? -- Where's dat blue satin dress she left here in? -- Where all dat money her husband took and died and left her? -- What dat ole forty year ole 'oman doin' wid her hair swingin' down her back lak some young gal? Where she left dat young lad of a boy she went off here wid? -- Thought she was going to marry? -- Where he left her? -- What he done wid all her money? -- Betcha he off wid some gal so young she ain't even got no hairs -- why she don't stay in her class?"

When she got to where they were she turned her face on the bander log and spoke. They scrambled a noisy "good evenin'" and left their mouths setting open and their ears full of hope. Her speech was pleasant enough, but she kept walking straight on to her gate. The porch couldn't talk for looking.

[...]

***Black Boy* by Richard Wright (1945)**

That night in my rented room, while letting the hot water run over my can of pork and beans in the sink, I opened *A Book of Prefaces* and began to read. I was jarred and shocked by the style, the clear, clean, sweeping sentences. Why did he write like that? And how did one write like that? I pictured the man as a raging demon, slashing with his pen, consumed with hate, denouncing everything American, extolling everything European or German, laughing at the weakness of people, mocking God, authority. What was this? I stood up, trying to realize what reality lay behind the meaning of the words…Yes, this man was fighting, fighting with words. He was using words as a weapon, using them as one would use a club. Could words be weapons? Well, yes, for here they were. Then maybe, perhaps, I could use them as a weapon? No. It frightened me. I read on and what amazed me was not what he said, but how on earth anybody had the courage to say it.

Occasionally I glance up to reassure myself that I was alone in the room. Who were these men about whom Mencken was talking so passionately? Who was Anatole France? Joseph Conrad? Sinclair Lewis, Sherwood Anderson, Dostoevski, George Moore, Gustave Flaubert, Maupassant, Tolstoy, Frank Harris, Mark Twain, Thomas Hardy, Arnold Bennett, Stephen Crane, Zola, Norris, Gorky, Bergson, Ibsen, Balzac, Bernard Shaw, Dumas, Poe, Thomas Mann, O. Henry, Dreiser, H.G. Wells, Gogol, T.S. Eliot, Gide, Baudelaire, Edgar Lee masters, Stendhal, Turgenev, Huneker, Nietzsche, and scores of others? Were these men real? Did they exist or had they existed? And how did one pronounce their names?

I ran across many words whose meanings I did not know, and I either looked them up in a dictionary or, before I had a chance to do that, encountered the word in a context that made its meaning clear. But what strange world was this? I concluded the book with the conviction that I had somehow overlooked something terribly important in my life. I had once tried to write, had once reveled in feeling, had let my crude imagination roam, but the impulse to dream had been slowly beaten out of me by experience. Now it surged up again and I hungered for books, new ways of looking and seeing. It was not a matter of believing or disbelieving what I read, but of feeling something new, of being affected by something that made the look of the world different.

As dawn broke I ate my pork and beans, feeling dopey, sleepy. I went to work, but the mood of the book would not die; it lingered, coloring everything I saw, heard, did. I now felt that I knew what the white men were feeling. Merely because I had read a book that had spoken of how they lived and thought, I identified myself with that book. I felt vaguely guilty. Would I, filled with bookish notions, act in a manner that would make the whites dislike me?

I forged more notes and my trips to the library became frequent. Reading grew into a passion.

[…]

***The Adventures of Augie March* by Saul Bellow (1949)**

"I haven't been wasting my time," he said. "I've been working on something. I think I'm getting married soon," he said, and didn't allow himself to smile with the announcement or temper it in some pleasant way.

"When? To whom?"

"To a woman with money."

"A woman? An older woman?" That was how I interpreted it.

"Well, what's the matter with *you*? Yes, I'd marry an older woman. Why not?"

"I bet you wouldn't." He was still able to amaze me, as though we had remained kids.

"We don't have to argue about it because she's not old. She's about twenty-two, I'm told."

"By whom? And you haven't even seen her?"

"No, I haven't. You remember the buyer, my old boss? He's fixing me up. I have her picture. She's not bad. Heavy—but I'm getting heavy too. She's sort of pretty. Anyhow, even if she weren't pretty, and if the buyer isn't lying about the dough—her family is supposed to have a mountain of dough—I'd marry her."

"You've already made up your mind?"

"I'll say I have!"

"And suppose she doesn't want to marry you?"

"I'll see that she does. Don't you think I can?"

"Maybe you can, but I don't like it. It's cold-blooded."

"Cold-blooded!" he said with sudden emotion. "What's cold-blooded about it? I'd be cold-blooded if I stayed as I am. I see around this marriage and beyond it. I'll never again go for all the nonsense about marriage. Everybody you lay eyes on, except perhaps a few like you and me, is born of marriage. Do you see anything so exceptional or wonderful about it that it makes it such a big deal? Why be fooling around to make this perfect great marriage? What's it going to save you from? Has it saved anybody—the jerks, the fools, the morons, the *schleppers*, the jag-offs, the monkeys, rats, rabbits, or the decent unhappy people or what you call nice people? They're all married or are born of marriages, so how can you pretend to me that it makes a difference that Bob loves Mary who loves Jerry? That's for the movies. Don't you see people pondering how to marry for love and getting the blood gypped out of them? Because while they're looking for the best there is—and I figure that's what's wrong with you—everything else gets lost. It's sad. It's a pity, but it's that way."

I was all the same strongly against him; that he saw. Even if I couldn't just then consider myself on the active list of lovers and wasn't carrying a live torch any more for Esther Fenchel. I recognized his face as the face of a man in the wrong.

[...]

***The Bluest Eye* by Toni Morrison (1970)**

One winter Pauline discovered she was pregnant. When she told Cholly, he surprised her by being pleased. He began to drink less and come home more often. They eased back into a relationship more like the early days of their marriage, when he asked if she were tired or wanted him to bring her something from the store. In this state of ease, Pauline stopped doing day work and returned to her own housekeeping. But the loneliness in those two rooms had not gone away. When the winter sun hit the peeling green paint of the kitchen chairs, when the smoked hocks were boiling in the pot, when all she could hear was the truck delivering furniture downstairs, she thought about back home, about how she had been all alone most of the time then too, but that this lonesomeness was different. Then she stopped staring at the green chairs, at the delivery truck; she went to the movies instead. There in the dark her memory was refreshed, and she succumbed to her earlier dreams. Along with the idea of romantic love, she was introduced to another—physical beauty. Probably the most destructive ideas in the history of human thought. Both originated in envy, thrived in insecurity, and ended in disillusion. In equating physical beauty with virtue, she stripped her mind, bound it, and collected self-contempt by the heap. She forgot lust and simple caring for. She regarded love as possessive mating, and romance as the goal of the spirit. It would be for her a well-spring from which she would draw the most destructive emotions, deceiving the lover and seeking to imprison the beloved, curtailing freedom in every way.

She was never able, after her education in the movies, to look at a face and not assign it some category in the scale of absolute beauty, and the scale was one she absorbed in full from the silver screen. There at last were the darkened woods, the lonely roads, the river banks, the gentle knowing eyes. There the flawed became whole, the blind sighted, and the lame and halt threw away their crutches. There death was dead, and people made every gesture in a cloud of music. There the black-and-white images came together, making a magnificent whole—all projected through the ray of light from above and beyond.

It was really a simple pleasure, but she learned all there was to love and all there was to hate.

[…]

***Dreaming in Cuban* by Cristina García (1992)**

Abuela gives me a box of letters she wrote to her onetime lover in Spain, but never sent. She shows me his photograph, too. It's very well preserved. He'd be good-looking by today's standards, well built with a full beard and kind eyes, almost professorial. He wore a crisp linen suit and a boater tilted slightly to the left. Abuela tells me she took the picture herself one Sunday on the Malecón,

She also gives me a book of poems she's had since 1930, we she heard García Lorca read at the Principal de la Comedia Theater. Abuela knows each poem by heart, and recites them quite dramatically.

I've started dreaming in Spanish, which has never happened before. I wake up feeling different, like something inside me is changing, something chemical and irreversible. There's a magic here working its way through my veins. There's something about the vegetation, too, that I respond to instinctively—the stunning bougainvillea, the flamboyants and jacarandas, the orchids growing from the trunks of the mysterious ceiba trees. And I love Havanna, its noise and decay and painted ladyness. I could happily sit on one of those wrought-iron balconies for days, or keep my grandmother company on her porch, with its ringside view of the sea. I'm afraid to lose all this. To lose Abuela Celia again. But I know that sooner or later I'd have to return to New York. I know now it's where I belong—not *instead* of here, but *more* than here. How can I tell my grandmother this?

[…]

Media Text:

Portal to selected interviews with author Cristina García:
http://www.cristinagarcianovelist.com/index.php?page=selectedinterviews

***The Namesake* by Jhumpa Lahiri (2003)**

One day he attends a panel discussion about Indian novels written in English. He feels obligated to attend; one of the presenters on the panel, Amit, is a distant cousin who lives in Bombay, whom Gogol has never met. His mother has asked him to greet Amit on her behalf. Gogol is bored by the panelists, who keep referring to something called "marginality," as if it were some sort of medical condition. For most of the hour, he sketches portraits of the panelists, who sit hunched over their papers along a rectangular table. "Teleologically speaking, ABCDs are unable to answer the question 'Where are you from?'" the sociologist on the panel declares. Gogol has never heard the term ABCD. He eventually gathers that it stands for "American-born confused deshi." In other words, him. He learns that the *C* could also stand for "conflicted." He knows that *deshi*, a generic word for "countryman," means "Indian," knows that his parents and all their friends always refer to India simply as *desh*. But Gogol never thinks of India as desh. He thinks of it as Americans do, as India.

Gogol slouches in his seat and ponders certain awkward truths. For instance, although he can understand his mother tongue, and speak it fluently, he cannot read or write it with even modest proficiency. On trips to India his American-accented English is a source of endless amusement to his relatives, and when he and Sonia speak to each other, aunts and uncles and cousins always shake their heads in disbelief and say, "I didn't understand a word!" Living with a pet name and a good name, in a place where such distinctions do not exist—surely that was emblematic of the greatest confusion of all. He searches the audience for someone he knows, but it isn't his crowd—lots of lit majors with leather satchels and gold-rimmed glasses and fountain pens, lots of people Ruth would have waved to. There are also lots of ABCDs. He has no idea there are this many on campus. He has no ABCD friends at college. He avoids them, for they remind him too much of the way his parents choose to live, befriending people not so much because they like them, but because of a past they happen to share. "Gogol, why aren't you a member of the Indian association here?" Amit asks later when they go for a drink at the Anchor. "I just don't have the time," Gogol says, not telling his well-meaning cousin that he can think of no greater hypocrisy than joining an organization that willingly celebrates occasions his parents forced him, throughout his childhood and adolescence, to attend. "I'm Nikhil now," Gogol says, suddenly depressed by how many more times he will have to say this, asking people to remember, reminding them to forget, feeling as if an errata slip were perpetually pinned to his chest.

[…]

Grades 11–12: Drama

Macbeth by William Shakespeare (c1611)

ACT V. SCENE I.
Dunsinane. Anteroom in the castle.

Enter a Doctor of Physic and a Waiting Gentlewoman.

DOCTOR. I have two nights watched with you, but can perceive no truth in your report. When was it she last walked?
GENTLEWOMAN. Since his Majesty went into the field, have seen
Her rise from her bed, throw her nightgown upon her, unlock her closet, take forth paper, fold it, write upon't, read it, afterwards seal it, and again return to bed; yet all this while in a most fast sleep.
DOCTOR. A great perturbation in nature, to receive at once the benefit of sleep and do the effects of watching! In this slumbery agitation, besides her walking and other actual performances, what, at any time, have you heard her say?
GENTLEWOMAN. That, sir, which I will not report after her.
DOCTOR. You may to me, and 'tis most meet you should.
GENTLEWOMAN. Neither to you nor anyone, having no witness to confirm my speech.

Enter Lady Macbeth with a taper.

Lo you, here she comes! This is her very guise, and, upon my life, fast asleep. Observe her; stand close.
DOCTOR. How came she by that light?
GENTLEWOMAN. Why, it stood by her. She has light by her continually; 'tis her command.
DOCTOR. You see, her eyes are open.
GENTLEWOMAN. Ay, but their sense is shut.
DOCTOR. What is it she does now? Look how she rubs her hands.
GENTLEWOMAN. It is an accustomed action with her, to seem thus washing her hands. I have known her continue in this a quarter of an hour.
LADY MACBETH. Yet here's a spot.
DOCTOR. Hark, she speaks! I will set down what comes from her, to satisfy my remembrance the more strongly.
LADY MACBETH. Out, damned spot! Out, I say! One- two -why then 'tis time to do't. Hell is murky. Fie, my lord, fie! A soldier, and afeard? What need we fear who knows it, when none can call our power to account? Yet who would have thought the old man to have had so much blood in him?
DOCTOR. Do you mark that?
LADY MACBETH. The Thane of Fife had a wife; where is she now?
What, will these hands neer be clean? No more o' that, my lord, no more o' that. You mar all with this starting.
DOCTOR. Go to, go to; you have known what you should not.
GENTLEWOMAN. She has spoke what she should not, I am sure of that. Heaven knows what she has known.
LADY MACBETH. Here's the smell of the blood still. All the perfumes of Arabia will not sweeten this little hand. Oh, oh, oh!
DOCTOR. What a sigh is there! The heart is sorely charged.
GENTLEWOMAN. I would not have such a heart in my bosom for the dignity of the whole body.
DOCTOR. Well, well, well-
GENTLEWOMAN. Pray God it be, sir.
DOCTOR. This disease is beyond my practice. Yet I have known those which have walked in their sleep who have died holily in their beds.
LADY MACBETH. Wash your hands, put on your nightgown, look not so pale. I tell you yet again, Banquo's buried; he cannot come out on's grave.
DOCTOR. Even so?
LADY MACBETH. To bed, to bed; there's knocking at the gate.

Come, come, come, come, give me your hand. What's done cannot be undone. To bed, to bed, to bed.
Exit.

DOCTOR. Will she go now to bed?

GENTLEWOMAN. Directly.

DOCTOR. Foul whisperings are abroad. Unnatural deeds
Do breed unnatural troubles; infected minds
To their deaf pillows will discharge their secrets.
More needs she the divine than the physician.
God, God, forgive us all! Look after her;
Remove from her the means of all annoyance,
And still keep eyes upon her. So good night.
My mind she has mated and amazed my sight.
I think, but dare not speak.

GENTLEWOMAN. Good night, good doctor.

Exeunt.

Media Texts:

Judi Dench (Lady Macbeth) performs this scene in a 1979 production with Ian McKellen:
http://www.youtube.com/watch?v=IOkyZWQ2bmQ
McKellen analyzes the "To-morrow and to-morrow and to-morrow" speech from Act V, Scene 5:
http://video.google.com/videoplay?docid=8837180438460805 12#docid=7225091828250988008

***The Importance of Being Earnest* by Oscar Wilde (1895)**

Excerpt from Act II, Part 2

Cecily [rather shy and confidingly]: Dearest Gwendolen, there is no reason why I should make a secret of it to you. Our little county newspaper is sure to chronicle the fact next week. Mr. Ernest Worthing and I are engaged to be married.

Gwendolen [quite politely, rising]: My darling Cecily, I think there must be some slight error. Mr. Ernest Worthing is engaged to me. The announcement will appear in the *Morning Post* on Saturday at the latest.

Cecily [very politely, rising]: I am afraid you must be under some misconception. Ernest proposed to me exactly ten minutes ago. [Shows diary.]

Gwendolen [examines diary through her lorgnettte carefully]: It is certainly very curious, for he asked me to be his wife yesterday afternoon at 5.30. If you would care to verify the incident, pray do so. [Produces diary of her own.] I never travel without my diary. One should always have something sensational to read in the train. I am so sorry, dear Cecily, if it is any disappointment to you, but I am afraid I have the prior claim.

Cecily: It would distress me more than I can tell you, dear Gwendolen, if it caused you any mental or physical anguish, but I feel bound to point out that since Ernest proposed to you he clearly has changed his mind.

Gwendolen [meditatively]: If the poor fellow has been entrapped into any foolish promise I shall consider it my duty to rescue him at once, and with a firm hand.

Cecily [thoughtfully and sadly]: Whatever unfortunate entanglement my dear boy may have got into, I will never reproach him with it after we are married.

Gwendolen: Do you allude to me, Miss Cardew, as an entanglement? You are presumptuous. On an occasion of this kind it becomes more than a moral duty to speak one's mind. It becomes a pleasure.

Cecily: Do you suggest, Miss Fairfax, that I entrapped Ernest into an engagement? How dare you? This is no time for wearing the shallow mask of manners. When I see a spade I call it a spade.

Gwendolen [satirically]: I am glad to say that I have never seen a spade. It is obvious that our social spheres have been widely different.

[Enter **Merriman**, followed by the footman. He carries a salver, table cloth, and plate stand. **Cecily** is about to retort. The presence of the servants exercises a restraining influence, under which both girls chafe.]

Merriman: Shall I lay tea here as usual, Miss?

Cecily [sternly, in a calm voice]: Yes, as usual. [**Merriman** begins to clear table and lay cloth. A long pause. **Cecily** and **Gwendolen** glare at each other.]

Gwendolen: Are there many interesting walks in the vicinity, Miss Cardew?

Cecily: Oh! yes! a great many. From the top of one of the hills quite close one can see five counties.

Gwendolen: Five counties! I don't think I should like that; I hate crowds.

Cecily [sweetly]: I suppose that is why you live in town? [**Gwendolen** bites her lip, and beats her foot nervously with her parasol.]

Gwendolen: [Looking round.] Quite a well-kept garden this is, Miss Cardew.

Cecily: So glad you like it, Miss Fairfax.

Gwendolen: I had no idea there were any flowers in the country.

Cecily: Oh, flowers are as common here, Miss Fairfax, as people are in London.

Gwendolen: Personally I cannot understand how anybody manages to exist in the country, if anybody who is anybody does. The country always bores me to death.

Cecily: Ah! This is what the newspapers call agricultural depression, is it not? I believe the aristocracy are suffering very much from it just at present. It is almost an epidemic amongst them, I have been told. May I offer you some tea, Miss Fairfax?

Gwendolen [with elaborate politeness]: Thank you. [Aside.] Detestable girl! But I require tea!

Cecily [sweetly]: Sugar?

Gwendolen [superciliously]: No, thank you. Sugar is not fashionable any more. [**Cecily** looks angrily at her, takes up the tongs and puts four lumps of sugar into the cup.]

Cecily [severely]: Cake or bread and butter?

Gwendolen [in a bored manner]: Bread and butter, please. Cake is rarely seen at the best houses nowadays.

Cecily [cuts a very large slice of cake, and puts it on the tray]: Hand that to Miss Fairfax.

[**Merriman** does so, and goes out with footman. **Gwendolen** drinks the tea and makes a grimace. Puts down cup at once, reaches out her hand to the bread and butter, looks at it, and finds it is cake. Rises in indignation.]

Gwendolen: You have filled my tea with lumps of sugar, and though I asked most distinctly for bread and butter, you have given me cake. I am known for the gentleness of my disposition, and the extraordinary sweetness of my nature, but I warn you, Miss Cardew, you may go too far.

Cecily [rising]: To save my poor, innocent, trusting boy from the machinations of any other girl there are no lengths to which I would not go.

Gwendolen: From the moment I saw you I distrusted you. I felt that you were false and deceitful. I am never deceived in such matters. My first impressions of people are invariably right.

Cecily: It seems to me, Miss Fairfax, that I am trespassing on your valuable time. No doubt you have many other calls of a similar character to make in the neighbourhood.

***Death of a Salesman* by Arthur Miller (1949)**

Oh, yeah, my father lived many years in Alaska. He was an adventurous man. We've got quite a little streak of self-reliance in our family. I thought I'd go out with my older brother and try to locate him, and maybe settle in the North with the old man. And I was almost decided to go, when I met a salesman in the Parker House. His name was Dave Singleman. And he was eighty-four years old, and he'd drummed merchandise in thirty-one states. And old Dave, he'd go up to his room, y'understand, put on his green velvet slippers—I'll never forget—and pick up his phone and call the buyers, and without ever leaving is room, at the age of eighty-four, he made his living. And when I saw that, I realized that selling was the greatest career a man could want. 'Cause what could be more satisfying than to be able to go, at the age of eighty-four, into twenty or thirty different cities, and pick up a phone, and be remembered and loved and helped by so many different people? Do you know? When he died—and by the way he died the death of a salesman, in his green velvet slippers in the smoker of the New York, New Haven and Hartford, going into Boston—when he died, hundreds of salesmen and buyers were at his funeral. Things were sad on a lotta trains for months after that. He stands up. Howard has not looked at him. In those days there was personality in it, Howard. There was respect, and comradeship, and gratitude in it. Today, it's all cut and dried, and there's no chance for bringing friendship to bear—or personality. You see what I mean? They don't know me anymore.

A *Raisin in the Sun* by Lorraine Hansberry (1959)

From Act III

BENEATHA: He's no brother of mine.

MAMA: What you say?

BENEATHA: I said that that individual is that room is no brother of mine.

MAMA: That's what I thought you said. You feeling like you better than he is today? [BENEATHA *does not answer*.] Yes? What you tell him a minute ago? That he wasn't a man? Yes? You give him up for me? You done wrote his epitaph too—like the rest of the world? Well who give you the privilege?

BENEATHA: Be on my side for once! You say what he just did, Mama! You saw him—down on his knees. Wasn't it you who taught me—to despise any man who would do that. Do what he's going to do.

MAMA: Yes—I taught you that. Me and your daddy. But I thought I taught you something else too…I thought I taught you to love him.

BENEATHA: Love him? There is nothing left to love.

MAMA: There is always something left to love. And if you ain't learned that you ain't learned nothing. [*Looking at her*.] Have you cried for that boy today? I don't mean for yourself and for the family 'cause we lost the money. I mean for him; what he been through and what it done to him. Child, when do you think is the time to love somebody the most; when they done good and made things easy for everybody? Well then, you ain't through learning—because that ain't the time at all. It's when he's at him lowest and can't believe in hisself 'cause the world done whipped him so. When you starts measuring somebody, measure him right, child, measure him right. Make sure you done taken into account what hills and valleys he come through before he got to wherever he is.

Grades 11–12: Poetry

"A Valediction Forbidding Mourning" by John Donne (1633)

As virtuous men pass mildly' away,
And whisper to their souls to go,
Whilst some of their sad friends do say
The breath goes now, and some say, no;

So let us melt, and make no noise,
No tear floods, nor sigh-tempests move,
'Twere profanation of our joys
To tell the laity our love.

Moving of th' earth brings harms and fears,
Men reckon what it did and meant;
But trepidation of the spheres,
Though greater far, is innocent.

Dull sublunary lovers' love
(Whose soul is sense) cannot admit
Absence, because it doth remove
Those things which elemented it.

But we by' a love so much refined
That our selves know not what it is,
Inter-assured of the mind,
Care less, eyes, lips, and hands to miss.

Our two souls therefore, which are one,
Though I must go, endure not yet
A breach, but an expansion,
Like gold to airy thinness beat.

If they be two, they are two so
As stiff twin compasses are two;
Thy soul, the fixed foot, makes no show
To move, but doth, if th' other do.

And though it in the center sit,
Yet when the other far doth roam,
It leans and hearkens after it,
And grows erect, as that comes home.

Such wilt thou be to me, who must
Like th' other foot, obliquely run.
Thy firmness makes my circle just.
And makes me end where I begun.

“Ode on a Grecian Urn” by John Keats (1820)

Thou still unravish'd bride of quietness,
Thou foster-child of silence and slow time,
Sylvan historian, who canst thus express
A flowery tale more sweetly than our rhyme:
What leaf-fring'd legend haunts about thy shape
Of deities or mortals, or of both,
In Tempe or the dales of Arcady?
What men or gods are these? What maidens loth?
What mad pursuit? What struggle to escape?
What pipes and timbrels? What wild ecstasy?

Heard melodies are sweet, but those unheard
Are sweeter; therefore, ye soft pipes, play on;
Not to the sensual ear, but, more endear'd,
Pipe to the spirit ditties of no tone:
Fair youth, beneath the trees, thou canst not leave
Thy song, nor ever can those trees be bare;
Bold Lover, never, never canst thou kiss,
Though winning near the goal—yet, do not grieve;
She cannot fade, though thou hast not thy bliss,
For ever wilt thou love, and she be fair!

Ah, happy, happy boughs! that cannot shed
Your leaves, nor ever bid the Spring adieu;
And, happy melodist, unwearied,
For ever piping songs for ever new;
More happy love! more happy, happy love!
For ever warm and still to be enjoy'd,
For ever panting, and for ever young;All breathing human passion far above,
That leaves a heart high-sorrowful and cloy'd,
A burning forehead, and a parching tongue.

Who are these coming to the sacrifice?
To what green altar, O mysterious priest,
Lead'st thou that heifer lowing at the skies,
And all her silken flanks with garlands drest?
What little town by river or sea shore,
Or mountain-built with peaceful citadel,
Is emptied of this folk, this pious morn?
And, little town, thy streets for evermore
Will silent be; and not a soul to tell
Why thou art desolate, can e'er return.

O Attic shape! Fair attitude! with brede
Of marble men and maidens overwrought,
With forest branches and the trodden weed;
Thou, silent form, dost tease us out of thought
As doth eternity: Cold Pastoral!
When old age shall this generation waste,
Thou shalt remain, in midst of other woe
Than ours, a friend to man, to whom thou say'st,

"Beauty is truth, truth beauty,"—that is all
Ye know on earth, and all ye need to know.

"Song of Myself" from *Leaves of Grass* by Walt Whitman (c1860)

I celebrate myself, and sing myself,
And what I assume you shall assume,
For every atom belonging to me as good belongs to you.

I loafe and invite my soul,
I lean and loafe at my ease observing a spear of summer grass.

My tongue, every atom of my blood, form'd from this soil, this air,
Born here of parents born here from parents the same, and their parents the same,
I, now thirty-seven years old in perfect health begin,
Hoping to cease not till death.

Creeds and schools in abeyance,
Retiring back a while sufficed at what they are, but never forgotten,
I harbor for good or bad, I permit to speak at every hazard,
Nature without check with original energy.

“Because I Could Not Stop for Death” by Emily Dickinson (1890)

Because I could not stop for Death—
He kindly stopped for me—
The Carriage held but just Ourselves—
And Immortality.

We slowly drove—He knew no haste
And I had put away
My labor and my leisure too,
For His Civility—

We passed the School, where Children strove
At Recess—in the Ring—
We passed the Fields of Grazing Grain—
We passed the Setting Sun—

We paused before a House that seemed
A Swelling of the Ground—
The Room was scarcely visible—
The Cornice—in the Ground—

Since then—‘tis Centuries—and yet
Feels shorter than the Day
I first surmised the Horses’ Heads
Were toward Eternity—

“Mending Wall” by Robert Frost (1914)

SOMETHING there is that doesn't love a wall,
That sends the frozen-ground-swell under it,
And spills the upper boulders in the sun;
And makes gaps even two can pass abreast.
The work of hunters is another thing:
I have come after them and made repair
Where they have left not one stone on stone,
But they would have the rabbit out of hiding,
To please the yelping dogs. The gaps I mean,
No one has seen them made or heard them made,
But at spring mending-time we find them there.
I let my neighbor know beyond the hill;
And on a day we meet to walk the line
And set the wall between us once again.
We keep the wall between us as we go.
To each the boulders that have fallen to each.
And some are loaves and some so nearly balls
We have to use a spell to make them balance:
"Stay where you are until our backs are turned!"
We wear our fingers rough with handling them.
Oh, just another kind of outdoor game,
One on a side. It comes to little more:
He is all pine and I am apple-orchard.
My apple trees will never get across
And eat the cones under his pines, I tell him.
He only says, "Good fences make good neighbors."
Spring is the mischief in me, and I wonder
If I could put a notion in his head:
"Why do they make good neighbors? Isn't it
Where there are cows? But here there are no cows.
Before I built a wall I'd ask to know
What I was walling in or walling out,
And to whom I was like to give offence.
Something there is that doesn't love a wall,
That wants it down!" I could say "Elves" to him,
But it's not elves exactly, and I'd rather
He said it for himself. I see him there,
Bringing a stone grasped firmly by the top
In each hand, like an old-stone savage armed.
He moves in darkness as it seems to me,
Not of woods only and the shade of trees.
He will not go behind his father's saying,
And he likes having thought of it so well
He says again, "Good fences make good neighbors."

Media Text:

The Frost Free Library, with essays, interviews, and audio:
http://www.frostfriends.org/library.html

“Ode to My Suit” by Pablo Neruda (1954) translated by Margaret Sayers Peden

Every morning, suit,
you are waiting on a chair
to be filled,
by my vanity, my love,
my hope, my body.

[…]

“Sestina” by Elizabeth Bishop (1983)

September rain falls on the house.
In the failing light, the old grandmother
sits in the kitchen with the child
beside the Little Marvel Stove,
reading the jokes from the almanac,
laughing and talking to hide her tears.

[…]

“The Latin Deli: An Ars Poetica” by Judith Ortiz Cofer (1988)

Presiding over a formica counter,
Plastic Mother and Child magnetized
to the top of an ancient register,
the heady mix of smells from the open bins
of dried codfish, the green plantains
hanging in stalks like votive offerings,
she is the Patroness of Exiles,

[…]

“Demeter’s Prayer to Hades” by Rita Dove (1995)

This alone is what I wish for you: knowledge.
To understand each desire has an edge,
To know we are responsible for the lives
we change.

[…]

“Man Listening to Disc” by Billy Collins (2001)

This is not bad --
ambling along 44th Street
with Sonny Rollins for company,
his music flowing through the soft calipers
of these earphones,

[…]

Grades 11–12: Informational Texts (English Language Arts)

The Declaration of Independence by Thomas Jefferson (1776)

IN CONGRESS, July 4, 1776

The unanimous Declaration of the thirteen united States of America

When in the Course of human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume, among the Powers of the earth, the separate and equal station to which the Laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.--That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed,--That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient causes; and accordingly all experience hath shown, that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same Object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such Government, and to provide new Guards for their future security.--Such has been the patient sufferance of these Colonies; and such is now the necessity which constrains them to alter their former Systems of Government. The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid world.

He has refused his Assent to Laws, the most wholesome and necessary for the public good.

He has forbidden his Governors to pass Laws of immediate and pressing importance, unless suspended in their operation till his

Assent should be obtained; and when so suspended, he has utterly neglected to attend to them.

He has refused to pass other Laws for the accommodation of large districts of people, unless those people would relinquish the right of Representation in the Legislature, a right inestimable to them and formidable to tyrants only.

He has called together legislative bodies at places unusual, uncomfortable, and distant from the depository of their Public Records, for the sole purpose of fatiguing them into compliance with his measures.

He has dissolved Representative Houses repeatedly, for opposing with manly firmness his invasions on the rights of the people.

He has refused for a long time, after such dissolutions, to cause others to be elected; whereby the Legislative Powers, incapable of Annihilation, have returned to the People at large for their exercise; the State remaining in the mean time exposed to all the dangers of invasion from without, and convulsions within.

He has endeavoured to prevent the population of these States; for that purpose obstructing the Laws of Naturalization of Foreigners; refusing to pass others to encourage their migration hither, and raising the conditions of new Appropriations of Lands.

He has obstructed the Administration of Justice, by refusing his Assent to Laws for establishing Judiciary Powers.

He has made judges dependent on his Will alone, for the tenure of their offices, and the amount and payment of their salaries.

He has erected a multitude of New Offices, and sent hither swarms of Officers to harass our People, and eat out their substance.

He has kept among us, in times of peace, Standing Armies without the Consent of our legislatures.

He has affected to render the Military independent of and superior to the Civil Power.

He has combined with others to subject us to a jurisdiction foreign to our constitution, and unacknowledged by our laws; giving his Assent to their Acts of pretended legislation:

For quartering large bodies of armed troops among us:

For protecting them, by a mock Trial, from Punishment for any Murders which they should commit on the Inhabitants of these States:

For cutting off our Trade with all parts of the world:

For imposing taxes on us without our Consent:

For depriving us, in many cases, of the benefits of Trial by Jury:

For transporting us beyond Seas to be tried for pretended offences:

For abolishing the free System of English Laws in a neighbouring Province, establishing therein an Arbitrary government, and enlarging its Boundaries so as to render it at once an example and fit instrument for introducing the same absolute rule into these Colonies:

For taking away our Charters, abolishing our most valuable Laws, and altering fundamentally the Forms of our Governments:

For suspending our own Legislatures and declaring themselves invested with Power to legislate for us in all cases whatsoever.

He has abdicated Government here, by declaring us out of his Protection and waging War against us.

He has plundered our seas, ravaged our Coasts, burnt our towns, and destroyed the lives of our people.

He is at this time transporting large armies of foreign mercenaries to complete the works of death, desolation and tyranny, already begun with circumstances of Cruelty & perfidy scarcely paralleled in the most barbarous ages, and totally unworthy of the Head of a civilized nation.

He has constrained our fellow Citizens taken Captive on the high Seas to bear Arms against their Country, to become the executioners of their friends and Brethren, or to fall themselves by their Hands.

He has excited domestic insurrections amongst us, and has endeavoured to bring on the inhabitants of our frontiers, the merciless Indian Savages, whose known rule of warfare is an undistinguished destruction of all ages, sexes and conditions.

In every stage of these Oppressions We have Petitioned for Redress in the most humble terms: Our repeated Petitions have been answered only by repeated injury. A Prince, whose character is thus marked by every act which may define a Tyrant, is unfit to be the ruler of a free People.

Nor have We been wanting in attention to our British brethren. We have warned them from time to time of attempts by their legislature to extend an unwarrantable jurisdiction over us. We have reminded them of the circumstances of our emigration and settlement here. We have appealed to their native justice and magnanimity, and we have conjured them by the ties of our common kindred to disavow these usurpations, which would inevitably interrupt our connections and correspondence. They too have been deaf to the voice of justice and of consanguinity. We must, therefore, acquiesce in the necessity, which denounces our Separation, and hold them, as we hold the rest of mankind, Enemies in War, in Peace Friends.

We, therefore, the Representatives of the United States of America, in General Congress, Assembled, appealing to the Supreme Judge of the world for the rectitude of our intentions, do, in the Name, and by the Authority of the good People of these Colonies, solemnly publish and declare, That these United Colonies are, and of Right ought to be Free and Independent States; that they are Absolved from all Allegiance to the British Crown, and that all political connection between them and the State of Great Britain, is and ought to be totally dissolved; and that as Free and Independent States, they have full Power to levy War, conclude Peace, contract Alliances, establish Commerce, and to do all other Acts and Things which Independent States may of right do. And for the support of this Declaration, with a firm reliance on the Protection of Divine Providence, we mutually pledge to each other our Lives, our Fortunes and our sacred Honor.

***The Crisis* by Thomas Paine (1776)**

From Number I

These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands it now, deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph. What we obtain too cheap, we esteem too lightly: it is dearness only that gives every thing its value. Heaven knows how to put a proper price upon its goods; and it would be strange indeed if so celestial an article as FREEDOM should not be highly rated. Britain, with an army to enforce her tyranny, has declared that she has a right (not only to TAX) but "to BIND us in ALL CASES WHATSOEVER," and if being bound in that manner, is not slavery, then is there not such a thing as slavery upon earth. Even the expression is impious; for so unlimited a power can belong only to God.

Whether the independence of the continent was declared too soon, or delayed too long, I will not now enter into as an argument; my own simple opinion is, that had it been eight months earlier, it would have been much better. We did not make a proper use of last winter, neither could we, while we were in a dependent state. However, the fault, if it were one, was all our own; we have none to blame but ourselves. But no great deal is lost yet. All that Howe has been doing for this month past, is rather a ravage than a conquest, which the spirit of the Jerseys, a year ago, would have quickly repulsed, and which time and a little resolution will soon recover.

I have as little superstition in me as any man living, but my secret opinion has ever been, and still is, that God Almighty will not give up a people to military destruction, or leave them unsupportedly to perish, who have so earnestly and so repeatedly sought to avoid the calamities of war, by every decent method which wisdom could invent. Neither have I so much of the infidel in me, as to suppose that He has relinquished the government of the world, and given us up to the care of devils; and as I do not, I cannot see on what grounds the king of Britain can look up to heaven for help against us: a common murderer, a highwayman, or a house-breaker, has as good a pretence as he.

***Walden* by Henry David Thoreau (1854)**

I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. I did not wish to live what was not life, living is so dear; nor did I wish to practise resignation, unless it was quite necessary. I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like as to put to rout all that was not life, to cut a broad swath and shave close, to drive life into a corner, and reduce it to its lowest terms, and, if it proved to be mean, why then to get the whole and genuine meanness of it, and publish its meanness to the world; or if it were sublime, to know it by experience, and be able to give a true account of it in my next excursion. For most men, it appears to me, are in a strange uncertainty about it, whether it is of the devil or of God, and have somewhat hastily concluded that it is the chief end of man here to "glorify God and enjoy him forever."

“Society and Solitude” by Ralph Waldo Emerson (1857)

’T is hard to mesmerize ourselves, to whip our own top; but through sympathy we are capable of energy and endurance. Concert fires people to a certain fury of performance they can rarely reach alone. Here is the use of society: it is so easy with the great to be great; so easy to come up to an existing standard; — as easy as it is to the lover to swim to his maiden through waves so grim before. The benefits of affection are immense; and the one event which never loses its romance, is the encounter with superior persons on terms allowing the happiest intercourse.

It by no means follows that we are not fit for society, because *soirées* are tedious, and because the *soirée* finds us tedious. A backwoodsman, who had been sent to the university, told me that, when he heard the best-bred young men at the law school talk together, he reckoned himself a boor; but whenever he caught them apart, and had one to himself alone, then they were the boors, and he the better man. And if we recall the rare hours when we encountered the best persons, we then found ourselves, and then first society seemed to exist. That was society, though in the transom of a brig, or on the Florida Keys.

A cold, sluggish blood thinks it has not facts enough to the purpose, and must decline its turn in the conversation. But they who speak have no more,--have less. ’Tis not new facts that avail, but the heat to dissolve everybody’s facts. The capital defect of cold, arid natures is the want of animal spirits. They seem a power incredible, as if God should raise the dead. The recluse witnesses what others perform by their aid, with a kind of fear. It is as much out of his possibility as the prowess of Cœur-de-Lion, or an Irishman’s day’s-work on the railroad. ’Tis said, the present and the future are always rivals. Animal spirits constitute the power of the present, and their feats are like the structure of a pyramid. Their result is a lord, a general, or a boon companion. Before these, what a base mendicant is Memory with his leathern badge! But this genial heat is latent in all constitutions, and is disengaged only by the friction of society. As Bacon said of manners, “To obtain them, it only needs not to despise them,” so we say of animal spirits, that they are the spontaneous product of health and of a social habit. “For behavior, men learn it, as they take diseases, one of another.”

But the people are to be taken in very small doses. If solitude is proud, so is society vulgar. In society, high advantages are set down to the individual as disqualifications. We sink as easily as we rise, through sympathy. So many men whom I know are degraded by their sympathies, their native aims being high enough, but their relation all too tender to the gross people about them. Men cannot afford to live together by their merits, and they adjust themselves by their demerits,--by their love of gossip, or by sheer tolerance and animal good-nature. They untune and dissipate the brave aspirant.

The remedy is, to reinforce each of these moods from the other. Conversation will not corrupt us, if we come to the assembly in our own garb and speech, and with the energy of health to select what is ours and reject what is not. Society we must have; but let it be society, and not exchanging news, or eating from the same dish. Is it society to sit in one of your chairs? I cannot go into the houses of my nearest relatives, because I do not wish to be alone. Society exists by chemical affinity, and not otherwise.

Put any company of people together with freedom for conversation, and a rapid self-distribution takes place, into sets and pairs. The best are accused of exclusiveness. It would be more true to say, they separate as oil from water, as children from old people, without love or hatred in the matter, each seeking his like; and any interference with the affinities would produce constraint and suffocation. All conversation is a magnetic experiment. I know that my friend can talk eloquently; you know that he cannot articulate a sentence: we have seen him in different company. Assort your party, or invite none. Put Stubbs and Coleridge, Quintilian and Aunt Miriam, into pairs, and you make them all wretched. ‘Tis an extempore Sing-Sing built in a parlor. Leave them to seek their own mates, and they will be as merry as sparrows.

A higher civility will re-establish in our customs a certain reverence which we have lost. What to do with these brisk young men who break through all fences, and make themselves at home in every house? I find out in an instant if my companion does not want me, and ropes cannot hold me when my welcome is gone. One would think that the affinities would pronounce themselves with a surer reciprocity.

Here again, as so often, Nature delights to put us between extreme antagonisms, and our safety is in the skill with which we keep the diagonal line. Solitude is impracticable, and society fatal. We must keep our head in the one and our hands in the other. The conditions are met, if we keep our independence, yet do not lose our sympathy. These wonderful horses need to be driven by fine hands. We require such a solitude as shall hold us to its revelations when we are in the street and in palaces; for most men are cowed in society, and say good things to you in private, but will not stand to them in public. But let us not be the victims of words. Society and solitude are deceptive names. It is not the circumstance of seeing more or fewer people, but the readiness of sympathy, that imports; and a sound mind will derive its principles from insight, with ever a purer ascent to the sufficient and absolute right, and will accept society as the natural element in which they are to be applied.

“The Fallacy of Success” by G. K. Chesterton (1909)

There has appeared in our time a particular class of books and articles which I sincerely and solemnly think may be called the silliest ever known among men. They are much more wild than the wildest romances of chivalry and much more dull than the dullest religious tract. Moreover, the romances of chivalry were at least about chivalry; the religious tracts are about religion. But these things are about nothing; they are about what is called Success. On every bookstall, in every magazine, you may find works telling people how to succeed. They are books showing men how to succeed in everything; they are written by men who cannot even succeed in writing books. To begin with, of course, there is no such thing as Success. Or, if you like to put it so, there is nothing that is not successful. That a thing is successful merely means that it is; a millionaire is successful in being a millionaire and a donkey in being a donkey. Any live man has succeeded in living; any dead man may have succeeded in committing suicide. But, passing over the bad logic and bad philosophy in the phrase, we may take it, as these writers do, in the ordinary sense of success in obtaining money or worldly position. These writers profess to tell the ordinary man how he may succeed in his trade or speculation—how, if he is a builder, he may succeed as a builder; how, if he is a stockbroker, he may succeed as a stockbroker. They profess to show him how, if he is a grocer, he may become a sporting yachtsman; how, if he is a tenth-rate journalist, he may become a peer; and how, if he is a German Jew, he may become an Anglo-Saxon. This is a definite and business-like proposal, and I really think that the people who buy these books (if any people do buy them) have a moral, if not a legal, right to ask for their money back. Nobody would dare to publish a book about electricity which literally told one nothing about electricity; no one would dare publish an article on botany which showed that the writer did not know which end of a plant grew in the earth. Yet our modern world is full of books about Success and successful people which literally contain no kind of idea, and scarcely and kind of verbal sense.

It is perfectly obvious that in any decent occupation (such as bricklaying or writing books) there are only two ways (in any special sense) of succeeding. One is by doing very good work, the other is by cheating. Both are much too simple to require any literary explanation. If you are in for the high jump, either jump higher than any one else, or manage somehow to pretend that you have done so. If you want to succeed at whist, either be a good whist-player, or play with marked cards. You may want a book about jumping; you may want a book about whist; you may want a book about cheating at whist. But you cannot want a book about Success. Especially you cannot want a book about Success such as those which you can now find scattered by the hundred about the book-market. You may want to jump or to play cards; but you do not want to read wandering statements to the effect that jumping is jumping, or that games are won by winners. If these writers, for instance, said anything about success in jumping it would be something like this: ‘The jumper must have a clear aim before him. He must desire definitely to jump higher than the other men who are in for the same competition. He must let no feeble feelings of mercy (sneaked from the sickening Little Englanders and Pro-Boers) prevent him from trying to *do his best*. He must remember that a competition in jumping is distinctly competitive, and that, as Darwin has gloriously demonstrated, THE WEAKEST GO TO THE WALL.’ That is the kind of thing the book would say, and very useful it would be, no doubt, if read out in a low and tense voice to a young man just about to take the high jump. Or suppose that in the course of his intellectual rambles the philosopher of Success dropped upon our other case, that of playing cards, his bracing advice would run—‘In playing cards it is very necessary to avoid the mistake (commonly made by maudlin humanitarians and Free Traders) of permitting your opponent to win the game. You must have grit and snap and *go in to win*. The days of idealism and superstition are over. We live in a time of science and hard common sense, and it has now been definitely proved that in any game where two are playing IF ONE DOES NOT WIN THE OTHER WILL.’ It is all very stirring, of course; but I confess that if I were playing cards I would rather have some decent little book which told me the rules of the game. Beyond the rules of the game it is all a question either of talent or dishonesty; and I will undertake to provide either one or the other—which, it is not for me to say.

***The American Language* by H. L. Mencken (1938)**

Excerpt from Section I, "The Nature of Slang," from Chapter XI, "American Slang,"

…What chiefly lies behind (slang) is simply a kind of linguistic exuberance, an excess of word-making energy. It relates itself to the standard language a great deal as dancing relates itself to music. But there is also something else. The best slang is not only ingenious and amusing; it also embodies a kind of social criticism. It not only provides new names for a series of every-day concepts, some new and some old; it also says something about them. "Words which produce the slang effect," observes Frank Sechrist, "arouse associations what are incongruous or incompatible with those of customary thinking."

Everyone, including the metaphysician in his study or the eremite in his cell, has a large vocabulary of slang, but the vocabulary of the vulgar is likely to be larger than that of the cultured, and it is harder worked. Its content may be divided into two categories: *(a)* old words, whether used singly or in combination, that have been put to new uses, usually metaphorical, and *(b)* new words that have not yet been admitted to the standard vocabulary. Examples of the first type are *rubberneck,* for a gaping and prying person, and *iceberg*, for a cold woman; examples of the second are *hoosegow, flim-flam, blurb, bazoo* and *blah*. There is a constant movement of slang into accepted usage. *Nice*, as an adjective of all work, signifying anything satisfactory, was once used in slang only, but today no one would question "a *nice* day," "a *nice* time," or "a *nice* hotel."…The verb-phrase *to hold up* is now perfectly good American, but so recently as 1901 the late Brander Matthews was sneering at it as slang. In the same way many other verb-phrases, *e.g., to cave in, fill the bill* and *to fly off the handle,* once viewed askance, have gradually worked their way to a relatively high level of the standard speech. On some indeterminate tomorrow *to stick up* and *to take for a ride* may follow them. …

"Politics and the English Language" by George Orwell (1946)

Most people who bother with the matter at all would admit that the English language is in a bad way, but it is generally assumed that we cannot by conscious action do anything about it. Our civilization is decadent and our language—so the argument runs—must inevitably share in the general collapse. It follows that any struggle against the abuse of language is a sentimental archaism, like preferring candles to electric light or hansom cabs to aeroplanes. Underneath this lies the half-conscious belief that language is a natural growth and not an instrument which we shape for our own purposes.

Now, it is clear that the decline of a language must ultimately have political and economic causes: it is not due simply to the bad influence of this or that individual writer. But an effect can become a cause, reinforcing the original cause and producing the same effect in an intensified form, and so on indefinitely. A man may take to drink because he feels himself to be a failure, and then fail all the more completely because he drinks. It is rather the same thing that is happening to the English language. It becomes ugly and inaccurate because our thoughts are foolish, but the slovenliness of our language makes it easier for us to have foolish thoughts. The point is that the process is reversible. Modern English, especially written English, is full of bad habits which spread by imitation and which can be avoided if one is willing to take the necessary trouble. If one gets rid of these habits one can think more clearly, and to think clearly is a necessary first step toward political regeneration: so that the fight against bad English is not frivolous and is not the exclusive concern of professional writers. I will come back to this presently, and I hope that by that time the meaning of what I have said here will have become clearer. Meanwhile, here are five specimens of the English language as it is now habitually written.

These five passages have not been picked out because they are especially bad—I could have quoted far worse if I had chosen—but because they illustrate various of the mental vices from which we now suffer. They are a little below the average, but are fairly representative examples. I number them so that I can refer back to them when necessary:

> "(1) I am not, indeed, sure whether it is not true to say that the Milton who once seemed not unlike a seventeenth-century Shelley had not become, out of an experience ever more bitter in each year, more alien [sic] to the founder of that Jesuit sect which nothing could induce him to tolerate."
>
> Professor Harold Laski (*Essay in Freedom of Expression*)

> "(2) Above all, we cannot play ducks and drakes with a native battery of idioms which prescribes egregious collocations of vocables as the Basic *put up with* for *tolerate*, or *put at a loss* for *bewilder*."
>
> Professor Lancelot Hogben (*Interglossa*)

> "(3) On the one side we have the free personality: by definition it is not neurotic, for it has neither conflict nor dream. Its desires, such as they are, are transparent, for they are just what institutional approval keeps in the forefront of consciousness; another institutional pattern would alter their number and intensity; there is little in them that is natural, irreducible, or culturally dangerous. But *on the other side*, the social bond itself is nothing but the mutual reflection of these self-secure integrities. Recall the definition of love. Is not this the very picture of a small academic? Where is there a place in this hall of mirrors for either personality or fraternity?"
>
> Essay on psychology in *Politics* (New York)

> "(4) All the 'best people' from the gentlemen's clubs, and all the frantic fascist captains, united in common hatred of Socialism and bestial horror at the rising tide of the mass revolutionary movement, have turned to acts of provocation, to foul incendiarism, to medieval legends of poisoned wells, to legalize their own destruction of proletarian organizations, and rouse the agitated petty-bourgeoisie to chauvinistic fervor on behalf of the fight against the revolutionary way out of the crisis."
>
> Communist pamphlet

> "(5) If a new spirit is to be infused into this old country, there is one thorny and contentious reform which must be tackled, and that is the humanization and galvanization of the B.B.C. Timidity here will bespeak canker and atrophy of the soul. The heart of Britain may be sound and of strong beat, for instance, but the British lion's roar at present is like that of Bottom in Shakespeare's *Midsummer Night's Dream*—as gentle as any sucking dove. A virile new Britain cannot continue indefinitely to be traduced in the eyes or rather ears, of the world by the effete languors of Langham Place, brazenly masquerading as 'standard English.' When the Voice of Britain is heard at nine o'clock, better far and infinitely less ludicrous to hear aitches honestly dropped than the present priggish, inflated, inhibited, school-ma'amish arch braying of blameless bashful mewing maidens!"
>
> Letter in *Tribune*

Each of these passages has faults of its own, but, quite apart from avoidable ugliness, two qualities are common to all of them. The first is staleness of imagery; the other is lack of precision. The writer either has a meaning and cannot express it, or he inadvertently says something else, or he is almost indifferent as to whether his words mean anything or not. This mixture of vagueness and sheer incompetence is the most marked characteristic of modern English prose, and especially of any kind of political writing. As soon as certain topics are raised, the concrete melts into the abstract and no one seems able to think of turns of speech that are not hackneyed: prose consists less and less of *words* chosen for the sake of their meaning, and more and more of *phrases* tacked together like the sections of a prefabricated hen-house.

“Abraham Lincoln and the Self-Made Myth” by Richard Hofstadter (1948)

Lincoln was shaken by the presidency. Back in Springfield, politics had been a sort of exhilarating game; but in the White House, politics was power, and power was responsibility. Never before had Lincoln held executive office. In public life he had always been an insignificant legislator whose votes were cast in concert with others and whose decisions in themselves had neither finality nor importance. As President he might consult with others, but innumerable grave decisions were in the end his own, and with them came a burden of responsibility terrifying in its dimensions.

Lincoln’s rage for personal success, his external and worldly ambition, was quieted when he entered the White House, and he was at last left alone to reckon with himself. To be confronted with the fruits of his victory only to find that it meant choosing between life and death for others was immensely sobering. That Lincoln should have shouldered the moral burden of the war was characteristic of the high seriousness into which he had grown since 1854; and it may be true, as Professor Charles W. Ramsdell suggested, that he was stricken by an awareness of his own part in whipping up the crisis. This would go far to explain the desperation with which he issued pardons and the charity that he wanted to extend to the conquered South at the war’s close. In one of his rare moments of self-revelation he is reported to have said: “Now I don’t know what the soul is, but whatever it is, I know that it can humble itself.” The great prose of the presidential years came from a soul that had been humbled. Lincoln’s utter lack of personal malice during these years, his humane detachment, his tragic sense of life, have no parallel in political history.

“Lincoln,” said Herndon, “is a man of heart—aye, as gentle as a woman’s and as tender. . . .” Lincoln was moved by the wounded and dying men, moved as no one in a place of power can afford to be. He had won high office by means sometimes rugged, but once there, he found that he could not quite carry it off. For him it was impossible to drift into the habitual callousness of the sort of officialdom that sees men only as pawns to be shifted here and there and “expended” at the will of others. It was a symbolic thing that his office was so constantly open, that he made himself more accessible than any other chief executive in our history. “Men moving only in an official circle,” he told Carpenter, “are apt to become merely official—not to say arbitrary—in their ideas, and are apter and apter with each passing day to forget that they only hold power in a representative capacity.” Is it possible to recall anyone else in modern history who could exercise so much power and yet feel so slightly the private corruption that goes with it? Here, perhaps, is the best measure of Lincoln’s personal eminence in the human calendar—that he was chastened and not intoxicated by power.

“Letter from Birmingham City Jail” by Martin Luther King, Jr. (1963)

My Dear Fellow Clergymen:

While confined here in the Birmingham city jail, I came across your recent statement calling my present activities "unwise and untimely." Seldom do I pause to answer criticism of my work and ideas. If I sought to answer all the criticisms that cross my desk, my secretaries would have little time for anything other than such correspondence in the course of the day, and I would have no time for constructive work. But since I feel that you are men of genuine good will and that your criticisms are sincerely set forth, I want to try to answer your statements in what I hope will be patient and reasonable terms.

I think I should indicate why I am here In Birmingham, since you have been influenced by the view which argues against "outsiders coming in." I have the honor of serving as president of the Southern Christian Leadership Conference, an organization operating in every southern state, with headquarters in Atlanta, Georgia. We have some eighty-five affiliated organizations across the South, and one of them is the Alabama Christian Movement for Human Rights. Frequently we share staff, educational and financial resources with our affiliates. Several months ago the affiliate here in Birmingham asked us to be on call to engage in a nonviolent direct-action program if such were deemed necessary. We readily consented, and when the hour came we lived up to our promise. So I, along with several members of my staff, am here because I was invited here I am here because I have organizational ties here.

But more basically, I am in Birmingham because injustice is here. Just as the prophets of the eighth century B.C. left their villages and carried their "thus saith the Lord" far beyond the boundaries of their home towns, and just as the Apostle Paul left his village of Tarsus and carried the gospel of Jesus Christ to the far corners of the Greco-Roman world, so am I. compelled to carry the gospel of freedom beyond my own home town. Like Paul, I must constantly respond to the Macedonian call for aid.

Moreover, I am cognizant of the interrelatedness of all communities and states. I cannot sit idly by in Atlanta and not be concerned about what happens in Birmingham. Injustice anywhere is a threat to justice everywhere. We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly. Never again can we afford to live with the narrow, provincial "outside agitator" idea. Anyone who lives inside the United States can never be considered an outsider anywhere within its bounds.

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“Mother Tongue” by Amy Tan (1990)

Just last week, I was walking down the street with my mother, and I again found myself conscious of the English I was using, the English I do use with her. We were talking about the price of new and used furniture and I heard myself saying this: “Not waste money that way.” My husband was with us as well, and he didn’t notice any switch in my English. And then I realized why. It’s because over the twenty years we’ve been together I’ve often used that same kind of English with him, and sometimes he even uses it with me. It has become our language of intimacy, a different sort of English that relates to family talk, the language I grew up with.

So you’ll have some idea of what this family talk I heard sounds like, I’ll quote what my mother said during a recent conversation which I videotaped and then transcribed. During this conversation, my mother was talking about a political gangster in Shanghai who had the same last name as her family’s, Du, and how the gangster in his early years wanted to be adopted by her family, which was rich by comparison. Later, the gangster became more powerful, far richer than my mother’s family, and one day showed up at my mother’s wedding to pay his respects. Here’s what she said in part: “Du Yusong having business like fruit stand. Like off the street kind. He is Du like Du Zong — but not Tsung-ming Island people. The local people call putong, the river east side, he belong to that side local people. That man want to ask Du Zong father take him in like become own family. Du Zong father wasn’t look down on him, but didn’t take seriously, until that man big like become a mafia. Now important person, very hard to inviting him. Chinese way, came only to show respect, don’t stay for dinner. Respect for making big celebration, he shows up. Mean gives lots of respect. Chinese custom. Chinese social life that way. If too important won’t have to stay too long. He come to my wedding. I didn’t see, I heard it. I gone to boy’s side, they have YMCA dinner. Chinese age I was nineteen.”

You should know that my mother’s expressive command of English belies how much she actually understands. She reads the Forbes report, listens to Wall Street Week, converses daily with her stockbroker, reads all of Shirley MacLaine’s books with ease–all kinds of things I can’t begin to understand. Yet some of my friends tell me they understand 50 percent of what my mother says. Some say they understand 80 to 90 percent. Some say they understand none of it, as if she were speaking pure Chinese. But to me, my mother’s English is perfectly clear, perfectly natural. It’s my mother tongue. Her language, as I hear it, is vivid, direct, full of observation and imagery. That was the language that helped shape the way I saw things, expressed things, made sense of the world.

Lately, I’ve been giving more thought to the kind of English my mother speaks. Like others, I have described it to people as ‘broken” or “fractured” English. But I wince when I say that. It has always bothered me that I can think of no way to describe it other than “broken,” as if it were damaged and needed to be fixed, as if it lacked a certain wholeness and soundness. I’ve heard other terms used, “limited English,” for example. But they seem just as bad, as if everything is limited, including people’s perceptions of the limited English speaker.

I know this for a fact, because when I was growing up, my mother’s “limited” English limited my perception of her. I was ashamed of her English. I believed that her English reflected the quality of what she had to say That is, because she expressed them imperfectly her thoughts were imperfect. And I had plenty of empirical evidence to support me: the fact that people in department stores, at banks, and at restaurants did not take her seriously, did not give her good service, pretended not to understand her, or even acted as if they did not hear her.

My mother has long realized the limitations of her English as well. When I was fifteen, she used to have me call people on the phone to pretend I was she. In this guise, I was forced to ask for information or even to complain and yell at people who had been rude to her. One time it was a call to her stockbroker in New York. She had cashed out her small portfolio and it just so happened we were going to go to New York the next week, our very first trip outside California. I had to get on the phone and say in an adolescent voice that was not very convincing, “This is Mrs. Tan.”

And my mother was standing in the back whispering loudly, “Why he don’t send me check, already two weeks late. So mad he lie to me, losing me money.

And then I said in perfect English, "Yes, I'm getting rather concerned. You had agreed to send the check two weeks ago, but it hasn't arrived."

Then she began to talk more loudly. "What he want, I come to New York tell him front of his boss, you cheating me?" And I was trying to calm her down, make her be quiet, while telling the stockbroker, "I can't tolerate any more excuses. If I don't receive the check immediately, I am going to have to speak to your manager when I'm in New York next week." And sure enough, the following week there we were in front of this astonished stockbroker, and I was sitting there red-faced and quiet, and my mother, the real Mrs. Tan, was shouting at his boss in her impeccable broken English.

"Take the Tortillas Out of Your Poetry" by Rudolfo Anaya (1995)

In a recent lecture, "Is Nothing Sacred?", Salman Rushdie, one of the most censored authors of our time, talked about the importance of books. He grew up in a household in India where books were as sacred as bread. If anyone in the household dropped a piece of bread or a book , the person not only picked it up , but also kissed the object by way of apologizing for clumsy disrespect.

He goes on to say that he had kissed many books before he had kissed a girl. Bread and books were for his household, and for many like his, food for the body and the soul. This image of the kissing of the book one had accidentally dropped made an impression on me. It speaks to the love and respect many people have for them.

I grew up in a small town in New Mexico, and we had very few books in our household. The first one I remember reading was my catechism book. Before I went to school to learn English, my mother taught me catechism in Spanish. I remember the questions and answers I had to learn, and I remember the well-thumbed, frayed volume which was sacred to me.

Growing up with few books in the house created in me a desire and a need for them. When I started school, I remember visiting the one room library of our town and standing in front of the dusty shelves. In reality there were only a few shelves and not over a thousand books, but I wanted to read them all. There was food for my soul in the books, that much I realized.

As a child I listened to the stories of the people, the cuentos the old ones told. Those stories were my first contact with the magic of storytelling. Those stories fed my imagination, and later, when I wrote books, I found the same sense of magic and mystery in writing. In B*less Me, Ultima*, my first novel, Antonio, my main character who had just started to school, sees in them the power of the written word. He calls books the "magic of words."

For me, reading has always been a path toward liberation and fulfillment. To learn to read is to start down the road of liberation, a road which should be accessible to everyone. . . .

Email with updated timeline for completion of the standards

From: Cindy Patterson [mailto:cindyp@ccsso.org] **On Behalf Of** Gene Wilhoit
Sent: Wednesday, January 13, 2010 4:22 PM
To: chiefs
Cc: Carrie Heath
Subject: Confidential Standards - DRAFT

Chiefs:

The second version of the **confidential** ELA and Mathematics K-12 Common Core State Standards drafts and exemplars are now available.

In order to access the standards, please use this link:
http://xlg.nga.org/RetrieveEmail.aspx?ID=48cf2b7b-9fd6-44f3-976e-0f1ed87ca9af
And use the code: **grayicicle496**

Please send your feedback by **January 22nd to Chris Minnich at CCSSO (chrism@ccsso.org).** We are requesting a fast turnaround on the feedback. See below for the focused feedback questions we would like you to answer. If you are unable to provide feedback by that time, there will be another opportunity to provide input on the public draft, which is expected to be released the first week of February. Please note that we have also shared these documents with the governors' offices in all participating initiative states.

We appreciate your input as we work to develop a strong set of common core state standards worthy of state adoption and are aiming at producing a final set of standards by the end of February/early March.

Updated Timeline:

- Feedback on the Confidential K-12 ELA and Math Standards Draft due: *January 22*
- Public Draft of K-12 ELA and Math Standards: *1st week of February*
- Feedback due on public draft: *February 19*
- Final Draft: *End of February/Early March*

If you have any questions, please contact Chris Minnich at chrism@ccsso.org.

Thanks,
Gene

Questions for State Feedback on K-12 English Language Arts and Mathematics Common Core State Standards Drafts (January 13, 2010)

1. Is the architecture of the draft standards clear and easy to follow for all audiences (e.g., teachers, administrators, curriculum developers, students, general public)?

2. Does the document present a rigorous, yet reasonable continuum of expectations for student learning in each discipline?

3. Is the language in this draft clear, concise, and precise? Will teachers be able to readily identify the standards within the document?

4. One of our stated goals for the common core state standards is that they are fewer, clearer and higher. Do these standards meet those criteria? Please be specific in areas where we can be more concise.

5. Please provide any other general feedback about the draft standards.

You are currently subscribed to chiefs as: terry.holliday@education.ky.gov.

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KENTUCKY'S PROCESS FOR ADOPTING THE NEW COMMOM CORE STANDARDS

The passage of Senate Bill 1 (SB1) by the Kentucky General Assembly in the 2009 regular session required that content standards in all content areas be revised. The goals of the revision were to have fewer, clearer and higher standards that are internationally benchmarked. The revision also allowed the opportunity to discontinue the use of the Core Content for Assessment document as its contents are already included in the current Program of Studies (POS) regulation adopted by the Kentucky Board of Education.

Kentucky is working with a consortium of several other states to develop standards in mathematics, English/language arts and, possibly, science (a little later) that will be known as the common core standards. It is necessary to replace the currently existing standards in the POS with these new, internationally benchmarked ones.

The Kentucky Board of Education brings regulations being considered for adoption before that body twice, once for review and the other time for final approval. At the December 9-10, 2009, meeting, the board did the first review of 704 KAR 3:303, Required program of studies, the regulation that incorporates the POS within it as a document incorporated by reference. Kentucky Department of Education staff recommended to the board in December that the name of Kentucky's Program of Studies for Grades Primary - 12 (revised 2006) be changed to Kentucky's Core Academic Standards. All places where POS is listed would be replaced with Core Academic Standards. Staff also recommended that content within Kentucky's Core Academic Standards be the content assessed on the state assessment and that the board replace the mathematics and reading/language arts standards in the current POS with new common core standards currently being developed in collaboration with other states in order to implement the changes required by SB1. The regulation will come back to the February 10-11, 2010 meeting for final approval. For science and any other content area standard changes, the regulation will be brought back to incorporate them in the future when these are ready.

In addition to the legal approval process for regulations to make the new standards for mathematics and reading/language arts have the force of law, a joint meeting of the Kentucky Board of Education with the Council on Postsecondary Education and Education Professional Standards Board is being planned for February 10 at which time the standards for mathematics and English/language arts will be considered for approval by all three boards. This joint approval signals public agreement and alignment between Kentucky's teacher certification board, higher education board and preschool through grade 12 board on what students need to know and be able to do.

Once 704 KAR 3:303 is given final approval by the Kentucky Board of Education at the February 10-11 meeting, the regulation and its document incorporated by reference (the standards), will then proceed through the legally required public hearing process and review by a series of legislative committees before officially becoming law. That process will take approximately through the end of May 2010 to be completed.

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 KENTUCKY ("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 and schooling.</u> 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.

SUMMATIVE

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.

AP Art Brig samples

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.

KENTUCKY

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 _____ Date 1-5-10

Terry Holliday
Print Name

Commissioner
Title

Please email this signed page to

Tammy Morrill
Tammy.Morrill@maine.gov

****PLEASE email this signed page only by January 7, 2010****

STATE - SIGNED MOU

Alabama
Arizona
Arkansas
California
Connecticut
Delaware
Illinois
Indiana
Kansas
Kentucky
Maine
Maryland
Massachusetts
Michigan
Mississippi
Missouri
Montana
New Hampshire
New Jersey
North Dakota
Ohio
Pennsylvania
Rhode Island
South Carolina
South Dakota
Utah
Washington DC
West Virginia
Wisconsin

Wyoming

Summative Multi-State Assessment Resources for Teachers and Educational Researchers (SMARTER) Memorandum of Understanding

This non-binding Memorandum of Understanding (MOU) is entered into by and between the states of Delaware, Hawaii, Idaho, Nebraska, Oregon, Tennessee, Utah, Washington, Wisconsin and Wyoming (referred to as "Lead States") and KENTUCKY ("Your State"), as a participating state. The purpose of this MOU is to establish a consortium of states (Consortium) to serve as a framework of collaboration as required to submit a proposal for a Multi-State Consortium Common Assessment Race to the Top grant. The working title for the proposal is the "Summative Multi-State Assessment Resources for Teachers and Educational Researchers" (SMARTER). In the event the proposal is approved and fully funded by the U.S. Department of Education, the final proposal will serve as the official agreement.

1. States in the Consortium will assign a key contact to assist in the drafting of the proposal, and to the extent practicable will engage their teachers, school and district administrators and institutions of higher education in the development and review of the proposal to ensure the design of the assessment system meets the needs of a variety of stakeholders.

2. States may withdraw from the Consortium prior to the establishment of the draft budget for the proposal. The anticipated date for the draft budget is 30 days before the proposal is due to the U.S. Department of Education.

3. States in the Consortium agree in principle to the following elements to be included in a proposal to the U.S. Department of Education:
   a. The purpose of the proposal is to develop a high quality summative assessment system that is aligned to the Common Core Standards, mutually adopted by Consortium states.
   b. The assessment system will use online adaptive tests, innovative item design and open-ended items to assess the full breadth of cognitive demand described by the Common Core Standards.
   c. Proposal writing will be governed by staff from the Lead States that have agreed to this MOU. Governance protocols for proposal development will be established by 2/15/2010.
   d. If funded, the assessment system will be governed by staff from states that are members of the Consortium, and will be guided with the support of selected technical experts. Governance protocols for the assessment system will be a deliverable of the grant.
   e. The assessment system will include teachers, school and district administrators, state departments of education and institutions of higher education in the design, administration, scoring and reporting of the assessments.
   f. States in the Consortium will report student, school, district and state results based upon a single common set of rigorous achievement standards. Additionally, states in the consortium may choose to report student achievement benchmarked to a variety of achievement standards including NAEP, international assessments, and benchmarks predictive of student success in college and careers.
   g. States in the Consortium will use the summative assessment system to measure school and district effectiveness to meet federal accountability requirements
   h. The assessments will be designed based on principles of Universal Design and will be consistent with professional standards as described by the APA/AERA/NCME *Standards for Educational and Psychological Testing*.
   i. The Consortium will coordinate with the MOSAIC consortium as appropriate and with other interested multi-state formative and benchmark assessment initiatives so that schools and districts will have access to a variety of high quality instructionally supportive assessment options that together yield a coherent balanced assessment system.
   j. The assessment system will use open source software applications accessible to any vendor procured by states in the Consortium.

k. States in the Consortium will create and adhere to common administration guidelines including accommodations and allowable tools and assistive devices based on high quality research regarding student learning and assessment.
l. Grant funds allocated to LEAs will in part be used to ensure participation opportunities for teachers. The estimated allocation and purpose of funds will be described in the budget section of the proposal.
m. States in the Consortium will participate in common procurement practices and deliverables to the extent the procurements are directly related to Consortium-wide activities described in the proposal. Lead states will construct a procurement process taking into account minimum procurement standards used in all participating states.
n. States in the Consortium will share a common reporting format consistent with a goal of aligning reporting systems.
o. States in the Consortium will share common security protocols regarding test items.
p. States in the Consortium will work with their institutions of higher education and teacher preparation institutions to ensure teachers are prepared to use and contribute to the summative assessment system.

This non-binding Memorandum of Understanding shall be effective beginning with the date of the last signature hereon:

Participating State SEA Superintendent/Chief/Commissioner
(or equivalent authorized signatory)

Signature _____ Date 1/6/10

Print Name TERRY HOLLIDAY Title Commissioner

Authorized Oregon SEA Official, on behalf of Lead States
By its signature below, the lead states hereby accept the SEA as a Participating SEA in the Consortium

Official State Designee _____ Date _____

Print Name _____ Title _____

Please sign and date this agreement by no later than January 8th, 2010.
FAX signed copy to Tony Alpert at: (503) 378-5156 or email scanned copy to Tony.Alpert@state.or.us

KENTUCKY

States participating in the SMARTER consortium

The following states have submitted a signed Memorandum of Understanding (MOU) to participate in the Summative Multi-State Assessment Resources for Teachers and Educational Researchers (SMARTER) consortium to provide high-quality summative assessments.

State	Date SMARTER MOU-Received	Lead or Participating State
Nebraska	January 4th, 2010	Lead
Washington	January 4th, 2010	Lead
Hawaii	January 4th, 2010	Lead
Wyoming	January 5th, 2010	Lead
Utah	January 5th, 2010	Lead
Tennessee	January 5th, 2010	Lead
Wisconsin	January 6th, 2010	Lead
Kentucky	January 6th, 2010	Participating
Kansas	January 6th, 2010	Participating
Minnesota	January 6th, 2010	Lead
Michigan	January 6th, 2010	Participating
Ohio	January 6th, 2010	Participating
South Carolina	January 6th, 2010	Participating
Oregon	January 6th, 2010	Lead
Montana	January 8th, 2010	Participating
Illinois	January 8th, 2010	Lead
Idaho	January 7th, 2010	Lead
Delaware	January 7th, 2010	Lead
Total # of states that have submitted signed MOUs for SMARTER	**18**	

Listed below are the states that have submitted a signed MOU to participate in SMARTER. In addition, also included are those states that have submitted formal statements of their intent to participate in SMARTER, but are not able to submit a signed MOU in time for the Race To the Top first round application deadlines.

State	Status of SMARTER MOU
Nebraska	Signed
Washington	Signed
Hawaii	Signed
Wyoming	Signed
Utah	Signed
Tennessee	Signed
Wisconsin	Signed
New Mexico	To be signed after AG review
Kentucky	Signed
Kansas	Signed
Minnesota	Signed
Michigan	Signed
Ohio	Signed
South Carolina	Signed
Oregon	Signed
Montana	Signed

Illinois	Signed
Idaho	Signed
Delaware	Signed
Anticipated total # of states that will participate in SMARTER	**19**

RTTT – Multiple Options (for) Student Assessment (and) Instruction Consortium (MOSAIC)
Memorandum of Understanding

This Non-Binding Memorandum of Understanding ("MOU") is entered into by and between the lead state(s): Nebraska and Wisconsin, and Kentucky ("Your State"). The purpose of this agreement is to establish a framework of collaboration, as well as articulate 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. States might choose to participate in this Consortium even if their Race to the Top grant application is not funded.

I. PROJECT PROPOSAL

A. PARTICIPATING SEA RESPONSIBILITIES

A Consortium of states proposes to build a balanced assessment system of formative and benchmark assessment in a Race to the Top grant application. A state might choose to participate in this agreement through funding of its own choosing. The name of the system to be built is Multiple Options (for) Student Assessment (and) Instruction Consortium (MOSAIC).

The proposed Consortium tasks and activities described in the Race to the Top application include the tasks that follow below. States participating in the Consortium will need to determine which of the tasks they wish to undertake with the Consortium Group. This decision may be made after the submission of the MOU.

Task 1.1.1: The consortium states will adopt the Common Core Standards. Within one year of state adoption, all districts within the consortium states will have adopted the Common Core Standards, will have integrated the standards to their local curriculum, and will have aligned professional development to familiarize staff with the college and career-ready expectations.

Task 1.1.2: The consortium states will develop and build professional development materials around the instructional integration of Common Core standards. This will include curricular frameworks aligned to the Common Core, defining of learning progressions within content areas, materials on instructional strategies, and suggested interventions. All materials will be disseminated across the states within the consortium and made available in a web-banked system.

Task 1.1.3: The consortium states will have access to the University of Kansas' Computerized Assessments and Learning (CAL) computerized engine and will make it available to districts in all of the states. Each state will load the system with formative/local assessment tasks, items, and instructional materials including performance assessments. These can be shared across states, and customized for local use. All will be aligned with the Common Core and will be available electronically to students and teachers with timely data turn-around.

Task 1.1.4: Each state will define the level at which districts/schools in their state participate in the formative/benchmark assessment system. This may vary from state to state, depending on how each state defines voluntary versus optional participation. (One level of required participation within a state might be to require the state's persistently low performing schools and districts to participate in this comprehensive assessment system, and to require that student performance data be tracked over time for growth and improvement.)

Task 1.1.5: Each state will contribute to the development of district, school, and student-level performance reports on the Common Core. Reports will be generated in parent-friendly and teacher-friendly formats to track progress on the Common Core standards. Emphasis will be placed upon growth and improvement over time, with customized feedback about suggested next-steps based on the student's performance.

Task 1.1.6: Each state will contribute to the development of a benchmark assessment item bank with the capabilities for adaptive testing. From this item bank, common diagnostic/benchmark tests will be developed across the "total package" consortia states through a consortia bid process to a single vendor. Each state will contribute field-tested items to the bank. This bank will be used to diagnose student strengths and deficiencies and serve as an "early warning" system. Common performance standards and cut scores for these diagnostic/benchmark tests will be set across the consortium of states. The common tests will be loaded into the CAL system for immediate data turn around. The common tests will be available to districts/schools within each state as defined by that state – varying levels of participation will require different cost to each state to implement, most likely on a per-pupil basis. (States participating at the Partner or Associate level may access items in the bank, but may not utilize the consortia-developed common assessments).

Task 1.1.7: Each state will contribute to the development of hands-on training and workshop modules for educators that focus on user-friendly strategies to make data-informed instructional decisions based upon formative, benchmark, and summative assessment results. All materials will be disseminated across the collaborating states.

The selection of tasks by each SEA participating in the Consortium will determine the level of participation of each respective state. There are three levels of participation that may be selected by each SEA in the Consortium. While the level of participation does not need to be selected at the time of signing the MOU, by its signature the state is indicating its interest in participating at a minimum of Level Three.

- **Level One – "Total Package"** – The state participates in **all seven tasks** with a common vendor, and shares in all resources available through the project, including all formative/benchmark assessments developed under the project. The state has an active role in developing, disseminating and sharing professional development tasks and materials.
- **Level Two - "Partner"** – The state contributes to the item bank (**Tasks 1.1.1, 1.1.2, and 1.1.6**)and professional development materials, and may use components in their state for state-specific work. (ex: state does not use common assessments developed from the bank; instead, uses the bank to create their own assessment tools with a separate vendor)

Kentucky

- **Level Three - "Associate"** – The state contributes to the item bank, (**Task 1.1.6 only**) and may use components in their state for state-specific work. The state does not contribute to or have access to professional development components developed through the project.

B. RESPONSIBILITIES OF ALL SEA PARTICIPATING IN THE CONSORTIUM

1) Each participating SEA in the Consortium will appoint a key contact person for the Race to the Top grant.

2) These key contacts from each State and the lead state(s) will maintain frequent communication 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 _____ Date 1-5-10

Terry Holliday Commissioner

Print Name Title

Authorized Lead SEA Official - Lead State
By its signature below, the lead state(s) hereby accepts the SEA as a Participating SEA in the Consortium

Official State Designee _____ Date _____

Print Name _____ Title _____

Please email this signed page by January 5, 2010 to

lynette.russell@dpi.wi.gov **and** **pat.roschewski@nebraska.gov**
or fax to

(Fax) 608.266.8770 **and** **(Fax) 402.471.4311**

****PLEASE email this signed page only by January 5, 2010****

States participating in the MOSAIC consortium

The following states have submitted a signed Memorandum of Understanding (MOU) to participate in the Multiple Options for Student Assessment and Instruction Consortium (MOSAIC) consortium to provide high-quality summative assessments. Listed below are the states that have submitted a signed MOU to participate in MOSAIC.

State	Date MOSAIC MOU-Received	Lead or Participating State
Delaware	January 5th, 2010	Participating
Hawaii	December 31st, 2009	Participating
Idaho	December 22nd, 2009	Participating
Iowa	January 5th, 2010	Participating
Kansas	January 5th, 2010	Participating
Kentucky	January 5th, 2010	Participating
Maryland	January 5th, 2010	Participating
Michigan	January 4th, 2010	Participating
Mississippi	January 5th, 2010	Participating
Missouri	January 5th, 2010	Lead
Montana	January 7th, 2010	Participating
Nebraska	January 6th, 2010	Lead
New Jersey	January 5th, 2010	Participating
North Dakota	January 5th, 2010	Participating
Ohio	January 6th, 2010	Participating
Oregon	January 6th, 2010	Participating
Pennsylvania	January 8th, 2010	Participating
South Carolina	January 6th, 2010	Participating
South Dakota	January 4th, 2010	Participating
Tennessee	January 5th, 2010	Participating
Utah	January 5th, 2010	Participating
Washington	January 4th, 2010	Participating
Wisconsin	January 6th, 2010	Lead
Wyoming	January 4th, 2010	Participating
Total # of states that have submitted signed MOUs for MOSAIC*	**24**	

* As of 1/8/2010

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<u>tegic goal</u> –21st Century Professionals

<u>ent goal</u> - P-16 educators and administrators will effectively implement new academic core ls in Math and Language Arts by August 2010

<u>tegy</u> – New Standards and Assessments

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Assessment Literacy

ent Step 1 tion to t Literacy	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
ents with racy e distributed website to be akeholders to settings	Ken Draut Felicia C. Smith	Staff	12/1/09	2/1/10	Documents will appear on KDE website	N/A	Add Counter on website to number of pe completing Survey will gi information o understandin information p
de webinar educators to d implement ssments for g (Stiggins es an	Felicia C. Smith Chris Powell	Staff KET	12/1/09	4/1/10	Webinars will be posted Completion results of participants	Analyze participant demographics for consistency across the state	Results from for understan Survey will gi information o understandin information p
lk of the tem- ormational acement on	Rhonda Sims	Staff	01/10	02/11	Counter on survey on website to calculate number of persons logging on	N/A	N/

ent Step 1 tion to nt Literacy	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
nercial that st on public radio that olders of the the balanced tem to	Lisa Gross	KET/KDE media resources Use of school based TV networks to send message across entire state. Use of local TV networks to send message across entire state. Use of radio stations to send message out across entire state	01/10	02/11	Through surveys that give us info back on the understanding of information presented.	Analysis of demographic information	Survey will giv information o understandin information p
g to every ment rough face-to- webinars, ent literacy	Rhonda Sims	$25,000	01/10	02/11	Through surveys that give us info back on the understanding of information presented or the completion of assessment modules	Training is duplicated throughout KY	Survey will giv information o understandin information p
g to regional face-to-face nars, online racy modules,	Rhonda Sims	$25,000	01/10	02/11	Through surveys that give us info back on the understanding of information presented. Or the completion of assessment modules.	Training is duplicated throughout KY	Survey will giv information o understandin information p

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ent Step 2 ation of the ssessment em.	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
seminate a ent to essment for ng facilitators ship Network and the needs rs	Core Oversight Team	Leadership Network Model	12/1/09	2/1/10	All surveys from the facilitators have been collected and analyzed.	N/A	N/
o Network District eams will istrict to assroom Student l	Core Oversight team	Leadership Network Model	6/1/10	On-going	This will be ongoing however growth will be determined by accountability results	Results of observations of training	Continuous Ir Improvement information Student Asses Results

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tegic goal –21st Century Professionals

ent goal - P-16 educators and administrators will effectively implement new academic core ls in Math and Language Arts by August 2010

tegy – New Standards and Assessments

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Dissemination of Standards

ent Step itial ication of dards	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
ure available & resources if CCSSO	Lisa Gross/Communications Committee	N/A	12/15/09	2/1/10	Copies of any existing print materials	N/A	Incorporation materials into created docum
vareness of ing for KDE n of awareness s rticipation in modules with up during LA nities of e	Felicia C. Smith	Copies of standards, additional materials designed for this purpose from OTL budget - $28,000	12/15/09	3/30/10	Session sign in sheets	Common vocabulary among KDE employees prior to standards deployment	Consistent me across all stak
n with key rticulate dards work resources	Frank Rasche Ruth Webb	Staff	As needed	As needed	Feedback from Ruth and Frank	N/A	Increase supp additional res redirection of funds for stan deployment
ucky Tonight man to dards and nce to KY	Lisa Gross/Communications Committee	KET/KDE staff	11/15/09	3/1/10	Event planned and Implemented	N/A	Consistent me about broadca discussion po appear among stakeholder communicatio

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ent Step itial ication of lards	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
tucky Living" nagazine	Lisa Gross/Communications Committee	Staff	11/15/09	3/1/10	Article planned and published	N/A	Consistent me about article a discussion po appear among stakeholder communicatio
s of articles s and arning in KY	Lisa Gross Felicia C. Smith Sally Sugg	Staff	2/10/09	On-going	Article planned and published	N/A	Consistent me about article a discussion po heard among educators
ures and/or dy ns pieces, role group--- nts, teachers, , business ic, etc. ---that ndards and ce to be used or on web by various	Lisa Gross/Communications Committee	Staff	12/15/09	2/1/10	Completed communication pieces Appearance of articles in various state wide publications (Kentucky Living, etc.), in organization newsletters, in education related newsletters	Consistent message about standards will appear among all stakeholder communications	Consistent me about standar appear among stakeholder communicatio
line/talking ness resources rict use with and in other oup meetings	Lisa Gross/Communications Committee	Staff	12/15/09	2/10/10	Completed outlines and resource packets	Consistent message about standards will be communicated in group meetings	Parents and o stakeholders w demonstrate i awareness and understanding standards
with E	Lisa Gross/Communications Committee	N/A	2/10/10	2/10/10	Event planned and Implemented	N/A	Discussion of among stakeh in news media

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ent Step itial ication of lards	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
ress	Lisa Gross/Communications Committee	Staff	2/10/10	2/10/10	Event planned and Implemented	Consistent message in news media	Discussion of among stakeh in news media
service s for use by all a---television, , school lio	Lisa Gross/Communications Committee	KDE communications budget	1/1/10	3/30/10	Completed PSAs Use of PSAs by state media outlets	N/A	Discussion of among stakeh
on KDE, CPE websites and n-related sites ard SB;KCTCS, iversities) or them	Lisa Gross/Communications Committee	N/A	2/10/10	2/10/10	Standards posted and/or links on various websites	N/A	Consistency o on websites Easy access to that explain th standards are stakeholders
s information tion-related s (i.e. er, Facebook,	Lisa Gross/Communications Committee	N/A	2/10/10	2/10/10	Messages about standards will appear on key websites	Consistent messages will appear on blogs and other electronic sites	Key communi discussions ab standards app regularly on k Positive mess increase Accurate infor will be accessi traditional au
akers bureau PowerPoint, and other tranet	Lisa Gross/Communications Committee Felicia C. Smith	No cost other than print materials from above items Prichard Committee	12/15/09	2/10/10	Speakers recruited, lists including contact information easily available to organizations	Consistent messages will be delivered by all speakers	Increased unc of standards a stakeholders

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ent Step itial ication of lards	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
tional dress needs of oups	Lisa Gross/Communications Committee Felicia C. Smith	KDE technology budget	1/1/10	ongoing	Webinars designed, delivered, and accessible.	Webinars will be archived for fidelity of duplication	Improved flo accurate infor regarding star
ss activities mittee other terials for use other civic	Lisa Gross/Communications Committee Felicia C. Smith	Staff	12/15/09	April	Activities prepared and submitted to key organizations List of organizations using activities with feedback	Consistent messages will be delivered by all utilizing standardized activities	Increased unc of standards a stakeholders
eting to ional o include ed workshops l conferences	Sally Sugg Felicia C. Smith	Staff	1/1/10	On-going	Schedule of workshops and agendas	Consistent messages will be delivered by professional organizations	Increased unc of standards a stakeholders
boards to rds	Lisa Gross/Communications Committee	Travel budgets	12/15/09	On-going	Meetings with editorial boards including but not limited to Courier-Journal, Herald Leader	Consistent messages will appear in news media	Increased unc of standards a stakeholders
editorials for le print media	Lisa Gross/Communications Committee	Staff	1/1/10	3/30/10	Sample editorials created "Authors" recruited Appearance of editorials in statewide media	Consistent messages will appear in news media	Increased unc of standards a stakeholders Discussion of among stakeh

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ent Step itial ication of lards	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
usiness and n buy in amber of education ir	Ruth Webb	Travel Budget	1/1/10	ongoing	Creation of projects, activities to help business world gain appreciation for standards	N/A	Business com demonstrate i awareness an understandin standards
type meetings ons to share rmation with eholders	Ruth Webb Superintendents Network TEK KSBA	Local district budgets	4/1/10	On-going	Schedule of meetings conducted and sign-in sheets	Consistent message about standards will be communicated in group meetings	Community w demonstrate i awareness an understandin standards

ent Step rs' Webinar Awareness)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
crosswalk paring new d standards ucators in gs	Felicia C. Smith Chris Powell	Staff	12/15/09	3/30/10	Document created, posted and used in a variety of settings	N/A	Educators wil understandin fewer, clearer aspects of new core standard
de webinar educators to k document te one packing a the Stiggins	Felicia C. Smith Chris Powell	Staff	12/15/09	3/30/10	Webinar completed and attendee lists generated Subsequent participants will be tracked	Series will be archived for fidelity of duplication	Educators wil the process in meetings and classroom ins and assessme other standar

D

ent Step rs' Webinar Awareness)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
de webinar o share ment and e example of andard using mework	Dr. Aaron Thompson John DeAtley Felicia C. Smith Chris Powell	Staff	12/15/09	3/30/10	Webinar completed and attendee lists generated Subsequent participants will be tracked	Series will be archived for fidelity of duplication	Educators wil the process in meetings and classroom ins and assessme other standar

ent Step ed Learning Follow-Up egies	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
Steering Unbridled nuing	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	Staff	12/1/09	March - On-going	Meeting schedule	N/A	Educators wil understandin fewer, clearer aspects of new core standard Increased coll between P12 a
ctional rk (ISN) to structional iversity staff, twork, coops,	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	$50,000 RTTT or existing PD funds	12/1/09	March	Event planned and implemented Agenda information	N/A	Educators wil understandin fewer, clearer aspects of new core standard Increased coll between P12 a

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ent Step ed Learning Follow-Up egies	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
Beshear, Dr. day and Billy t a event tied to Education in) and rning Summit	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	Staff	12/1/09	March	Event planned and implemented Agenda information	N/A	Educators wil understandin fewer, clearer aspects of nev core standard Increased coll between P12 a
ards related ons for P-16 nce	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	KDE/CPE Staff Coops Educational Partners	12/1/09	March	Event planned and implemented List of break-out sessions	N/A	Educators wil understandin fewer, clearer aspects of nev core standard Increased coll between P12 a
college deans d arts & romote ong IHE staff	Dr. Robert King Dr. Aaron Thompson	N/A	1/15/09	March	Meeting agendas, email communications, newsletters to IHE Attendance tracking sheets	N/A	Number of att from IHE
eges and l convene to fine their role ng work of out **Strategy)**	Dr. Robert King Dr. Aaron Thompson	N/A	1/15/09	March	Meeting agendas, email communications, newsletters to IHE	N/A	Increased nur attendees fro

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ent Step ed Learning Follow-Up egies	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
6 ISN ies will y electronic d webinars to of interest and s around **Strategy)**	Steering Committee (TBA)	Staff KDE/CPE budget for webinars	12/1/09	On-Going	Newsletters, webinars and activity agendas	Steering Committee oversight	Educators wil understandin fewer, clearer aspects of nev core standard Increased coll between P12 a

ent Step rs' On-line ries (P-12)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
ching and for educators KHSAA les) with intro and Pres. Beshear	Chris Powell	Staff/KET	April	April	Modules completed; attendance tracking	Series will be archived for fidelity of duplication	Surveys will s teachers have understandin standards and impact their c
of teachers line modules; cts	Chris Powell	Staff	April	8/1/10	Attendance tracking reported to districts	Data sent to all districts will ensure state-wide consistency of implementation	Districts will e all remaining complete thes

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ent Step sessions for IE	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
-up trainings Leaning DE & aculty; & KDE, these enhance staff of the how to align rds with post- iculum	Dr. Aaron Thompson Felicia C. Smith Starr Lewis Kevin Nolan	CPE/KDE staff University staff	April	May	Trainings completed and implemented Agenda information	Consistency of deliverers of content	Educators wil understandin fewer, clearer aspects of nev core standard

ent Step shing P-12 orks	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators
of follow-up -12 staff (i.e. dministrators) n with operatives, e for the next unpacking	Felicia C. Smith 8 Educational Cooperatives Directors	KDE/Coop staff School district budgets	May	June	Trainings completed and implemented Agenda information	Core Oversight Team will ensure consistency among networks through observation of trainings	Educators wil understandin fewer, clearer aspects of nev core standard

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tegic goal –21st Century Professionals

ent goal - P-16 educators and administrators will effectively implement new academic core ls in Math and Language Arts by August 2010

tegy – New Standards and Assessments

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Statewide Leadership Networks

ent Step egin uction of with small eams	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
Oversight consultants, ative or other	Felicia C. Smith Sally Sugg	N/A	12/15/09	1/15/10	List of Core Oversight Team members	N/A	All identified m active participa 2010-20011 sch
ocol for of the	Felicia C. Smith OTL staff Assessment Training Institute Staff (e.g., Rick Stiggins)	Classroom Assessment for Student Learning (CASL) book and other resources Administrator's Guide to CASL book Instructional rounds books Skilled and experienced facilitators	February	February	Protocol document	N/A	Observations w consistency of t implementatior deconstruction standards

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ent Step egin uction of with small eams	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
rocess with thematics nguage Arts ho reviewed ore standards 60 teacher personnel, lty, and KDE	Karen Kidwell KDE staff	CASL book KDE protocol Other skilled content facilitators	February	April	Training planned and implemented	Observations will ensure consistency across training sites	Refined & consi process/protoco deconstruction standards with targets using CA primary resourc Identified teach personnel, and have experience process as a lea have been train the process and and who may be lead facilitators
d calibration ruction rning targets the age Arts eveloping on- using the onstruct rds as a way rocess	Core Oversight Team	KDE staff Other skilled content facilitators	March	May	Training materials accessible on-line	N/A	Consistent (star examples of lea targets for a few in mathematics English/Langua

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ent Step egin uction of with small eams	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
n of ep #1 to be on-line ader use and	Clint Goins OTL-Division of Secondary & Virtual Learning KET	Content experts and module designers	February	May	Document accessible on-line	N/A	On-line resourc for district/scho teams once the networks are es

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nd provide statewide etwork and rofessional anizations	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
dminister rict/school ns who nded the 2 rofessional LPD) cilitators TS/ATI to l needs for n of effective	Karen Kidwell Nawanna Privett	Web Access	12/15/09	1/15/10	Survey prepared and administered Results shared with Core Oversight Team	On-line access will ensure consistency of data collection	Assess needs fa for district/scho leadership team develop targete strategies for local/statewide implementatio
f follow up gs for leadership e an otocol is pport works	Karen Kidwell Nawanna Privett OLSI and OTL staff Educational Partners	Assessment Training Institute Staff (e.g., Rick Stiggins)	April	May	Trainings planned and implemented Attendance data and sign-in sheets	Observations will ensure consistency across training sites	Support for district/schools implementatio teams to prepa facilitation and for content netw District/school greater facilitation/coa in order to supp learning in the networks and a level

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nd provide statewide etwork and rofessional anizations	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
nal aders to for arning dards roll out, racy, etc.	Felicia C. Smith Sally Sugg	Educational partners	April	May	Agenda and sign-in sheets Minutes of meeting	N/A	Addition of support/strand statewide profe content organiz conferences Opportunities t implementation characteristics quality teaching learning from K classrooms
f on-line istrict/school cilitation of	Chris Powell Content experts Assessment Training Institute Staff (e.g., Rick Stiggins); KET	Redistribution of existing professional development dollars	February	April	Resources available on KDE website	N/A	In-the-field sup identified for districts/school coaches, cooper consultants, oth educational age On-line resourc available for fut

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
eet with esign team ing the core – team plans for hip networks, protocols for g teams to quality & nce/consisten nessages nding the eristics of effective g and g es/processes onstruction of ds & design ative nents leadership nces for ors and ants in the ks	Felicia C. Smith Sally Sugg	Trained KDE consultants and other skilled and trained content facilitators who have experience supporting and working with teachers and administrators around this work Training and support for facilitators working with Networks on an on-going basis (monthly) KET Consultants/Media Resources Skilled Hybrid Learning Consultants to design/deliver online support	February/ March	On-going monthly meeting with leadership networks 2- day summer working event	Meeting agenda and sign-in sheets Meeting minutes	Surveys and observations will reveal consistency across sites	Quality control planning team t facilitation, coo and coherence leadership netw provides support/resour hybrid compon

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
tors for each ministrator	Core Oversight Team	Content consultants and refocused KDE/KLA Funding: Incentives (i.e. stipends, course buy-outs) for faculty to participate and remained committed	March	May	List of facilitators available on KDE website	Facilitators will represent state demographics	Facilitators who committed to th implementation participation in leadership netw facilitate profes learning for dist leadership team
one ultant" E to be the of contact for ated activities ate n within KDE DE and other	Felicia C. Smith Sally Sugg	Skilled consultant with experience in organizing and working with multiple partners and with knowledge/experience in using the ETS/ATI CASL resources	1/15/10	2/10/10	Position posted and filled	N/A	A single point o within KDE wh clear communic maintains overa including aligni resources, previ relevant resourc using data to ev network success
lease RFA or local arning team ocused on the work nd n	Orin Simmerman	PD flow-through dollars (redirection of 20% of local funding)	April	May	RFA executed and grants awarded	Grants will represent state demographics	Once awarded, district/school l learning teams implemented

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
ols identify mit to KDE	Network Consultant (TBA)	"Profile of ideal leads" shared with districts/schools – Support districts in identification based on individuals who have previously participated in the Leading Professional Development in Assessment training	March	May	List of leads available on KDE website	Leads will represent state demographics	The 'right peopl involved in the those who have leadership capa are willing to implement/lead implementation goals.
nt of contact' t area in nd at each on olleges of Arts and onsultants r list of points very ddle, high her ed	Network Consultant (TBA)	District Leadership	June	June	Lists of points of contact will be available on KDE website	Points of contact will represent state demographics	Ensure specific specific professi development resources/prod ation are equita distributed to e every school bu higher educatio institutions acr Commonwealth
erson and dership to most odel for he new k	Felicia C. Smith Network Consultant	Jefferson and Fayette Co. leadership	February	February	Meeting agenda	N/A	Jefferson and F implement the

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
dministrator tworks meet	Core Oversight Team Network Consultant (TBA)	Trained facilitators Funding: Redistribution of professional development funds to support the work of the networks and/or possibly RTTT funds District budgets	Begin June, 2010; monthly across the academic year; 2-day summer institutes	On-going; 3-5 years	Meeting agendas Sign-in sheets Products	Observations, products and surveys will reveal consistency in implementation	Teachers and administrators understand: a p and importance deconstructing developing lear targets, assessm and use of form assessments, th characteristics c quality teaching learning. Specif Content Leader Networks will a district leadersh deconstructing development of targets, underst formative asses implementation characteristics c quality teaching learning Administrators Networks will a administrator t revising state le to ensure teach evaluations incl demonstration

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
							characteristics o quality teaching learning; work to align KTIP do and other resou characteristics o quality teaching learning

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sh 8 (eight) nt and strator networks d delivery del)	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicat
ources (and als) to ng for a ences – nclude ies for the ning targets, ssessments,	Core Oversight Team	KDE staff KTE	April	On-going; 3-5 years	Resources will be available on-line	All KY educators will have access to similar resources	Resources will b populate the *co instructional in software tool* a complement the the networks as up in districts
of KDE field t n of learning d at nd/or other encies	Core Oversight Team	Funding to support positions (RTTT funds or cooperative districts pool funds to support position)	April	April	List of field staff and assignments will be available on-line	N/A	On-the-spot su district/school teams; cooperat other agency su expertise

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ish higher etworks or teams	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
cation Deans rship with identify lead cipate in the	Dr. Aaron Thompson CPE/KDE College of Ed deans	Lead university faculty from initial small group standards work and faculty who have participated in previous Leading Professional Development in Assessment seminars KACTE Funding: Incentives or release time for faculty to participate in and share their expertise in the leadership and faculty networks	June	June	List of IHE faculty participating will be available on-line	All IHE will be represented	Establish struct faculty from acr state to collabor develop consist strategies for implementation standards and a impacting leade networks as wel service educatio
ces deans culty to raining based rds	Dr. Aaron Thompson CPE/KDE and Arts & Sciences deans	Lead university faculty from initial small group standards work and faculty who have participated in previous Leading Professional Develop in Assessment Funding: Incentives or release time for faculty to participate in and share their expertise in the leadership and faculty networks	June	June	List of IHE faculty participating will be available on-line	All IHE will be represented	Establish struct faculty from acr state to collabor develop consist strategies for implementation standards and a impacting leade networks as wel undergraduate

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ish higher etworks or teams	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
on networks ns meet r ed expert nt area minimum of ulty, 5 Arts aculty, 5 s from ies (e.g., aries, other ng not to exceed per content with onsultants g year 1 and year after. eams will nate Bill 1 roll their will share higher ed lementing align with cluding	Core Oversight Team Dr. Aaron Thompson	Higher Ed faculty	August; meet quarterly	On-going	Meeting agendas Sign-in sheets Products	Observations, products and surveys will reveal consistency in implementation	Establish a cadr faculty leads wh capacity to shar their colleagues variety of mech information and for implementa standards and t development of assessment cou teacher educati programs Establish a cadr faculty leads wh capacity to shar colleagues throu variety of mech (e.g., sessions a conferences targ higher ed) infor resources for implementation standards and t development of assessment cou arts and science Development of clearinghouse fo and expertise fo informing profe learning opport be shared with l districts/school

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n regional specifically service n majors	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
ng team and essional ences for ucators who regional	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	KDE staff University Faculty	11/10	4/11	Event will be planned and implemented	Learning experiences will mirror practitioners ' experiences	Two-three day p outlined for the conference Communication out to all colleg education and p education majo Registration site established and maintained
ucators rticipate in nference	Dr. Aaron Thompson John DeAtley Felicia C. Smith Sally Sugg	KDE staff University Faculty	5/11	5/11	Event will be planned and implemented	Learning experiences will mirror practitioners ' experiences	Letters of atten education majo Opportunities f service educato showcase and le effective ways t implement the characteristics o quality teaching learning, includ standards and a etc.
all lated to roll-out DE website`	Network Consult	SB 1 webpage OTL webpage Links to partner organization	2/10/10	On-going	Information will be available to all KY educators and interested citizens	Website will be regularly updated	Interested educ citizens will be knowledgeable standards roll-o Noticeable decr phone calls to K misconceptions

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Continuous Instructional Improvement Technology System

tablish a instructional nt technology teachers to directly	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
P for a software ould house at teachers and could access at	Ruth Webb	Staff	12/1/09	2/10/10	RFP published Vendor secured	N/A	Use of the softw enable teachers administrators quality instructi effective practic measure the eff of teachers and impact on stude performance

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tablish a instructional nt technology teachers to directly	Persons Responsible	Resources Required and Source of Resources	Start Date	End Date	Evaluation Components Evidence of:		
					Completion	Fidelity	Indicators o
nent of content tware in order riculum, struction, arning and to f tools to ctional networks will rocess nsist of and ures for: apping; vertical alignment of rmative neasures and rogress ls ; teacher and mal d formal rmation; ios; evaluating rofessional es for job- fessional ncluding ning tools to ning of local	Core Oversight Team	Region Coops IHE and local district staff	2/10	On-going	Catalogue of information available	Consistent replication of learning outcomes statewide	Use of the softw enable teachers administrators quality instructi effective practic measure the eff of teachers and impact on stude performance

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Senate Bill 1 Deployment and Professional Learning Work Group	
Amanda Hill	Nelson County School District
Amon W. Couch	KDE-Highly Skilled Educator
Ann Larson (for Starr Lewis)	University of Louisville
Annette Bridges	KDE-Division of Early Childhood
BJ Martin	KDE-Achievement Gap Coor.
Bob Fortney*	KDE-Division of Secondary & Virtural Learning
Bob Hackworth	KDE-Bureau of Learning & Results Services
Brenda McGown*	Kentucky Education Association
Carolyn Witt Jones	League of NewCities
Cherry Boyles	KDE-Division of Curriculum Development
Chris Powell	KDE-Division of Secondary & Virtural Learning
Cindy Gnadinger	Bellarmine University
Cindy Heine	Prichard Committee
Cindy Parker	KDE-Division of Curriculum Development
Connie Hodge	Eastern KY University
Dale Winkler	KY Association for Career & Technical Education
David Baird	KY School Boards Association
David Couch	KDE-Office of Education Technology
Diane Johnson	Lewis County School District
Dorie Combs	KBE/Eastern KY University
Debbie Daniels	KDE-Office of Leadership & School Improvement
Drew Muntz*	KDE-Division of Scholastic Assistance
Felicia Smith	KDE-Office of Teaching & Learning
Jim Rinehart	Eastern KY University
Joe Morgan	KY Association of Career & Technical Education.
Jodie Zeller	KDE-Div. of Educator Quality and Diversity
John DeAtley	Council on Postsecondary Education
Johnny Collett	KDE-Division of Exceptional Children
Karen Branham	KDE-Highly Skilled Educator
Karen Kidwell	KDE-Division of Curriculum Development
Karen Nash*	Education Cabinet-Career & Technical Education
Kathryn Polmanteer	Morehead State University
Kathy Gunn	Morehead State University
Kim Zeidler-Watters*	University of Kentucky
Kristie Fleming	Northern KY University
Lee Nimicks	Council on Postsecondary Education
Leon Mooneyhan	Ohio Valley Educational Cooperative
Lisa Gross	KDE-Division of Communications
Liz Erwin (for Ronda Harmon)	KY Association of School Councils
Liza Holland	Fayette County School District
Marcia Seiler	Legislative Research Commission

Marilyn Troupe	Education Professional Standards Board
Mary Ann Blankenship	KY Education Association
Michael Dailey	KDE-Division of Educator Quality & Diversity
Michael Flory	KDE-Bureau of Learning & Results Services
Michael Miller	KDE-Division of Curriculum Development
Mike Kennedy	Fayette County School District
Mike Stone	KY Association for Career & Technical Education
Nancy Carpenter	Kentucky Educational Television
Nancy Lovette	Murray State University
Nawanna Privett	KDE-Office of Leadership & School Improvement
Orin Simmerman	KDE-Division of Leadership & Instructional Support
Pat Trotter	KDE-Office of Leadership & School Improvement
Polly Page	Northern KY Cooperative for Education Services
RaAnn Miller*	KDE-Career & Technical Education
Rebecca Blessing	KDE-Division of Communications
Rhonda Sims*	KDE-Division of Assessment Support
Rhonda Harmon	KY Association of School Councils
Robert Brown	Education Professional Standards Board
Robin Chandler	KDE-Office of Teaching & Learning
Robin Hill	KDE-Division of Curriculum Development
Sandy Rutledge	Kentucky Parent Teacher Association
Tina Tipton	Ohio Valley Educational Cooperative
Tom Guskey	University of Kentucky
Wilson Sears	KY Association of School Superintenents

English/Language Arts Common Core Standards Work Team

NAME	ROLE	DISTRICT/SCHOOL/BUSINESS	KEA
Artavia Acklin	EL teacher	Shelby Co. (Clear Creek EL)	X
Janice Almasi	Higher Ed.	University of Kentucky	
Michelle Barnett	EL teacher (Sp.Ed.)	Mercer Co. (Harlow EL)	
Claire Batt	EL teacher	Fayette Co. (Athens-Chilesburg EL)	
Carol Brooks	Early Childhood	Berea Early Childhood Regional Trng Ctr	
Maggie Brown	Higher ed.	KCTCS	
Danielle Burke	HS teacher	Danville Ind. (Danville HS)	
Missy Callaway	HS teacher	Jefferson Co. (Butler HS)	
Debbie Curry	Director of Sp. Ed.	Elizabethtown Ind. (central office)	
Karen Edwards	MS teacher	Boyle Co. (Boyle Co. MS)	
Maria Flynn	Higher ed.	KCTCS	
Alysson Hamilton-McIntire	Business/industry	Kentucky Chamber	
DeVona Hickerson	Title I Coord/Reading Cons.	Spencer (central office)	X
Kelley Johnstone	EL teacher	Oldham Co. (LaGrange EL)	
Heather Labarbara	MS teacher	Jessamine Co. (West Jessamine MS)	
Ben Lusk	Director of Teaching&Lng	Ft. Thomas Ind. (central office)	
Gary McCormick	Literacy Consultant	Kenton Co. (central office)	
Anita McNeal	HS teacher (Sp.Ed.)	Rowan Co. (Rowan Co. HS)	X
Stacy Noah	Principal	Harlan Ind. (Harlan HS)	
Brenda Overturf	Higher Ed.	University of Louisville	
Rosemary Perry	HS teacher	Hardin Co. (Central Hardin HS	
Pamela Petty	Higher Ed.	Western Kentucky University	
Cindy Price	Business/industry	Jewish Hospital	
Mary Shortridge	Higher ed.	KCTCS	
Paula Stafford	Asst. Principal	Rowan Co. (Rowan Co. MS)	
Sandra Stapleton	MS teacher	Allen Co. (Allen Central MS)	X
Erin Stephens	HS teacher	Somerset Ind. (Somerset HS)	X
Mike Stone	Business/industry	Anthem	
Jean Wolph	Higher Ed.	University of Louisville	

Others assigned to team:

Annie Rooney French – KDE – Preschool
Laura Wathen – KDE – Early Childhood
Kathy Mansfield
April Pieper – Secondary Ed.

Mathematics Common Core Standards Work Team

NAME	ROLE	DISTRICT/SCHOOL/BUSINESS	KEA
Jeannette Barreiro	MS teacher	Daviess Co. (College View MS)	X
Jeff Blythe	EL teacher	Monroe Co. (Gamaliel EL)	X
Tammy Booth	MS teacher (Sp.Ed.)	Clark Co. (Conkwright MS)	X
Bill Bush	Higher Ed.	University of Louisville	
Dana Calland	Higher Ed.	KCTCS	
Bobbie Fryman	MS teacher	Franklin Co. (Bondurant MS)	
Sonia Fullwood	MS teacher	Fayette Co. (Bryan Station MS)	
Alice Gabbard	Higher Ed. (KCM)	Northern Kentucky University	
Greg Gierhart	Early Childhood	Murray State University	
Chris Girard	HS teacher	Kenton Co. (Simon Kenton HS)	
Jim Hamm	EL teacher	Carter Co. (Prichard EL)	X
Seth Hunter	HS teacher	Jefferson Co. (Male HS)	X
Charma Linville	HS	Fayette Co. (central office)	
Lisa Lokesak	EL teacher	Boone Co. (New Haven EL)	
Linda Mayhew	Higher Ed.	KCTCS	
Jeremy Miller	HS teacher	Lee Co. (Lee Co. HS)	
Matt Moore	Sp. Ed. Director	Jessamine Co. (central office)	
Charlie Newquist	MS teacher	Jessamine Co. (East Jessamine MS)	X
Bob Pervine	Higher Ed.	Murray State University	
Marsha Reddick	HS teacher	Adair Co. (Adair Co. HS)	
Vicki Shelton	EL teacher	Owensboro Ind. (Cravens EL)	
Daniel Stauft	Business/Industry	Toyota	
Jon Thomas	Higher Ed. (KCM)	Northern Kentucky University	
Mike Waters	Higher Ed. (KCM)	Northern Kentucky University	
Bethany Watson	EL teacher	Henderson Co. (Niagara EL)	
Elaine Woolley	Asst. Principal	Erlanger-Elsmere Ind. (Tichenor MS)	
Demetrio Zourarakis	Business/Industry	Commonwealth Office of Technology	

Others assigned to team:

Janis Logsdon – Early Childhood
Amy Patterson – Secondary Ed.
David Bolen - Outreach

KASA Recommended Changes to
Calendar (KRS 158.070) and Professional Development (KRS 156.095) Statutes

Over the last several years there have been numerous events (weather emergencies, building emergencies, etc.) that have affected local districts ability to effectively manage their school calendars. This created a need to review the statute regarding school calendars. The result was a bill enacted in the 2009 General Assembly (HB 322) to address these events. In addition, HB 406 (the 2008-2010 Budget Bill) sought to address concerns over the amount of instructional time provided to students. At the same time, changes at the national, state, and local levels regarding the most effective way to deliver professional development have come in conflict with Kentucky's professional development system (see page 3).

The Kentucky Association of School Administrators (KASA) has developed a series of recommended changes to the two statutes that relate to the school calendar and to professional development. It is hoped that these recommended changes will be presented in the 2010 Legislative. These recommendations should assist our school districts in addressing the areas of concern listed above.

The Primary Recommendation

KRS 158.070 (Current Law)	HB 406 (2008-2010 Budget Bill)	Recommendation
- 175 Instructional Days	- 177 Instructional Days	- 180 six-hour equivalent instructional days
- 4 Required PD Days	- 4 Required PD Days	(1080 hours)
- 6 Other Days	- 4 Other Days	- Minimum of 170 "student attendance days"
185 TOTAL CONTRACT DAYS	185 TOTAL CONTRACT DAYS*	187 "TEACHER PROFFESIONAL DAYS"

*HB 406 did not increase the number of days in the school term. In practice, however, most districts already added two days and have 187 day school terms.

Key Points

<u>KRS 158.070</u>

- This proposal provides for 180 six-hour equivalent instructional days (1080 instructional hours) in the school calendar and requires a minimum of 170 "student attendance days". This will allow districts to be flexible by allowing for a range of calendar changes from adding instructional days to reducing the number of days (but not time) and giving teachers more days for professional learning.
- Under this recommendation, each district would return to the flexibility given to them in KRS 158.070 to deal with "unforeseen circumstances" while also addressing the desire to increase the amount of instructional time.

- It would eliminate the need for the language in HB 406 and HB 322.
- This recommendation also eliminates a specific number of professional development days in the calendar to allow for greater flexibility for the district.
- This recommendation is critical for establishing the kinds of professional learning experiences for teachers and administrators necessary for improving their performance.
- For the first time, these changes provide specific definitions for "student attendance day", "teacher professional day" and "teacher professional year".
- In exchange for the removal of the four (4) PD days in the calendar the teacher will have a set "teacher professional day" that has the professional learning time built in. The benefits are numerous and include making professional learning on-going and continuous so that it occurs multiple times each week, thus significantly increasing the amount of time spent in professional learning experiences.
- Most importantly, this causes a shift in mindset that moves us to compliance with the new definition. We must move to a system where professional learning is considered part of a teacher's regular professional duties and professional day. It can no longer be a separate "thing" that teachers do on certain days in their contract. These changes will create collegial opportunities for teachers that will have the most positive effect on student achievement.
- Professional learning will now take place primarily during the regular teacher professional days in the calendar at times when a teacher is not providing classroom instruction. That means before school, after school or during school on designated planning times.

<u>KRS 156.095</u>

- Change in vocabulary by moving from "professional development" to "professional learning". This is necessary because the current vocabulary is connected to the traditional way of thinking about professional learning.
- Requires school districts to have specific policies about how they will provide the leadership necessary to move towards a more school based model of professional learning and also how they will evaluate the professional learning of their teachers as to its effect on improving their effectiveness in teaching and thus increase learning.
- Modernizes the function of the Kentucky Department of Education to reflect our role as support and assistance to professional learning coordinators.

Amendment to Section 9101(34) of the Elementary and Secondary Education Act (ESEA) As Reauthorized by the No Child Left Behind Act of 2001 Sen. Jack Reed – Rhode Island, Sponsor Developed by the National Staff Development Council

(34) **PROFESSIONAL DEVELOPMENT –** The term 'professional development' means a comprehensive, sustained and intensive approach to improving teachers' and principals' effectiveness in raising student achievement –

(A) Professional development fosters collective responsibility for improved student performance and must be comprised of professional learning that –

(1) is aligned with rigorous state student academic achievement standards, as well as related local education agency and school improvement goals;
(2) is conducted among educators at the school and facilitated by well-prepared school principals and/or, school-based professional development coaches, mentors, master teachers, or other teacher leaders;
(3) primarily occurs several times per week among established teams of teachers, principals, and other instructional staff members where the teams of educators engage in a continuous cycle of improvement that –
(i) evaluates student, teacher, and school learning needs through a thorough review of data on teacher and student performance;
(ii) defines a clear set of educator learning goals based on the rigorous analysis of the data;
(iii) achieves the educator learning goals identified in subsection (A)(3)(ii) by implementing coherent, sustained, and evidenced-based learning strategies, such as lesson study and the development of formative assessments, that improve instructional effectiveness and student achievement;
(iv) provides job-embedded coaching or other forms of assistance to support the transfer of new knowledge and skills to the classroom;
(v) regularly assesses the effectiveness of the professional development in achieving identified learning goals, improving teaching, and assisting all students in meeting challenging state academic achievement standards;
(vi) informs ongoing improvements in teaching and student learning; and
(vii) that may be supported by external assistance.

(B) The process outlined in subsection (34)(A) may be supported and strengthened by activities such as courses, workshops, institutes, networks and conferences that:

(1) must address the learning goals and objectives established for professional development by educators at the school level;
(2) advance the ongoing, school-based professional development; and
(3) are provided by for-profit and nonprofit entities outside the school such as universities, education service agencies, technical assistance providers, networks of content-area specialists, and other education organizations and associations.

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158.070 School term – Professional learning [~~development~~] -- Holidays and days closed -- Continuing education for certain students -- Breakfast program – Missed school days due to emergencies and service credit.

(1) "Student Attendance Day" means any day that students are at school. It encompasses their arrival time on each day so designated until they are dismissed each day. Each student attendance day may include, but is not limited to, classroom instruction, duty-free lunch for teachers, teacher planning time and instructional breaks for students.

(2) "Teacher Professional Day" means any day teachers report to work. The teacher professional day encompasses the time teachers report to work until the time their daily responsibilities are complete. Any time during a teacher professional day that is not spent supervising students shall be used for professional learning activities described in subsection six (6) of this section or for other job-related duties. Each local board of education shall establish the length of each teacher professional day.

(3) [~~(1)~~] The minimum school term shall be one hundred eighty-seven (187) teacher professional days. [~~one hundred eighty-five (185) days, including no less than the equivalent of one hundred seventy-five (175) six (6) hour instructional days. A board of education may extend its term beyond the minimum term.~~] All school districts shall operate on a fiscal year beginning July 1 and ending June 30.

(4) Each school district shall provide the equivalent of one hundred eighty (180) six-hour days of instruction. Included in this instructional time will be a minimum of one hundred seventy (170) student attendance days. The use of the remaining days in the school term shall be determined

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by the local board of education. A board of education may extend its term beyond the minimum term.

(5) [~~(2)~~] The local board of education, upon recommendation of the local school district superintendent, shall adopt a school calendar for the upcoming school year that establishes the opening and closing dates of the school term, beginning and ending dates of each school month, student attendance days, and days on which schools shall be dismissed. The local board may schedule days for breaks in the school calendar that shall not be counted as a part of the minimum school term. If a board of education amends its calendar after its adoption, **due to an emergency**, it may lengthen or shorten any remaining student attendance days by thirty (30) minutes or more, as it deems necessary, provided the amended calendar complies with the requirements of subsection (4) of this section.

[~~(5) [(3)] Any local board of education operating its schools on a year-round school program basis shall conform with administrative regulations promulgated and adopted by the Kentucky Board of Education upon the recommendation of the commissioner of education, which regulations must be in conformity with the following criteria:~~

~~(a) The year-round school program shall be operated on a fiscal year beginning July 1 and ending June 30;~~

~~(b) A pupil's required attendance in school shall be for at least the minimum instructional term; and~~

~~(c) No teacher shall be required to work [teach] more than the minimum teacher contract [term] during the school year.~~]

(6) [~~(4)~~] (a) All teachers shall receive regular and continuous effective professional learning experiences during the regular teacher professional year. The majority of the professional learning shall occur as part of the teacher's regular daily work schedule. Professional learning shall occur primarily during regular teacher professional days and shall take place at the school site. This professional learning shall consist of collaborative professional learning and collegial planning activities that shall include, but not be limited to, the analysis of student work, development of common assessments for similar content areas or grade levels, collaborative lesson planning, action research and other activities designed to improve teacher and administrator effectiveness in raising student achievement for all students.

(b) Professional learning may occur during any part of a teacher professional day that the teacher is not involved in direct supervision of students. Each teacher shall also be allowed, with prior approval, to attend workshops or other conferences designed to support the professional learning that occurs at the school site.

[~~(a) Each local board of education shall use four (4) days of the minimum school term for professional development and collegial planning activities for the professional staff without the presence of pupils pursuant to the requirements of KRS 156.095. At the discretion of the superintendent, one (1) day of the school term [of professional development may be used] for district-wide activities and for training that is mandated by federal or state law. The use of three (3) days shall be planned by each school council, except that the district is encouraged to provide technical assistance and leadership to school councils to maximize existing resources and to encourage shared planning.~~

~~(b) A local board may approve a school's flexible professional development plan that permits teachers or other certified personnel within a school to participate in professional development activities outside the days scheduled in the school calendar or the regularly scheduled hours in the school work day and receive credit towards the four (4) day professional development requirement within the minimum one hundred eighty-five (185) days that a teacher shall be employed.~~

~~1. A flexible schedule option shall be reflected in the school's professional development component within the school improvement plan or consolidated plan and approved by the local board. Credit for approved professional development activities may be accumulated in periods of time other than full-day segments.~~

~~2. No teacher or administrator shall be permitted to count participation in a professional development activity under the flexible schedule option unless the activity is related to the teacher's classroom assignment and content area, or the administrator's job requirements, or is required by the school improvement or consolidated plan, or is tied to the teacher's or the administrator's individual growth plan. The supervisor shall give prior approval and shall monitor compliance with the requirements of this paragraph. In the case of teachers, a professional development committee or the school council by council policy may be responsible for reviewing requests for approval.]~~

(7) (a) [~~(c)~~] The local board of each school district may use up to a maximum of four (4) days of the minimum school term for holidays; provided, however, any holiday which occurs on Saturday may be observed on the preceding Friday.

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1 [~~(d) Each local board may use two (2) days for planning activities without the presence of~~
2 ~~pupils.~~]
3 (b) [~~(e)~~] Each local board may use the number of days deemed necessary for:
4 1. National or state emergency [~~disaster~~] or mourning when proclaimed by the President of the
5 United States or the Governor of the Commonwealth of Kentucky;
6 2. Local emergency [~~disaster~~] which would endanger the health or safety of children;
7 and
8 3. Mourning when so designated by the local board of education and approved by the Kentucky
9 Board of Education upon recommendation of the commissioner of education.
10 (8) [~~(5)~~] The Kentucky Board of Education, upon recommendation of the commissioner of
11 education, shall adopt administrative regulations governing the use of school days, including
12 days missed from the regular school day as a result of local emergency [~~disaster~~], as defined in
13 subsection 7(b)(2) [~~(4)(e)2~~]. of this section, and regulations setting forth the guidelines and
14 procedures to be observed for the approval of the days utilized for the opening and closing of
15 school. [~~and the days utilized for professional development and planning activities for the~~
16 ~~professional staff.~~]
17 (9) [~~(6)~~] (a) In setting the school calendar, school may be closed for two (2) consecutive days for
18 the purpose of permitting professional school employees to attend statewide professional
19 meetings. These two (2) days for statewide professional meetings may be scheduled to begin
20 with the first Thursday after Easter, or upon request of the statewide professional education
21 association having the largest paid membership, the commissioner of education may designate

1 alternate dates. ~~If schools are scheduled to operate during days designated for the statewide~~
2 ~~professional meeting, the school district shall permit teachers who are delegates to attend as~~
3 ~~compensated professional leave time and shall employ substitute teachers in their absence.~~
4 Districts [~~The commissioner of education~~] shall designate one (1) additional day during the
5 school year when schools may [~~shall~~] be closed to permit professional school employees to
6 participate in regional or district professional meetings. [~~These three (3) days so designated for~~
7 ~~attendance at professional meetings shall not be counted as a part of the minimum school term~~.]
8 If schools are scheduled to operate during days designated for these professional meetings, the
9 school district shall permit teachers who are delegates to attend as compensated professional
10 leave time and shall employ substitute teachers in their absence.
11 (b) No district shall designate the day of a regular election or the day of a primary election as a
12 student attendance day. [~~School shall be closed on the day of a regular election and on the day of~~
13 ~~a primary election, and those days may be used for professional development activities,~~
14 ~~professional meetings, or parent-teacher conferences.~~]
15 (c) [~~(b)~~] All schools shall be closed on the third Monday of January in observance of the
16 birthday of Martin Luther King, Jr. This date shall not be designated as a student attendance day
17 or a teacher professional day. [~~Districts may:~~
18 ~~1. Designate the day as one (1) of the four (4) holidays permitted under subsection (5)(a) [(4)(c)]~~
19 ~~of this section; or~~
20 ~~2. Not include the day in the minimum school term specified in subsection (1) of this section.~~]
21 (10) [~~(7)~~] Students applying for excused absence for attendance at the Kentucky State Fair shall
22 be granted one (1) day of excused absence.

1 (11) [~~(8)~~] Schools shall provide continuing education for those students who are determined to
2 need additional time to achieve the outcomes defined in KRS 158.6451, and schools shall not be
3 limited to the minimum school term in providing this education. Continuing education time may
4 include extended days, extended weeks, or extended years. A local board of education may adopt
5 a policy requiring its students to participate in continuing education. The local policy shall set
6 out the conditions under which attendance will be required and any exceptions which are
7 provided. The Kentucky Board of Education shall promulgate administrative regulations
8 establishing criteria for the allotment of grants to local school districts and shall include criteria
9 by which the commissioner of education may approve a district's request for a waiver to use an
10 alternative service delivery option, including providing services during the school day on a
11 limited basis. These grants shall be allotted to school districts to provide instructional programs
12 for pupils who are identified as needing additional time to achieve the outcomes defined in KRS
13 158.6451. A school district that has a school operating a model early reading program under
14 KRS 158.792 may use a portion of its grant money as part of the matching funds to provide
15 individualized or small group reading instruction to qualified students outside of the regular
16 classroom during the school day.
17 (12) [~~(9)~~] Notwithstanding any other statute, each school term shall include no less than the
18 equivalent of the minimum number of student attendance days required by this section.
19 (13) [~~(10)~~] Notwithstanding the provisions of KRS 158.060(3) and the provisions of subsection
20 (3) [~~(1)~~] of this section, a school district shall arrange bus schedules so that all buses arrive in
21 sufficient time to provide breakfast prior to the student attendance day. In the event of an
22 unforeseen bus delay, the administrator of a school that participates in the Federal School

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1 Breakfast Program may authorize up to fifteen (15) minutes of the [~~six (6) hour~~] student
2 attendance day if necessary to provide the opportunity for children to eat breakfast not to exceed
3 eight (8) times during the school year within a school building.
4 (14) [~~(11)~~] Notwithstanding any other statute to the contrary, the following provisions shall apply
5 to a school district that misses school days due to emergencies, including weather-related
6 emergencies:
7 (a) A certified school employee shall be considered to have fulfilled the minimum one hundred
8 eighty-seven (187) [~~eighty-five (185)~~] day contract with a school district under KRS 157.350 and
9 shall be given credit for the purpose of calculating service credit for retirement under KRS
10 161.500 for certified school personnel if:
11 1. State and local requirements under this section are met regarding the [~~equivalent of the~~]
12 number of teacher professional days and holidays [~~student attendance days, professional~~
13 ~~development days and days for planning activities without the presence of pupils~~]; and
14 2. The provisions of the district's school calendar to make up school days missed due to any
15 emergency, as approved by the Kentucky Department of Education, including but not limited to
16 a provision for additional instructional time per day, are met.
17 (b) Additional time worked by a classified school employee shall be considered as equivalent
18 time to be applied toward the employee's contract and calculation of service credit for classified
19 employees under KRS 78.615 if:
20 1. The employee works for a school district with a school calendar approved by the Kentucky
21 Department of Education that contains a provision that additional instructional time per day shall
22 be used to make up full days missed due to an emergency;

1 2. The employee's contract requires a minimum six (6) hour work day; and

2 3. The employee's job responsibilities and work day are extended when the instructional time is

3 extended for the purposes of making up time.

4 (c) Classified employees who are regularly scheduled to work less than six (6) hours per day and

5 who do not have additional work responsibilities as a result of lengthened student attendance

6 days shall be excluded from the provisions of this subsection. These employees may be assigned

7 additional work responsibilities to make up service credit under KRS 78.615 that would be lost

8 due to lengthened student attendance days.

9 **(15) The Kentucky Board of Education shall promulgate an administrative regulation to**

10 **establish the reporting structure for collecting data on the quality and effectiveness of**

11 **professional learning activities for educators.**

12 **Effective:** June 20, 2005

13 **History:** Amended 2005 Ky. Acts ch. 178, sec. 1, effective June 20, 2005. -- Amended

14 2004 Ky. Acts ch. 89, sec. 1, effective April 6, 2004. -- Amended 2002 Ky. Acts

15 ch. 131, sec. 1, effective July 15, 2002; and ch. 169, sec. 1, effective July 15, 2002. --

16 Amended 2001 Ky. Acts ch. 134, sec. 1, effective June 21, 2001. -- Amended 2000

17 Ky. Acts ch. 261, sec. 1, effective July 14, 2000; and ch. 527, sec. 13, effective July

18 14, 2000. -- Amended 1998 Ky. Acts ch. 580, sec. 4, effective July 15, 1998; and

19 ch. 609, sec. 2, effective July 15, 1998. -- Amended 1996 Ky. Acts ch. 20, sec. 2,

20 effective July 15, 1996; ch. 195, sec. 25, effective July 15, 1996; and ch. 362, sec. 6,

21 effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 394, sec. 22, effective July

22 15, 1994; and ch. 464, sec. 1, effective July 15, 1994. – Amended 1992 Ky. Acts

23 ch. 398, sec. 1, effective July 14, 1992. -- Amended 1990 Ky. Acts ch. 476, Pt. I,

24 sec. 27, effective July 13, 1990. -- Amended 1986 Ky. Acts ch. 373, sec. 1, effective

25 July 15, 1986. -- Amended 1984 Ky. Acts ch. 359, sec. 2, effective July 13, 1984. --

1 Amended 1978 Ky. Acts ch. 306, sec. 2, effective March 30, 1978. -- Amended 1976
2 Ky. Acts ch. 209, sec. 1. -- Amended 1974 Ky. Acts ch. 265, sec. 5. -- Amended
3 1972 Ky. Acts ch. 372, sec. 2. -- Amended 1966 Ky. Acts ch. 29, sec. 1 (1) and (2);
4 and ch. 255, sec. 150. -- Amended 1964 Ky. Acts ch. 6, sec. 1; and ch. 133, sec. 1. --
5 Amended 1962 Ky. Acts ch. 244, Art. VII, sec. 2. -- Amended 1952 Ky. Acts
6 ch. 104, sec. 1. -- Recodified 1942 Ky. Acts ch. 208, sec. 1, effective October 1,
7 1942, from Ky. Stat. sec. 4370-7.
8 **Legislative Research Commission Note** (1/29/2002). The words "upon request of the
9 statewide professional education association having the" were inadvertently omitted
10 from subsection (6)(a) of this section when it was amended by 2001 Ky. Acts ch.
11 134, sec. 1. These words have been restored to the section by the reviser of statutes
12 under KRS 7.136 and 446.280.
13 **Legislative Research Commission Note** (6/21/2001). A reference to "subsection (3)(c)"
14 in subsection (6)(b)1. of this statute has been changed in codification to "subsection
15 (4)(c)" under KRS 7.136(1)(e) and (h). In 2001 Ky. Acts ch. 134, sec. 1, the existing
16 subsection (3) was renumbered as subsection (4), but an internal reference to that
17 subsection in the existing language of this statute was overlooked.
18 **2006-2008 Budget Reference.** See State/Executive Branch Budget, 2006 Ky. Acts ch.
19 252, Pt. I. D.4.(16), at 1172; and State/Executive Branch Budget Memorandum,
20 2006 Ky. Acts ch. 257, at 2486 (Final Budget Memorandum, at 799
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156.095 Professional learning [~~development~~] programs -- Professional growth [~~development~~] coordinator – [~~Long term~~] improvement plans – [~~Electronic consumer bulletin board~~] -- Training to address needs of students at risk -- Teacher academics.

(1) The Kentucky Department of Education shall be responsible for providing technical assistance and support to local school districts to ensure each district has high quality and effective professional learning experiences for all staff. [~~establish, direct, and maintain a statewide program of professional development to improve instruction in the public schools~~.]

(2) Each local school district superintendent shall appoint a certified school employee to fulfill the role and responsibilities of a professional growth [~~development~~] coordinator who shall disseminate professional learning [~~development~~] information to schools and personnel. Upon request by a school council or any employees of the district, the coordinator shall provide technical assistance to the council or the personnel that may include assisting with needs assessments, analyzing school data, planning and evaluation assistance, organizing districtwide programs requested by school councils or groups of teachers, or other coordination activities.

(a) The manner of appointment, qualifications, and other duties of the professional growth [~~development~~] coordinator shall be established by Kentucky Board of Education through promulgation of administrative regulations.

(b) The local district professional growth [~~development~~] coordinator, in partial fulfillment of the requirements of KRS 156.101, shall participate in annual professional learning approved by the Kentucky Department of Education [~~annual training program~~] for local school district professional learning [~~development~~] coordinators. Approval of this job specific professional learning will be awarded for experiences that [~~The training program~~] may include, but not be

1 limited to, the demonstration of various approaches to needs assessment and planning; strategies
2 for implementing [~~long term,~~] school-based professional learning [~~development~~]; strategies for
3 strengthening teachers' roles in the planning, development, and evaluation of professional
4 learning [~~development~~]; and demonstrations of effective professional learning communities
5 [~~model professional development programs. The training shall include information about teacher~~
6 ~~learning opportunities relating to the core content standards. The Kentucky Department of~~
7 ~~Education shall regularly collect and distribute this information.~~]
8 (3) The majority of professional learning experiences shall occur during regular teacher
9 professional days and shall be considered as one of the regular job responsibilities of each
10 teacher and administrator.
11 (4) (a) School districts shall develop policies and procedures to ensure that all certified teachers
12 receive regular and continuous professional learning experiences and shall ensure that all
13 professional learning is related to the needs addressed in local school improvement plans,
14 professional learning team plans and the individual growth needs of each teacher.
15 (b)The professional learning policies and procedures adopted by the local board of education
16 shall include the process for the implementation of effective professional learning experiences by
17 school and district leadership. In addition the policies shall provide a process for the evaluation
18 of professional learning experiences for their role in improving teacher and administrator
19 effectiveness in raising student achievement for all students.
20 (5) [~~(3)~~] Each school council shall work collaboratively with local district personnel to [~~shall~~]
21 provide professional learning [~~development~~] experiences [~~The [Kentucky Department of~~
22 ~~Education shall provide or facilitate optional, professional development programs for certified~~

1 ~~personnel throughout the Commonwealth that are based on the statewide needs of teachers,~~
2 ~~administrators, and other education personnel. Programs may include classified staff and parents~~
3 ~~when appropriate. Programs offered or facilitated by the department shall be at locations and~~
4 ~~times convenient to local school personnel and shall be made accessible through the use of~~
5 ~~technology when appropriate. They shall include programs~~] that address the goals for Kentucky
6 schools as stated in KRS 158.6451, including reducing the achievement gaps as determined by
7 an equity analysis of the disaggregated student performance data from the state assessment
8 program developed under KRS 158.6453; engage educators in effective learning processes and
9 foster collegiality and collaboration; and provide support for staff to incorporate newly acquired
10 skills into their work through practicing the skills, gathering information about the results, and
11 reflecting on their efforts. Professional learning [~~development~~] experiences [~~programs~~] shall be
12 made available to teachers based on their needs which shall include, but not be limited to, focus
13 on the following areas:
14 (a) Strategies to reduce the achievement gaps among various groups of students and to provide
15 continuous progress;
16 (b) Curriculum content and methods of instruction for each content area including differentiated
17 instruction;
18 (c) School-based decision making;
19 (d) Assessment literacy;
20 (e) Integration of performance-based student assessment into daily classroom instruction;
21 (f) Nongraded primary programs;
22 (g) Research-based instructional practices;

(h) Instructional uses of technology;

(i) Curriculum design to serve the needs of students with diverse learning styles and skills and of students of diverse cultures;

(j) Instruction in reading, including phonics, phonetic awareness, comprehension, fluency, and vocabulary;

(k) Educational leadership; and

(l) Strategies to incorporate character education throughout the curriculum.

(6) [~~(4)~~] The department shall, in collaboration with postsecondary education institutions, education cooperatives and consortia, professional education organizations and other professional learning providers, assist local district personnel with the planning and development of effective professional learning programs. The department shall provide technical assistance to assist school personnel in assessing the impact of professional learning [~~development~~] on their instructional practices and student learning.

(7) [~~(5)~~] The department shall assist districts and school councils with the development of [~~long-term~~] school, professional learning team, and district improvement plans that include multiple strategies for professional learning [~~development~~] based on the assessment of needs at the school level.

(a) Professional learning [~~development~~] strategies may include, but are not limited to, participation in subject matter academies, teacher networks, training institutes, workshops, seminars, and study groups; collegial planning; action research; mentoring programs; appropriate university courses; and other forms of professional learning [~~development~~].

1 (b) [~~In planning the use of the four (4) days for professional development under KRS 158.070,~~]
2 School [~~school~~] councils and districts shall give priority to experiences [~~programs~~] that increase
3 teachers' understanding of curriculum content and methods of instruction appropriate for each
4 content area based on individual school plans, professional learning team plans, and the
5 individual professional growth plans of teachers. [~~The district may use up to one (1) day to~~
6 ~~provide district-wide training and training that is mandated by state or federal law.~~] When
7 providing district training that is mandated by federal or state law, only [~~Only~~] those employees
8 identified in the mandate or affected by the mandate shall be required to attend the training.
9 (c) State funds allocated for professional learning [~~development~~] shall be used to support
10 professional learning [~~development~~] initiatives that are consistent with local school improvement
11 plans, professional learning team plans, and [~~professional development plans and~~] teachers'
12 individual growth plans. The funds may be used throughout the year for all staff, including
13 classified and certified staff and parents on school councils or committees. A majority [~~portion~~]
14 of the funds allocated to each school council under KRS 160.345 shall be used to support job-
15 embedded professional learning experiences and a portion may be used to prepare or enhance the
16 teachers' knowledge and teaching practices related to the content and subject matter that are
17 required for their specific classroom assignments.
18 (9) [~~(6)~~] The Department of Education shall provide professional learning resources [~~establish an~~
19 ~~electronic consumer bulletin board that posts information regarding professional development~~
20 ~~providers and programs~~] as a service to school district central office personnel, school councils,
21 teachers, and administrators. These resources shall include, but not be limited to, guidance on
22 planning and providing high quality professional learning experiences for staff, key research on

professional learning, tools for evaluating of professional learning for its impact on improving teacher and administrator effectiveness in raising student achievement for all students.

[~~Participation on the electronic consumer bulletin board shall be voluntary for professional development providers or vendors, but shall include all programs sponsored by the department. Participants shall provide the following information: program title; name of provider or vendor; qualifications of the presenters or instructors; objectives of the program; program length; services provided, including follow-up support; costs for participation and costs of materials; names of previous users of the program, addresses, and telephone numbers; and arrangements required. Posting information on the bulletin board by the department shall not be viewed as an endorsement of the quality of any specific provider or program.~~]

(10) [~~(7)~~] The Department of Education shall provide training to address the characteristics and instructional needs of students at risk of school failure and most likely to drop out of school. The training shall be developed to meet the specific needs of all certified and classified personnel depending on their relationship with these students. The training for instructional personnel shall be designed to provide and enhance skills of personnel to:

(a) Identify at-risk students early in elementary schools as well as at-risk and potential dropouts in the middle and high schools;

(b) Plan specific instructional strategies to teach at-risk students;

(c) Improve the academic achievement of students at risk of school failure by providing individualized and extra instructional support to increase expectations for targeted students;

(d) Involve parents as partners in ways to help their children and to improve their children's academic progress; and

1 (e) Significantly reduce the dropout rate of all students.

2 (11) [~~(8)~~] By July 1, 2001, the department shall establish teacher academies to the extent funding
3 is available in cooperation with postsecondary education institutions for elementary, middle
4 school, and high school faculty in core disciplines, utilizing facilities and faculty from
5 universities and colleges, local school districts, and other appropriate agencies throughout the
6 state. Priority for participation shall be given to those teachers who are teaching core discipline
7 courses for which they do not have a major or minor or the equivalent. Participation of teachers
8 shall be voluntary.

9 **Effective:** July 15, 2002

10 **History:** Amended 2002 Ky. Acts ch. 302, sec. 2, effective July 15, 2002. -- Amended 2000 Ky.
11 Acts ch. 162, sec. 4, effective July 14, 2000; ch. 452, sec. 3, effective July 14, 2000; and ch. 527,
12 sec. 10, effective July 14, 2000. -- Amended 1998 Ky. Acts ch. 514, sec. 4, effective July 15,
13 1998.; and ch. 609, sec. 1, effective July 15, 1998. -- Amended 1996 Ky. Acts ch. 362, sec. 6,
14 effective July 15, 1996. -- Amended 1990 Ky. Acts ch. 476, Pt. I, sec. 13, effective July 13,
15 1990. -- Amended 1985 (1st Extra. Sess.) Ky. Acts ch. 10, sec. 1, effective October 18, 1985;
16 Amended 1978 Ky. Acts ch. 155, sec. 82, effective June 17, 1978. -- Amended 1956 (1st Extra.
17 Sess.) Ky. Acts ch. 7, Art. II, sec. 2. -- Created 1950 Ky. Acts ch. 127, sec. 1.

18 **Legislative Research Commission Note** (7/14/2000). This section was amended by 2000 Ky.
19 Acts chs. 162, 452, and 527. Where these Acts are not in conflict, they have been codified
20 together. As to subsection (7) of this section, a conflict exists, in part, between Acts chs. 452 and
21 527. Under KRS 446.250, Acts ch. 527, which was last enacted by the General Assembly,
22 prevails in this conflict.

DISCUSSON DRAFT

Applying AdvanceKentucky to the Race to the Top Selection Criteria

The Race to the Top (RTT) application recognizes science, technology, engineering, and mathematics (STEM) as the only Competitive Preference Priority. States who demonstrate a commitment to implementing a high-quality plan that emphasizes STEM education in the manner required by the application have an opportunity to gain 15 extra points in the review process. That is equivalent to a three percent boost in an application's score, which can make a material difference as points are tallied.

In order to receive these Competitive Preference Priority points, States must not only provide a summary of the manner in which they will emphasize STEM education and fulfill the requirements of the Competitive Preference Priority, **States must also demonstrate that their emphasis on STEM education pervades the entire RTT application**.

AdvanceKentucky has dedicated the past two and one-half years to establishing in Kentucky the highly successful AP Training and Incentive Program (APTIP) with funding and national expertise of the National Math and Science Initiative (NMSI). In that time, AdvanceKentucky has proven its viability to dramatically accelerate students' access to, preparation for and success in rigorous AP mathematics, science and English courses. The integrated Elements of Success of the NMSI Model that have led to this measurable success of it first Cohort of 12 Kentucky high schools apply directly to many of the RTT Selection Criteria, and can help States demonstrate that their STEM initiatives apply to many aspects of their strategic plans for education reform. Moreover, NMSI currently is operating in only five other states besides Kentucky, providing a competitive advantage in the Race to the Top.

The following outlines pertinent ways in which AdvanceKentucky supports the Competitive Preference Priority as well as other State education reforms throughout the RTT application.

<u>Competitive Preference Priority – Emphasis on STEM Education</u>

This Competitive Preference Priority requires that States have a high-quality plan to

(i) Offer a rigorous course of study in STEM;

(ii) Cooperate with industry experts, museums, universities, research centers, or other STEM-capable community partners to prepare and assist teachers in integrating STEM content across grades and disciplines, in promoting effective and relevant instruction, and in offering applied learning opportunities for students; and

(iii) Prepare more students for advanced study and careers in STEM, including by addressing the needs of underrepresented groups and of women and girls in the STEM fields.

AdvanceKentucky's successful implementation of the NMSI Model supports Kentucky as it addresses the first and the third components of this Competitive Preference Priority. The central focus of AdvanceKentucky is to implement a rigorous course of study that prepares students for advanced study in high school and in college. With the knowledge and confidence that this proven, integrated series of Elements of Success provide, students are more likely to attend and graduate from college, an essential step in preparing them for a career in STEM. The results generated by the first cohort of schools demonstrate that AdvanceKentucky already is addressing the achievement gap that exists for underrepresented groups, including girls.

- These 12 pioneer schools represent only 7 percent of the Kentucky's public high school population yet contributed one-third of all *new* passing scores earned on the 2009 AP math, science and English exams in Kentucky statewide.
- With a 79 percent increase in scores from 2008 to 2009, this cohort of schools performed at 14 times the national rate of increase.
- On the 2009 AP Exams, the first Cohort of AdvanceKY schools accounted for one-half of all *new* math, science and English AP qualifying scores in Kentucky earned by low income students and one-half of all *new* qualifying scores earned by females in Kentucky.
- These dramatic growth in scores placed Kentucky second in the nation in one-year percent growth in AP scores from 2008 to 2009.
- To place these results in a more equalized context of math, science and English AP passing scores per 1,000 juniors and seniors, these 12 schools started considerably below the state average on this indicator and in one year shot up to exceed the national average – some schools by extraordinarily lengths.

Expanding the scope and reach of AdvanceKentucky into additional schools to reach nearly 50 percent of all Kentucky high schools over the life of RTT will serve to strategically multiply these positive effects and have a transformative impact on Kentucky's talent development in *both* STEM and English AP subjects.

AdvanceKentucky also addresses the second component above because the partnership with Laying the Foundation (Pre-AP teacher training and rigorous teaching materials to reach a diverse student population) helps to ensure that teachers are integrating STEM and English content across grades (6-11). Laying the Foundation (LTF) teacher training helps ensure that teachers are providing instruction that is relevant to and specifically directed towards preparing students for advanced STEM and English study in high school. Importantly, LTF training sessions are all imbedded with applied learning techniques immediately useful in teachers' classrooms.

LTF helps lay the foundation for common language and goals among teachers through vertical teaming and coordinated progression of skills across grades. While the training is grade and subject specific, all materials are presented to show how it strategically connects students' preparation for and self-confidence to succeed in rigorous math, science and English coursework. The training and materials establish a clear path for teachers to know how they each contribute to the preparation of students for college-level rigor, as well as to know what skills students will come into their class with, and what skills they will develop in any subsequent grades leading up to AP course options.

AdvanceKentucky is the formal affiliate of Laying the Foundation to offer its Pre-AP teacher training in Kentucky.

<u>State Success Factors – Commitment from the Participating LEAs (A)(1)(ii)</u>

AdvanceKentucky has an ongoing process for establishing formal commitments with schools and districts to implement the NMSI Model. This process include setting aggressive stretch goals for each school and teacher as measured by student success on internationally benchmarked math, science and English AP exams. With a strong core of schools ready to begin to implement AdvanceKentucky's proven, integrated set of Elements of Success, Kentucky is poised to take full and immediate advantage of this extraordinary opportunity to speed scale up across the State. Specifically, under the 20/20/20/20 scale up plan, 20 schools will be prepared to begin start-up activities in Spring 2010, AP and Pre-AP

teacher training in Summer 2010, and expanded access to AP math, science and English AP courses for the 10/11 school year.

Nearly 50 interested schools, in addition to the 28 already implementing AdvanceKentucky with funding from NMSI, are currently in various stages of application and implementation to AdvanceKentucky. With this existing interest that grows daily, AdvanceKentucky Cohorts of 20 new schools would be prepared to begin each year for the next four years -- or 80 new schools. Schools would participate for a maximum of 3 years in establishing a new culture of rigorous, high expectations and of confidence in achieving greater student success.

With 28 schools already in AdvanceKentucky, Kentucky is poised to reach 50 percent of its high schools by 2014.

State Success Factors – Generating Broad Statewide Impact (A)(1)(iii)

AdvanceKentucky is already generating broad statewide impact as demonstrated by the results from the first year of operation. With this proven model for achieving and demonstrating rigorous student learning in priority subjects as part of Kentucky's RTT plan, the State will continue to (1) increase student achievement in reading and math, (2) decrease the achievement gaps in reading and math, (3) increase high school graduation rates, and (4) increase college enrollment and the number of students who complete at least a year's worth of college credit.

State Success Factors – Building a Strong Statewide Capacity to Implement, Scale up, and Sustain Proposed Plans (A)(2)

AdvanceKentucky is a committed partner with a well experienced team of both content and program management experts with the proven capacity to implement, scale up, and sustain statewide education reform plans. AdvanceKentucky is the culmination of over 20 years of experience dedicated to advancing science and technology – through education, university R&D and technology enterprise developments.

As required for the RTT application, AdvanceKentucky has demonstrated its ability to identify and support participating LEAs as they implement the proven practices of a coordinated set of Elements of Success, widely disseminating and replicating these effective practices statewide, and holding participating LEAs accountable for progress and performance and transformational changes that are being demonstrated through AdvanceKentucky.

Additionally, AdvanceKentucky is a proven partner that has demonstrated its effective and efficient operations and processes in areas such as budget reporting and monitoring, performance measure tracking and reporting, and fund disbursement through public and private sponsors at state and national levels.

Professional non-profit management systems and accountability measures are well established by AdvanceKentucky to achieve this aggressive scale up to 80 new schools over the life of Kentucky's Race to the Top, and to hold participating schools accountable for student achievement and fiscal efficiencies. Likewise, AdvanceKentucky has demonstrated its reliable accountability for multiple multi-million dollar investments in education, university R&D and technology enterprise for the last 20 years. This includes an equally long history of clean state, federal, and private independent financial audits.

Finally, AdvanceKentucky stands as a dedicated member of Kentucky's coalition of stakeholders and a contributing partner that holds both high expectations and envisions the means by which to achieve unprecedented levels of student success in AP mathematics, science and English coursework. At the same time, AdvanceKentucky has a long-time statewide reputation for effective implementation of programs and policies and is regularly held accountable by both public and private sector overseers for results measured in terms of student success in rigorous AP coursework in these priority subjects.

State Success Factors – Demonstrating Significant Progress in Raising Achievement and Closing Gaps (A)(3)

The success and results from the first cohort of APTIP schools helps bolster [INSERT STATE]'s demonstration that is has improved student outcomes since 2008. Because the APTIP is targeted to AP scores, [INSERT NON-PROFIT NAME] can easily explain the connection between the results and the actions that contributed to increasing student achievement, decreasing achievement gaps, and possibly increasing graduation rates. AdvanceKentucky has proven its ability to create an environment that is supportive of, conducive to, and committed to education reform. Its inaugural Cohort of 12 schools contributed to Kentucky's ranking as the second in the nation in terms of the one-year percent increase (from 2008 to 2009) in AP qualifying scores in math, science and English. These 12 schools representing just seven percent of Kentucky's public high school students, earned 778 AP qualifying scores, contributed one-third of all *new* qualifying scores on these national, priority AP exams, 50 percent of *new* qualifying scores earned by low income students and among females -- across the entire state. Among 28 currently participating Kentucky high schools in the 09/10 school year, 5,900 students are enrolled in 185 AP math, science and English courses, representing an astounding 60 percent increase in enrollments above last year.

Standards and Assessments – Supporting the Transition to Enhanced Standards and High-Quality Assessments (B)(3)

This criterion requires a high-quality plan for supporting a statewide transition to and implementation of internationally benchmarked K-12 standards that build toward college and career readiness by the time of high school graduation and high-quality assessments tied to those standards.

The AP courses, the core content of AdvanceKentucky, support this requirement; they incorporate college level curriculum standards, and the AP exams that measure student achievement against college level benchmarks. Further, AP courses standards and exams were developed by higher education faculty and represent college level standards. Students' qualifying scores on AP exams are widely accepted as college credit. Every AP course so labeled on a student's high school transcript undergoes an "audit" by the College Board of the course syllabus and instructional materials and assessments. These audits are performed by college faculty across the country.

Thus, AP courses and exams taken by students participating in AdvanceKentucky provide internationally benchmarked standards tied to college readiness by the time of high school graduation and a system of common, national assessments that are linked to those standards. By expanding high schools participating in AdvanceKentucky, Kentucky's Race to the Top statewide plan support far more aggressive dissemination of those standards, implementation of high-quality instruction and assessments, prepares students for college by the time they graduate high school, and deliver high-quality teacher and school administrator professional development to support these standards and assessments and achieve dramatically improved student performance, with a special focus on reaching many more students traditionally underrepresented in AP.

This open enrollment approach requires a deliberate and intentional approach to reach out to these underrepresented students. This is accomplished in many ways to personally approach students but also by data analyses that may reveal promising indicators of students talents not yet fully realized. In particular, the ACT college readiness standards now offer research that supports the ability to use the ACT Plan test scores (a national exam administered to every 10th grader in Kentucky and paid for by KDE) to help predict students' probability of achieving qualifying scores on each AP exam. In this way, AdvanceKentucky expects participating schools to know and use these data well to intentionally reach out to many more students and recognize their potential for rigorous coursework. Now these schools have an integrated set of Elements of Success to provide the additional supports for both students and teachers serving in this open enrollment environment. [See "ACT Issues in College Readiness: Using PLAN to Identify Student Readiness for Rigorous Courses in High School"]

Data Systems to Support Instruction – Using Data to Improve Instruction (C)(3)

[FYI, AdvanceKentucky has solicited the assistance of National Math and Science Initiative's National AP Director to help expedite Kentucky's use of AP data in statewide longitudinal research on Kentucky's students. A meeting is set for Dec 8th at KDE.]

For all participating schools AdvanceKentucky tracks teacher and student data on the relevant Elements of Success (i.e., AP qualifying scores by student and by teacher, extra time on task for students, teacher training and mentoring, etc.). Moreover, AdvanceKentucky is supported by extensive national data analyses by NMSI to better place in context the level of growth and students achievements from year-to-year and longitudinally over time.

Great Teachers and Leaders – Improving Teacher and Principal Effectiveness Based on Performance – (D)(2)

The RTT application places significant emphasis on measuring student growth. The AP exams provide a distinct and common measure of achievement for each individual student and are a nationally recognized metric for tracking student growth and college readiness. AdvanceKentucky links the accountability of administrators' and teachers' performance to funding incentives based on this national measure of student growth. At the same time, AdvanceKentucky institutes aggressive supports for teacher training, vertical teaming among AP and Pre-AP teachers and students' skills development that builds student success and readiness to achieve qualifying scores on national AP exams in math, science and English. Management strategies also are put in place to directly tie administrator incentives to student achievements in AP. Administrators include principals and in many cases other local champions of AP to ensure that all the Elements of Success are being fully implemented for maximum success.

Great Teachers and Leaders – Ensuring Equitable Distribution of Effective Teachers and Principals (D)(3)

A critical component of the APTIP is providing professional development and training to teachers in participating schools so that those teachers become highly effective in the hard-to-staff subjects of math and science.

AdvanceKentucky invests considerable resources into developing successful teachers and principals – as measured by their students' success on AP exams in math, science and English. As a result of this strategy, many more Kentucky teachers are available to help mentor and assist newer or to-date less successful teachers. As AdvanceKentucky expands to more schools, this expanded teacher/mentor talent base is develops further every year to support this statewide expansion. As importantly, by investing in Kentucky's teacher talent development able to serve this more diverse AP student population, AdvanceKentucky set as a priority the ability to sustain the Elements of Success over time by

continuously and relentlessly increasing the percentage of highly effective teachers distributed across the State.

Because AdvanceKentucky places the highest priority to serve largely underrepresented student populations of both low income and minority students, AdvanceKentucky has proven successful in its teacher training and development in a wide range of schools including high-poverty and high-minority student populations.

Great Teachers and Leaders – Providing Effective Support to Teachers and Principals (D)(5)

AdvanceKentucky includes a system of high-quality, effective, data-informed professional development for its teachers. [INSERT NON-PROFIT NAME]'s professional development design focuses on a train-the-trainer model which provides experts to each participating school. State and national content experts train and mentor local AP teachers and administrators, who in turn over time are called on as contractors to help mentor others in their school and across the state in their respective content areas. This highly customizable professional development paradigm of continuously building local teacher talent to teach rigorous content and administrative supports to create a culture of high expectations is highly effective -- as demonstrated by the increase of students with passing AP scores in the schools where this professional development plan was implemented) and tied to internationally benchmarked standards of the AP exam.

As such, AdvanceKentucky's extensive professional development strategies, including summer institutes and various job-imbedded training strategies throughout the school year, are already in place and primed to support teachers in participating LEAs in Kentucky's Race to the Top. These are annual, not one-time efforts, for both new and more experienced teachers, are data driven based on students prior achievements on AP math, science and English Exams, and are incented by annual stipends for the extra time required to achieve these gains and performance bonuses based on student achievement on AP exams.

Kentucky Science Technology Engineering and Mathematics (STEM) Education Imperative Funding Request
STEM Concept Proposal - PLTW

Submitters:
Science, Technology, Engineering & Mathematics (STEM) Education Workgroup
Dr. Lee Todd, Chair
Commissioner Deborah Clayton, Vice Chair

Project Title:
Kentucky's STEM Education Imperative

Project Partners/Team:
Cabinet for Economic Development; Girls' STEM Collaborative; Kentucky Association of Manufacturers; Kentucky Chamber of Commerce; Kentucky Community & Technical College System; Kentucky Council on Postsecondary Education; Kentucky Department of Education; Kentucky Society of Professional Engineers; Lexmark International, Inc.; The NEED Project; Northern Kentucky University; Project Lead the Way; Toyota; Western Kentucky University; University of Kentucky; University of Louisville.

> *". . . since we know that the progress and prosperity of future generations will depend on what we do now to educate the next generation, today I am announcing a renewed commitment to education in mathematics and science. Think about new and creative ways to engage young people in science and engineering. . . encourage young people to create, build, and invent to be makers of things, not just consumers of things."* Barack Obama, U.S. President.

Project Background & Purpose:
For many years, Kentucky has been recognized for its successful tobacco, equine and bourbon industries. Today Kentucky is known for high marks and rankings in less-than-desirable health, social, and educational issues. Kentucky recognizes the critical need to turn these issues into opportunities, to emerge ready to face the future, preparing Kentucky children for success in high-tech medical, science, and technology careers. Further, Kentucky recognizes the clearly established and documented link between educating children and improving economic opportunity. Now Kentucky embraces this moment in which it can redefine for the long-term the way our children learn math and science, and prepare themselves for successful careers in STEM disciplines.

This is Kentucky's moment to move forward via the many facets of *Project Lead the Way*™ (PLTW), a proven, recommended, nationally recognized and nationally aligned K-12 STEM curriculum. The expectations of this project include the strengthening of STEM education of all middle and high school students to make them college and STEM career-ready; to improve teacher effectiveness through enhanced teacher preparation/continuing professional development; to utilize rigorous assessments to monitor learning outcomes; and to implement the appropriate infrastructure to verify the expected improvements.

Scaling statewide rigorous STEM education curricula responds to President Obama's strong commitment to spur innovation in America's schools and his willingness to put stimulus package dollars to the task of supporting effective curricular models that work, such as PLTW.

The keys for Kentucky's future are found in several areas of opportunity:

- Changing and adopting the Kentucky Core Content Standards to embrace national STEM standards.
- Recruiting, encouraging and rewarding teachers who exhibit outstanding teaching skills and practices, as proven by documented results. Kentucky currently has a tuition-forgiveness program as well as scholarship support for aspiring math and science teachers.
- Bridging the gap for all students to have equal exposure and opportunities to investigate STEM careers, thereby increasing the Commonwealth's workforce more deeply populated with mathematicians, scientists, and engineers.
- Improving and implementing appropriate infrastructure to capture and quantify successes and to recognize improvement areas.

> *". . . these commitments of improvement in teacher effectiveness and ensuring all schools have highly qualified teachers; making progress toward college- and career-ready standards; improving achievement in low-performing schools; and evaluation of the above through enhanced data systems that track progress, will help ensure outstanding teachers in America's schools, arm educators with the tools and data needed to determine what does and doesn't work in our nation's classrooms, align curricula and assessments with rigorous standards that prepare young people for college and careers, and transform our lowest-performing schools."*
> Arne Duncan, U.S. Secretary of Education.

Efforts currently in place to move Kentucky toward these keys to future success include:

- The Beshear administration working diligently and effectively to make Kentucky competitive attracting and retaining high tech companies.
- Legislators from both parties in both chambers investing effort and funding to elevate Kentucky's STEM efforts, for both energy and engineering.
- The presidents of Kentucky's universities expressing support for and willingly providing strengthened and continuing pre-service and in-service training to P-12 teachers in these areas of critical need.
- Kentucky superintendents and members of school boards recognizing the need to dramatically improve the way teachers teach and students learn, especially in STEM-related curricular areas.
- Schools scattered throughout the state are successfully supporting STEM education and leveraging available state resources but these efforts are remain isolated and episodic.
- Kentucky has both water and coal energy resources to be a leader in America's move toward energy independence; however, the state's ability to become a leader depends upon strengthening the supply of STEM professionals.
- The recent announcement that Argonne National Laboratory will locate a research and development (R&D) Advanced Battery Technology Center in Kentucky gives momentum to the call for more STEM graduates and researchers.
- The retirement of much of Kentucky's teaching workforce requires creative ways of re-engaging them with 21st Century skills, while recruiting new STEM disciplined educatiors..

The creation of a skilled STEM workforce is the cornerstone for research and development, and consequently the key to innovation and success in the knowledge-based technology-driven economy. There is broad agreement that STEM education in the United States is not producing the quality and quantity of graduates needed to keep the U. S. competitive. Numerous analyses have documented that Kentucky ranks below the national average in developing scientific and innovation talent as reported in National Science Foundation's Science and Engineering Indicators. Kentucky's recent (2009) college-bound public high school seniors' composite ACT scores were lower than in 2008, with all subject areas below ACT benchmarks for college readiness. In 2007, the Council on Postsecondary Education's STEM Task Force (STEM I) identified a strong emphasis on P-20 collaborative partnerships with multi-sectors, including business, industry, and civic leaders, as the mechanism to bridge the chasm between education and employer needs in the 21st Century. Specifically identified is a critical need for teaching more rigorous STEM curricula and for teacher education focused on enhanced STEM-disciplined and embedded pedagogy.

It is not enough to encourage and applaud isolated efforts in various schools in various parts of the state. Key to Kentucky's successful participation in the knowledge economy is for all Kentucky schools to be given the opportunity to embrace dramatic and lasting change and progress in the STEM education they provide, the skills and the knowledge to be effective teachers and administrators, and the tools to execute the delivery of a proven, recognized, standards-based STEM curriculum.

Project Description:

PLTW (http://www.pltw.org/index.cfm) is a nationally-recognized middle and high school curriculum focused on projects and problem-based contextual learning. PLTW's aim is to cultivate student interest in pursuing careers in engineering, advanced manufacturing, biomedical sciences, and energy. PLTW makes science, math, engineering and technology fun for students, and encourages those who may have overlooked a STEM career by opening the door of options and opportunitities. PLTW focuses on the development of logical, problem-solving skills, thereby preparing students for STEM-related postsecondary education or the technology workforce. The success of PLTW depends on integrated partnerships between elementary, middle and high schools, colleges and universities, and the business and government sectors.

Research has shown when schools apply activities and problem-based learning student motivation increases. Additionally, students acquire cooperative learning skills and higher-order thinking, resulting in an increase in overall student achievement. For example, according to an evaluation by *High Schools That Work*, PLTW students scored significantly higher in both mathematics and science high school assessments (See Appendix I). The National Center for Education Statistics 2006-07 True Outcomes report explains that students who participate in PLTW are five times more likely to graduate college as science, technology, engineering and mathematics (STEM) majors than those who do not; PLTW students are more likely to choose engineering; and the retention rate after enrollment into engineering is higher for PLTW students (See Appendix II). PLTW is standards-based, incorporated and aligned with standards from the National Academy of Sciences, National Council of Teachers of Mathematics, International Technology Education Association, and National English Language Arts. Additionally, In June 2009, the Education Commission of the States awarded PLTW the

2009 ECS Corporate Award for the organization's commitment to and investment in improving public education.)

Kentucky STEM I & II workgroups have determined that *Project Lead the Way*™ (PLTW), when implemented statewide, will increase engineering, biomedical, manufacturing, and energy talent pipelines in Kentucky and therefore deliver the quantity and quality of students graduating from high school prepared for high-tech fields. PLTW has been praised by numerous professional organizations, including the Aerospace Industry Association and the Society of Manufacturing Engineers, and was the subject of a recent segment on National Public Radio entitled, *Can Science Reasoning Be Taught*? PLTW is the only K-12 STEM curriculum identified in the 2005 report, "Rising Above the Gathering Storm" published by the National Academies of Engineering, Science and Health as the path to improving the STEM workforce in this country.

Kentucky'seducational data warehouse plan calls for including PLTW students in the longitudinal data system currently under implementation for the state, including the evaluation of PLTW students compared to non-PLTW students in academic areas. Appendix 1 shows the comparison between these two groups from a national PLTW perspective.

As academics improve in PLTW schools, teachers can achieve recognition and reward through the PLTW School Certification process, ultimately leading to opportunities for additional compensation through the PLTW Master Teacher training process. Currently Kentucky has eight PLTW certified high schools, or 10 percent of all PLTW schools.
Kentucky already has invested seed money in PLTW. The 2006 and 2008 Kentucky General Assembly appropriated funds to begin implementing PLTW in Kentucky. To date, nearly 100 schools have registered to participate, with implementation in 78, including nine schools' proposals approved to begin in 2009-2010. These participating schools represent only 17 percent of Kentucky's 174 public school systems. There are 224 middle schools and 225 high schools statewide. National and Kentucky data show PLTW is a program that works, as shown in Appendix I. PLTW students have higher standardized test scores, they are much more likely to complete four years of math and science during high school, their college preparation is enhanced, and 97 percent of them plan to attend college, with 80 percent indicating their primary area of study will be engineering, technology or computer science. Clear evaluative measures are in place to monitor outcomes and track student progress through Kentucky's educational data portal, as well as national PLTW metrics.

There are several reasons PLTW is appealing to schools and teachers and effective for students:

- PLTW provides an equal opportunity for all students regardless of prior learning.
- Implementation is straight-forward with few changes to existing curriculum, enriching core content.
- Extensive continuous professional development for teachers is required and provided via an established Kentucky university affiliate.
- Teacher training takes place through on-campus Summer Training Institutes and the PLTW Virtual Academy, offering graduate education credit for professional development.
- Equipment/software installation, maintenance, and support are available to all participating systems.

- Partnering with local employers and mentors from diverse sectors of society is an eligibility criteria for participation to best serve an integrated knowledge-based economy.
- PLTW courses are considered part of the general education courses in the regular high school program, reflecting national standards in math, science, and technology.
- PLTW students outperform non-PLTW students in academics (See Appendix I)

PLTW aligns with Kentucky's other continuing efforts in STEM education, including the Girls' STEM Collaborative, AdvanceKentucky, the Partnership Enhancement Projects (PEP), the Center of Integrative Natural Science and Math (CINSAM), and SKYTeach.

PLTW is cost-prohibitive for many schools in Kentucky due to the added teacher load (teacher to student ratio of 1:20), additional laboratory space, furniture, computer equipment, and software. The curriculum is high-tech and high-touch. Many Kentucky school systems do not have capacity to provide substitutes or the cost of Summer Training Institutes for teachers' professional development, which is required through intense annual continuing education. Without financial assistance, many school systems would not be able to provide PLTW without the commitment of additional state, community, and multiple sector support.

PLTW can be expanded and further developed in Kentucky with a systematic investment in human capital and equipment. Already in place is the technical advisory expertise of the Kentucky Department of Education, as well as the PLTW University Affiliate within the University of Kentucky College of Engineering. Clearly, state level financial support has been critical to school implementation as illustrated by the Kentucky General Assembly's investments made through KDE energy initiatives, and CPE's pre-engineering pipeline funds. This proposal provides annualized investments needed for statewide scaling of STEM education.

In addition to strengthening schools for the long-term, PLTW P-12 opportunities will subsidize technical support in each of the 250 schools, equipping laboratories with new, high-tech and scientific equipment. In addition, rigorous STEM professional development for over 400 teachers and counselors will be provided.

Project Budget and Amount of Economic Stimulus Funds Requested:
Expanding PLTW to 250 additional Kentucky middle and high schools in two years will cost an estimated $25 million (See Appendix III). This amount includes professional development funds and equipment start-up costs. Clear support has been demonstrated by the Kentucky Department of Education, the Council on Postsecondary Education, the Cabinet for Economic Development's Department for Commercialization and Innovation, Lexmark International, Inc., Kentucky Society of Professional Engineers, business and industry leaders, public/private sector interests, and both parties in both chambers of the Kentucky General Assembly. Kentucky has invested to date $2.8 million in PLTW, in addition to KDE, CPE, the University of Kentucky and local investments.

The General Assembly created a second STEM Task Force (STEM II) and charged it with developing a business plan following the recommendations of the STEM I Task Force. That business plan included the scaling of PLTW statewide. (http://cpe.ky.gov/NR/rdonlyres/9A310C72-2566-4BD3-9F55-F56608816C71/0/STEM2Report1208.pdf) This 2008 plan forged a phased approach to build a strong collaborative for sustaining new PLTW programs for two years, adding additional

programs each year as schools become self-sustained by their systems. Funding opportunities through the federal Stimulus Package (American Recovery and Reinvestment Act – ARRA), National Science Foundation (NSF), U.S. Department of Education (US ED) as well as legislative support is needed to secure any and all funds to both scale and sustain the program statewide. Additional funding opportunities through grants and foundations, as well as additional federal programs continue to loom on the horizon and aggressive efforts will continue to enhance all potential funding assistance.

Project Team:
Kentucky Department of Education, Division of Career and Technical Education, PLTW Director, Henry Lacy and Division Director, Deborah Anderson; Kentucky Community and Technical College System, pre-engineering/bio-science faculty; University of Kentucky College of Engineering PLTW National Affiliate Director, Dianne Leveridge; Patrick Brewer with Lexmark International; William Kovacic, retired, of the Kentucky Society of Professional Engineers.

Budget Proposal: (Appendix III.)
To scale the program rapidly utilizing national stimulus funds would enable PLTW to be provided in an additional 250, or 55 percent of Kentucky public middle and high schools within two years. Joint program proposals from smaller school systems should be rewarded for being fiscally responsive and best utilizing limited business/industry resources at the local level. Larger school systems with existing PLTW programs could serve as mentors and consultants to neighboring schools in the early stages of curriculum implementation. School systems and administrators are willing to provide some startup funds and are required to match costs of professional development for teachers and counselors by national affiliation with PLTW.

The budget included in Appendix II reflects a rapid escalation to scale 55 percent of Kentucky's middle and high schools with PLTW funding within the next two years. Beginning with 100 new programs in middle and high school pre-engineering/energy curricula and 50 new high school programs in the Biomedical Science curricula, this stimulus proposal will fit the stimulus package objectives for immediate and long-term educational and subsequently economic benefits. The curriculum contains clear evaluation metrics to ensure that it meets the stimulus package's strict transparency and accountability requirements, as well as assessments congruent with national standards.

Additional funding enables expansion of PLTW into more schools statewide, bringing the total schools in Kentucky to 73 percent. Scaling quickly will shorten the duration to achieve Kentucky's 2020 goals and respond to a dire need expressed by state and national economic development goals of Kentucky.

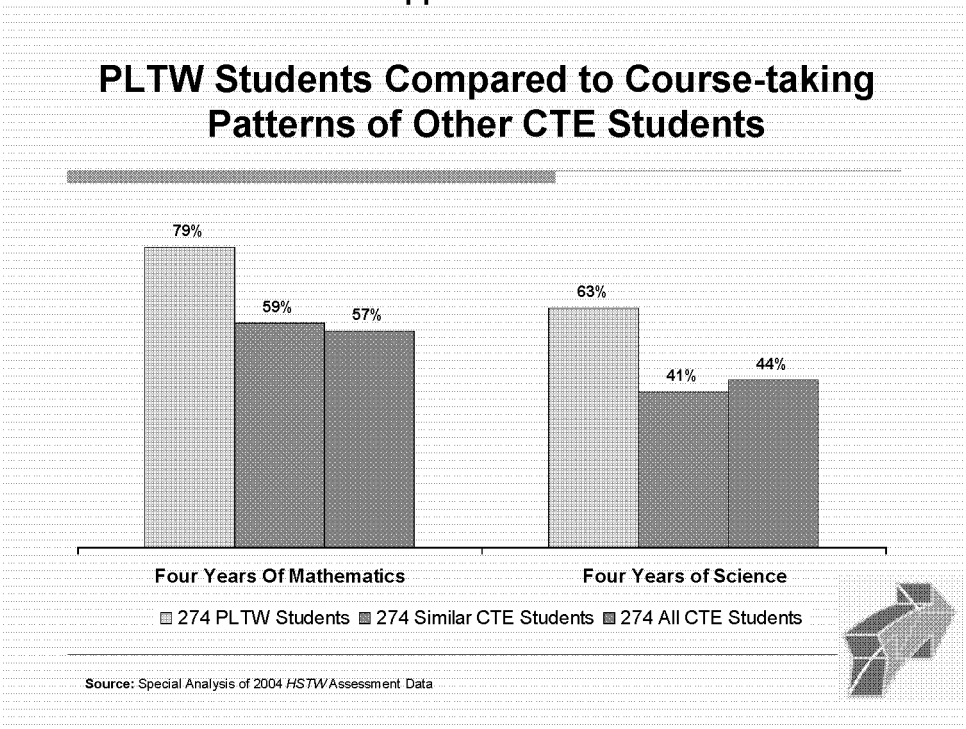
PLTW Student Observations

"I'd like to be a civil engineer and work with bridges and roads." CTE student, Franklin County Career & Technical Center

"I was not planning to go to college. Now, with this class, I am thinking of going to the community college." CTE student, Jessamine County Career & Technical Center

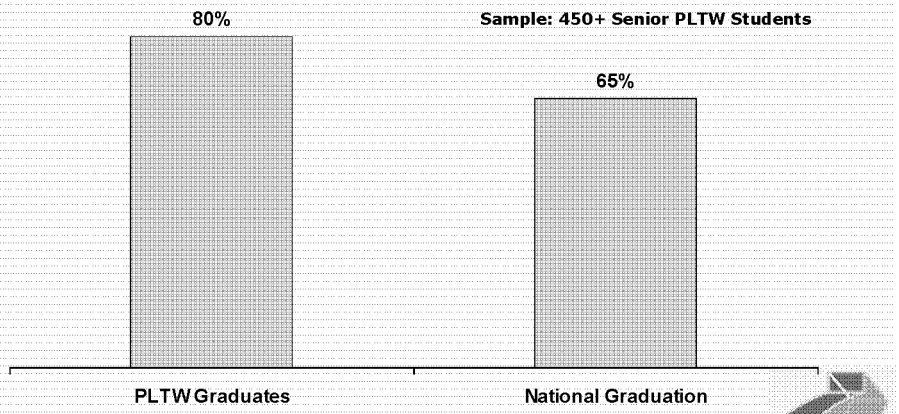
"I'm thinking of being an engineer since I get college credit for these classes I'm taking at the tech center." CTE student, Franklin County Career & Tech Center

Appendix I



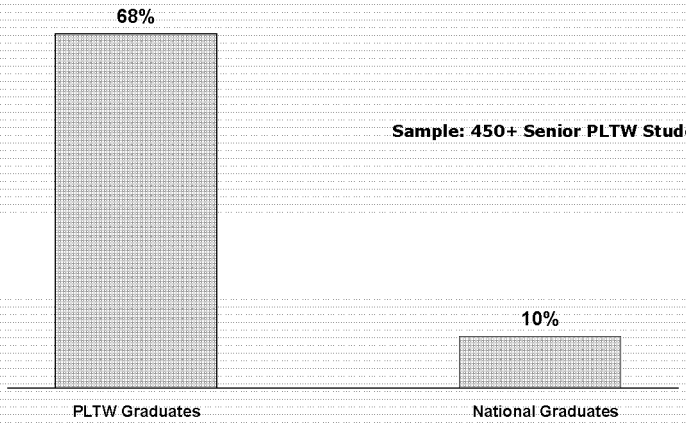
Appendix II

Senior Students Planning to Attend 2 or 4 year Post-secondary Studies



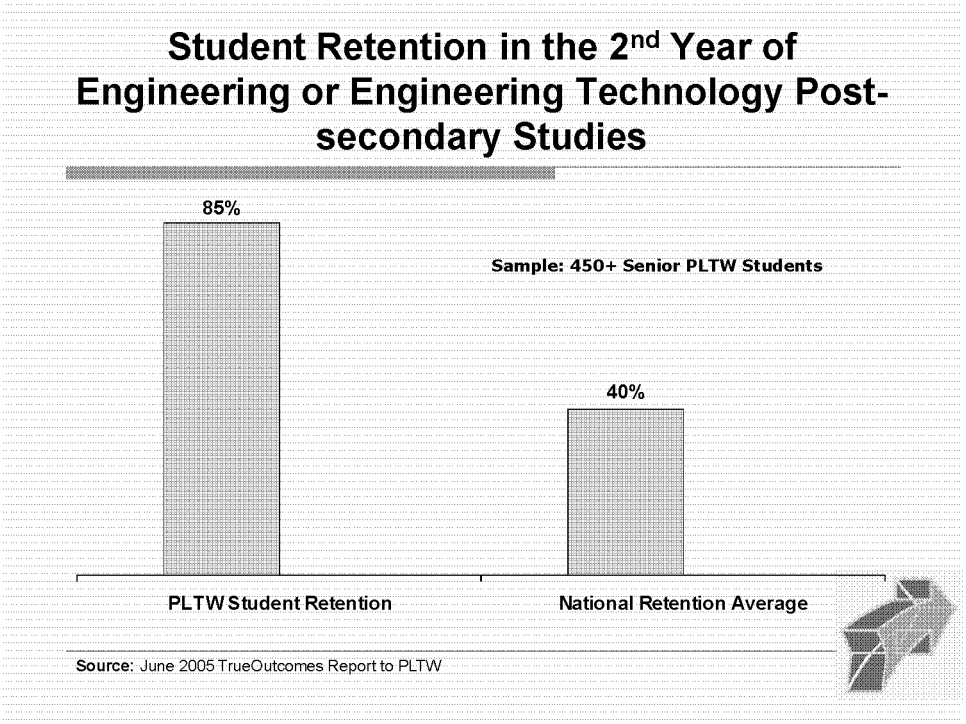
Source: June 2005 TrueOutcomes Report to PLTW

Senior Students Planning to Enroll in Engineering or Engineering Technology Post-secondary Studies



Source: June 2005 TrueOutcomes Report to PLTW

Appendix II continued



Appendix III

SCHOOL COST PROJECTIONS	Two-Year Costs for Initiating 250 new PLTW schools		
	# Schools	Cost Per School	Total 2-year Costs
Middle Schools (pre-Eng/Energy)	100	55,000	5,500,000
High Schools (pre-Eng/Energy)	100	110,000	11,000,000
High Schools (Biomedical)	50	100,000	5,000,000
KDE Coordinators/Evaluators/Fiscal Management			1,500,000
Technical Support (1 PT/school)	250	5,000	1,250,000
UK PLTW Affiliate, Institute Staff/Materials			1,500,000
Annual Projections			**25,750,000**

Budget Justification:

- PLTW proposes 250 new school sites in Kentucky, representing 55 percent of Kentucky middle and high schools. With the 78 schools already offering the PLTW curriculum, this growth increases the number to 328, or 73 percent of schools offering pre-engineering/energy and/or biomedical science STEM education.
- Initiating 250 new programs over two years requires additional coordination within the state education department, as well as expansion of the Summer Training Institute locations.
- Each new school site requires the technical support/maintenance provided either by the school board or as in-kind industry support.

Results:

- Middle Schools with pre-Engineering/Energy PLTW 100
- High Schools offering pre-Engineering/Energy PLTW 100
- High Schools offering Biomedical Science PLTW 50
- MS/HS Prior to 2010 Academic Year 79
- **Total Kentucky MS/HS offering PLTW (73%) 328**

Research Brief

Project Lead the Way: A Pre-engineering Curriculum That Works

A New Design for High School Career/Technical Studies

by Gene Bottoms and Karen Anthony

Project Lead The Way (PLTW) is a high school pre-engineering program taken in conjunction with college-preparatory level academics designed to prepare students for postsecondary engineering studies.

PLTW courses utilize project- and problem-based learning that teaches high school students how to apply what they are learning to real-life situations. These courses provide opportunities for students to:

- understand the scientific process, engineering problem-solving and the application of technology;
- understand how technological systems work with other systems;
- use mathematics knowledge and skills in solving problems;
- communicate effectively through reading, writing, listening and speaking; and
- work effectively with others.[1]

The *High Schools That Work* (*HSTW*) and PLTW partnership began in September of 1999 in order to create a high school pre-engineering pathway. The design and rigor of the PLTW program provides students with quality learning experiences across both academic and career/technical classes. PLTW complements the major goals of the *HSTW* design by blending the essential content of traditional college-preparatory academic studies with challenging career/technical studies, thus increasing the percentages of students completing a quality core curriculum and scoring at or above the proficient level in reading, mathematics and science.

May 2005

Southern Regional Education Board

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[1] HSTW *Presents a Pre-engineering Program of Study*, 2001.

Features of the PLTW pre-engineering program of studies that other career/technical areas can adopt to raise standards and integrate their courses with academic studies include requiring:

- four years of mathematics — Algebra I and higher — and at least three college-preparatory-level lab-based science courses;
- course curriculums that contain key concepts that affect students' academic and technical learning;
- teacher participation in two weeks of training for each course they plan to teach. Training begins with a pre-assessment of the teacher's possible weaknesses in mathematics, followed by suggested actions to strengthen those particular mathematics skills. Further training is provided on how to teach in a project-based format, how to engage students in projects and problems requiring rigorous mathematics and science knowledge and skills, and how to assess students' mastery of materials;
- upgraded laboratories with equipment, instructional materials and supplies essential for teaching the courses;
- end-of-course exams that teachers use to determine whether students have mastered key course concepts; and
- training for counselors that addresses the changing workplace and the courses students need to take in order to successfully complete the curriculum and be prepared for postsecondary study and careers in the given field.

The purpose of this research is to determine whether the PLTW program results in students with higher quality learning experiences — and higher achievement — when compared to other students in the *HSTW* network.

In the analysis of PLTW students, the following questions were posed:

- Do PLTW students in the *HSTW* network have significantly higher achievement in reading, mathematics and science on a NAEP-referenced assessment than other students in the network?
- Are PLTW students more likely to take higher-level mathematics and science courses than other students?
- How do PLTW students who complete four years of college-preparatory mathematics and science perform compared to PLTW students who do not complete four years of college-preparatory mathematics and science?
- Do PLTW students experience more engaging instructional strategies in mathematics and science classes and across the curriculum?
- Do PLTW students have a richer set of learning experiences in their career/technical courses?
- Are PLTW students more likely than other career/technical students to plan to attend a four-year college or university?

Key Findings

- When PLTW students are compared to similar students from comparable career/technical fields, PLTW students have significantly higher achievement in mathematics on a NAEP-referenced assessment.
- When PLTW students are compared to similar students across all career/technical fields, PLTW students have significantly higher achievement in reading, mathematics and science on a NAEP-referenced assessment.
- When PLTW students are compared to similar students in comparable fields of study and to similar students drawn from all career/technical fields, PLTW students complete significantly more higher-level mathematics and science courses.
- Significantly more PLTW students were enrolled in classes that engage them in reading and writing across the curriculum; and in using real-world problems, technology and group work to advance mathematics and science achievement.
- Significantly more PLTW students experience career/technical classes that required students to use academic knowledge and skills to complete project assignments.

To answer these questions, the results of the 2004 *HSTW* Assessment and student survey were analyzed. The 274 students who participated in the 2004 *HSTW* Assessment reported completing at least two PLTW credits. Preliminary analyses revealed that this group of students had significantly different demographics than other career/technical students in the *HSTW* network. In order to make valid comparisons between career/technical students and PLTW students, a random sample of career/technical students matching the demographic composition of the PLTW group was drawn so that differences between the two groups would be more attributable to students' school and classroom experiences, rather than their backgrounds.[2] For these analyses, two different comparison groups were used: 1) career/technical students from high-tech fields,[3] and a sample of 2) all career/technical students.

For both comparison groups — high-tech fields and all career/technical students — two random samples of 274 students were drawn to match the demographics of the 274 PLTW students. (See Table 1.)

[2] A stratified random sample technique was used to separate students in each career/technical comparison group into categories based on gender, ethnicity and parental educational level. Then, for each career/technical comparison group, a random sample of students was chosen from each demographic category to exactly match the number of students in each category within the PLTW student group.

[3] For the first comparison group, students were chosen only if they had completed CTE majors in Information Technology; A/V Tech and Communications; Electricity and Electronics; Drafting and Design; or Technology and Engineering. Because Project Lead The Way is a career pathway within the Science, Technology, Engineering and Mathematics cluster, students who reported completing this major and at least one PLTW credit were removed from the pool.

Table 1
Student Demographics for All PLTW Students and CTE Comparison Groups

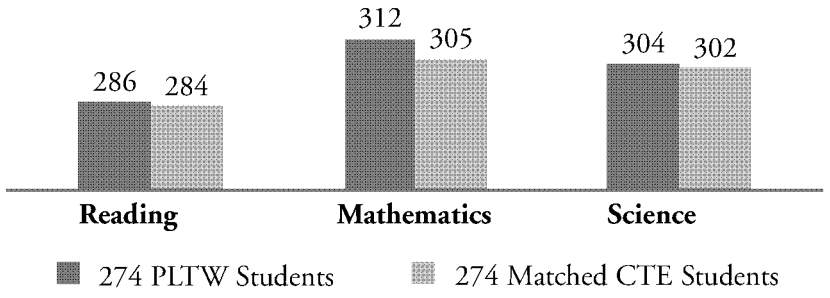
Group	Male	Female	White	African-American	Other Ethnicities	Students Whose Parent Attended College	Students Whose Parent Did Not Attend College
All PLTW Students	76%	24%	64%	24%	12%	69%	31%
CTE Comparison Groups	76	24	64	24	12	69	31

Source: Special Analyses of 2004 *HSTW* Assessment Data

Do PLTW students in the *HSTW* network have significantly higher achievement in reading, mathematics and science on a NAEP-referenced assessment than other students in the network?

The PLTW program requires teachers to participate in two weeks of training for each course they plan to teach to help them learn how to engage students in the mathematics and science needed in pre-engineering courses. Teachers also learn how to utilize a course guide. Because the PLTW program requires its pre-engineering students to complete challenging studies in mathematics and science, it is to be expected that PLTW students will score higher on the *HSTW* Assessment mathematics and science sub-tests than a comparable group of students from high-tech career/technical fields. **In 2004, PLTW students scored slightly higher in reading and science and significantly higher in mathematics than this group of students.** (See Figure 1.)

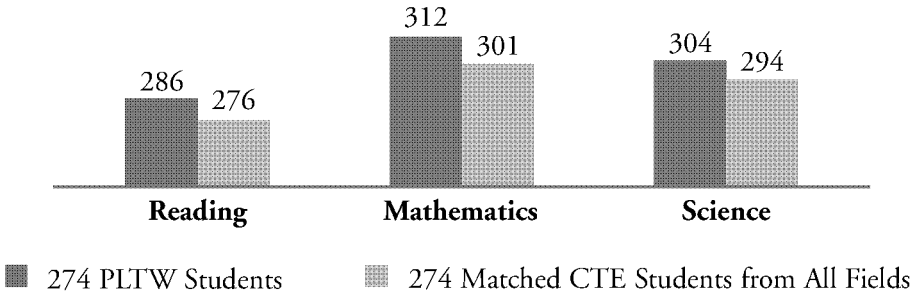
Figure 1
Comparison of Pre-engineering Students' Mean Scores to a Random Sample of Career/Technical Students from Similar Fields



Source: Special analyses of 2004 *HSTW* Assessment data
Note: The difference in the mean scores for mathematics between the two groups is significant at $p \leq .05$ on the t test.

However, when comparing the PLTW students to a random sample of all career/technical students, there were much greater differences in achievement. PLTW students outscored a random sample of career/technical students by 10 points in reading, 11 points in mathematics and 10 points in science. The differences in reading, mathematics and science achievement are significant. (See Figure 2.) This can be taken as evidence that many high school career/technical students are achieving far below their potential because they are not completing a challenging curriculum and are not experiencing classes with an intensive emphasis on research-based problems.

Figure 2
Comparison of Pre-engineering Students' Mean Scores to a Random Sample of All Career/Technical Students

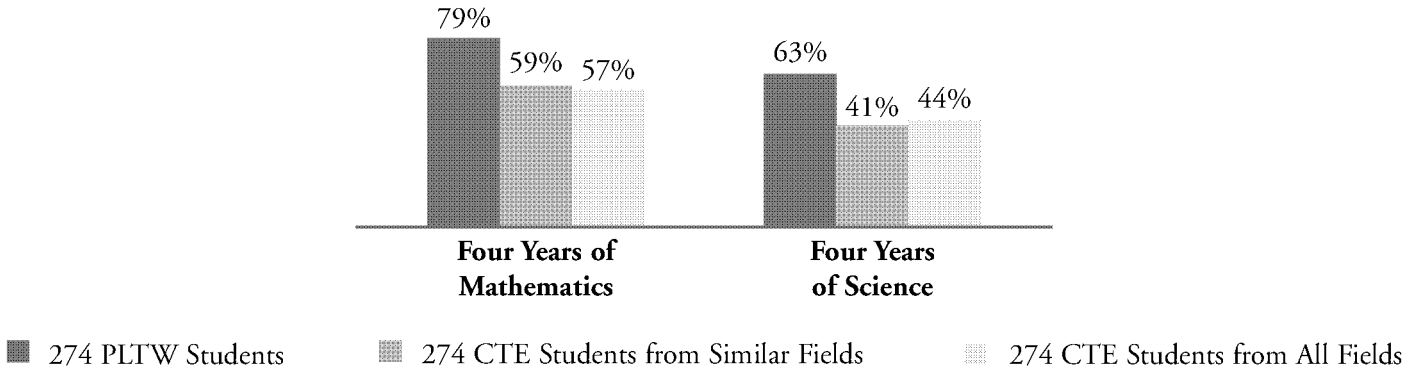


Source: Special analyses of 2004 *HSTW* Assessment data
Note: The differences in the reading and mathematics mean scores between the two groups are significant at $p \leq .001$, and the difference in the science mean score is significant at $p \leq .05$ based on the t test.

Are PLTW students more likely to take higher-level mathematics and science courses than other students?

Project Lead The Way requires students to complete four courses in college-preparatory level mathematics, and also encourages students to complete four courses in science. **Further analysis revealed that significantly higher percentages of PLTW students took four years of mathematics and science compared to the two comparable groups.** Seventy-nine percent of PLTW students took four years of mathematics (Algebra I and higher), and 63 percent took four years of science. In the matched group of career/technical students from similar fields, only 59 percent took four years of mathematics and 41 percent took four years of science. In the sample of all career/technical students, 57 percent took four years of mathematics and 44 percent took four years of science. (See Figure 3.) Yet, there is no reason to believe that the same percentages of students from the matched career/technical groups could not have succeeded if they had been encouraged and given the opportunity.

Figure 3
Comparison of Pre-engineering Students' Course-taking Patterns to Other Career/Technical Students



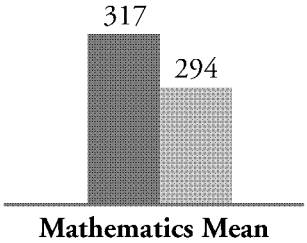
Source: Special analyses of 2004 *HSTW* Assessment data

These results suggest that the PLTW approach of stressing to students the importance of completing an academic sequence along with their pre-engineering courses is effective in getting the message across and results in more students completing four years of college-preparatory mathematics and science courses.

How do PLTW students who complete four years of college-preparatory mathematics and science perform compared with PLTW students who do not complete four years of college-preparatory mathematics and science?

Seventy-nine percent of PLTW students completed four years of college-preparatory mathematics, and 63 percent completed four years of college-preparatory science. When PLTW students who completed higher-level mathematics and science courses are compared to students who did not, significant differences in achievement are evident. Those completing the mathematics curriculum had a mean score 23 points higher than other PLTW students, and those completing the science curriculum had a mean score 15 points higher. (See Figures 4 and 5.)

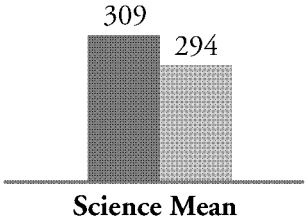
Figure 4
PLTW Students' Mean Mathematics Scores by
College-preparatory Mathematics Courses Completed



Completed Four Years CP Mathematics Did Not Complete Four Years CP Mathematics

Source: Special analyses of 2004 *HSTW* Assessment data
Note: The difference in the mean scores for mathematics between the two groups is significant at $p \leq .001$ based on the t test.

Figure 5
PLTW Students' Mean Science Scores by
College-preparatory Science Courses Completed



Completed Four Years CP Science Did Not Complete Four Years CP Science

Source: Special analyses of 2004 *HSTW* Assessment data
Note: The difference in the mean scores for mathematics between the two groups is significant at $p \leq .05$ based on the t test.

Further, more PLTW students who completed the recommended number of mathematics and science courses had mean scores at the proficient and advanced levels on the mathematics and science subtests of the 2004 *HSTW* Assessment. (See Table 2.) However, it is unacceptable that students can complete four years of college-preparatory level mathematics and science and still 18 percent and 30 percent respectively perform below the basic level.

Table 2
Percentages of PLTW Students Scoring at Each Proficiency Level on the *HSTW* Assessment by Completion of Mathematics and Science Curriculum

	Below Basic	**Basic**	**Proficient and Above**
Completed Four Years CP Mathematics	18%	41%	41%
Did Not Complete Four Years CP Mathematics	42	48	10
Completed Four Years CP Science	30%	29%	42%
Did Not Complete Four Years CP Science	43	22	35

Source: Special Analyses of 2004 *HSTW* Assessment Data
Note: The differences in the percentages for level of performance in mathematics between groups are significant at $p \leq .001$ based on the chi-square test.

These results suggest that a way to increase the achievement scores of PLTW students is to ensure that *all* PLTW students take four years of college-preparatory mathematics and science and to improve the quality of mathematics and science instruction that they receive.

Do PLTW students experience more engaging instruction in mathematics and science classes and across the curriculum?

PLTW students not only take more demanding mathematics and science courses but are also more likely to have engaging classroom learning experiences.

HSTW has developed indicators that describe classroom practices and activities relating to student engagement in mathematics and science instruction, and in literacy across all classes. Following are *HSTW*'s key indicators of engaging mathematics instruction:

HSTW Key Indicators of Emphasis on Engaging Mathematics Instruction

Students reported that:

- They took a mathematics class during their senior year.
- They took at least four full-year courses in mathematics in grades nine through 12.
- Their mathematics teachers showed them how mathematics concepts are used to solve real-life problems **sometimes or often**.
- They used graphing calculators to complete mathematics assignments **at least monthly**.
- They completed a mathematics project in ways that most people would use mathematics in a work setting **at least monthly**.
- They orally defended a process they used to solve a mathematics problem **at least monthly**.
- They worked with one or more students on a challenging mathematics assignment and received a group and individual grade **at least monthly**.
- They worked in groups to brainstorm how to solve a mathematics problem **at least monthly**.
- They solved mathematics problems with more than one answer **at least monthly**.
- They solved mathematics problems other than those found in the textbook **at least monthly**.
- They used mathematics to complete challenging assignments in their career/technical area **at least monthly** (CTE students only).

Intensive: eight to 11 indicators **Moderate:** four to seven indicators **Low:** three or fewer indicators

These are *HSTW*'s key indicators of engaging science instruction:

HSTW Key Indicators of Emphasis on Engaging Science Instruction

Students reported that:

- They completed any three of the following science courses: college-preparatory physical science, college-preparatory biology/biology 2, anatomy, college-preparatory chemistry, physics or Advanced Placement science.
- Science teachers showed how scientific concepts are used to solve problems in real life **often**.
- They took a science class in their senior year.
- They used science equipment to do science activities in a lab with tables and sinks **at least weekly**.
- They read an assigned book or article dealing with science **at least monthly**.
- They used science equipment to do science activities in a classroom **at least monthly**.
- They worked with one or more students on a challenging science assignment **at least monthly**.
- They prepared a written report of lab results in science **at least monthly**.

Intensive: six to eight indicators **Moderate:** three to five indicators **Low:** two or fewer indicators

Following are *HSTW*'s key indicators of literacy in all classes:

HSTW Key Indicators of Emphasis on Literacy

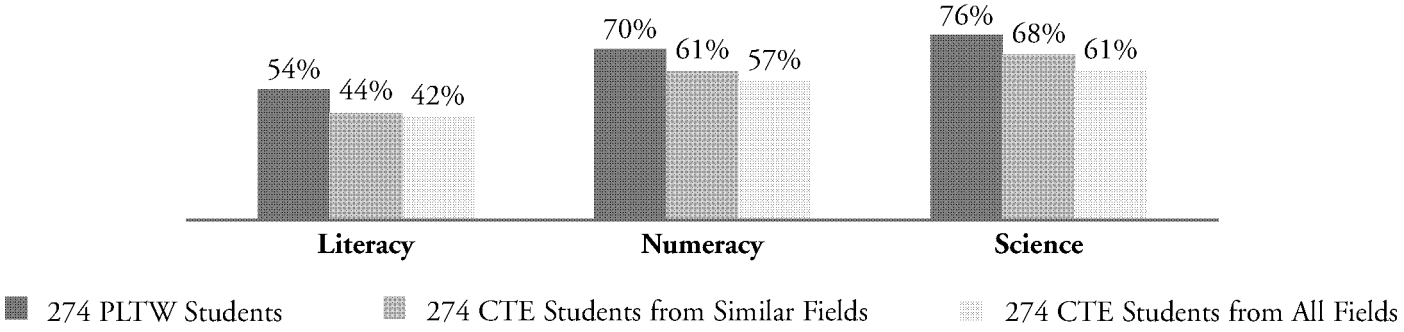
Students reported that:

- They used word-processing software to complete an assignment or project **often**.
- They revised their essays or other written work several times to improve their quality **often**.
- They wrote in-depth explanations about a class project or activity **sometimes or often**.
- They discussed or debated with other students about what they read in English/language arts classes **at least monthly**.
- They read and interpreted technical books or manuals to complete assignments in their career/technical area **at least monthly** (CTE students only).
- They read an assigned book outside of class and demonstrated that they understand the significance of the main idea **at least monthly**.
- They spent **two or more hours** reading non-school related materials outside of class in a typical week.
- They completed short writing assignments of one to three pages in their English classes **at least monthly**.
- They completed short writing assignments of one to three pages in their science classes **at least monthly**.
- They completed short writing assignments of one to three pages in their social studies classes **at least monthly**.

Intensive: seven to 10 indicators **Moderate:** four to six indicators **Low:** three or fewer indicators

Significantly more students in the PLTW program are in classes that engage them in reading and writing across the curriculum and in mathematics and science classes that engage them in solving real-world problems, working in teams and making greater use of technology. (See Figure 6.) Poor quality, non-engaging classroom instruction may provide a partial explanation of why one out of five students and three out of 10 students perform below basic in mathematics and science achievement respectively.

Figure 6
Percentages of Students Having Moderate or Intensive Emphasis on Literacy, Numeracy and Science

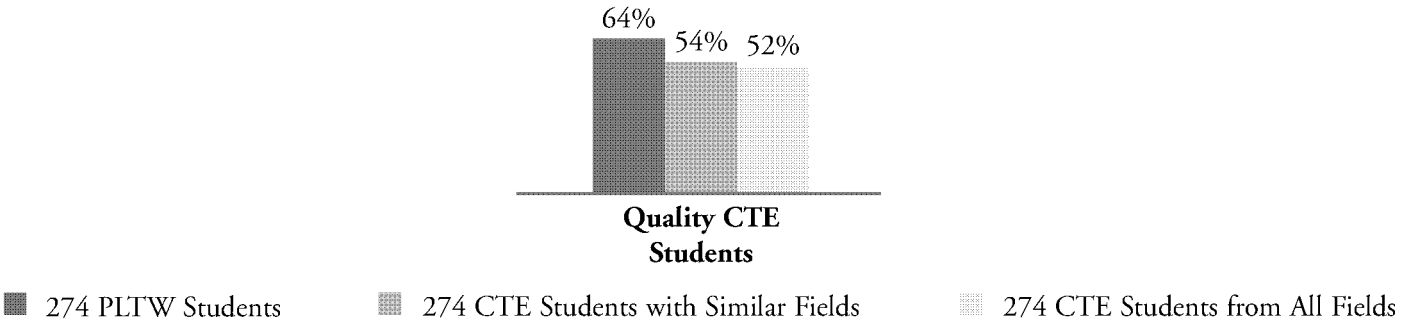


Source: Special analyses of 2004 *HSTW* Assessment data
Note: The differences in the percentages among groups are significant at $p \leq .05$ based on the chi-square test.

Do PLTW students have a richer set of learning experiences in their career/technical courses?

PLTW stresses the importance of engaging students in challenging assignments that require them to apply academic and technical knowledge and skills to complete real-world projects. *HSTW* has developed indicators related to instructional effectiveness and student achievement in career/technical classes. It was hypothesized that the PLTW students would have richer set of learning experiences in career/technical courses as measured by the *HSTW* indicators than other similar students. **In fact, significantly higher percentages of PLTW students experienced high-quality career/technical studies.** (See Figure 7.)

Figure 7
Percentages of Students Having a Moderate or Intensive Emphasis on Quality Career/Technical Studies



Source: Special analyses of 2004 *HSTW* Assessment data
Note: The differences in the percentages among groups are significant at $p \leq .05$ based on the chi-square test.

HSTW Key Indicators of Quality Career/Technical Studies

Students reported that:

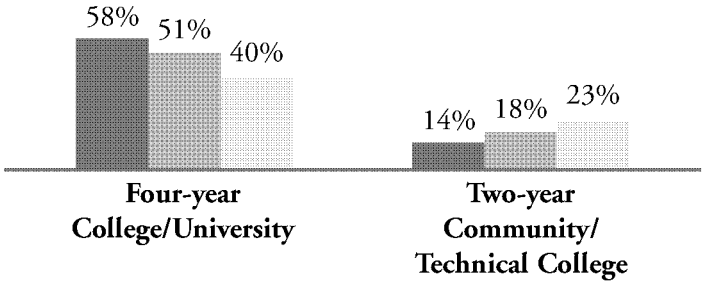
- They spent **one hour or more** reading non-school-related materials in a typical week.
- They used mathematics to complete challenging assignments in their career/technical area **at least weekly**.
- They read and interpreted technical books and manuals to complete career/technical assignments **at least weekly**.
- They read a career-related article and demonstrated understanding of the content **at least monthly**.
- They used computer skills to do assignments in their career/technical studies **at least monthly**.
- They had challenging assignments in career/technical classes **at least monthly**.
- They completed a project that first required some research and a written plan.
- They had to meet certain standards on a written exam to pass a course.
- They were required to complete a senior project that included researching a topic, creating a product or performing a service and presenting it to the class or others
- They spoke with or visited someone in a career to which they aspire.
- They spent **30 minutes or more** each day on homework assigned by career/technical teachers.

Intensive: eight to 11 indicators **Moderate:** five to seven indicators **Low:** four or fewer indicators

Are PLTW students more likely than other career/technical students to attend a four-year college or university?

One of the goals of the PLTW program is to encourage more students to pursue further education and careers in the field of engineering and related fields at the technician level. Seventy-two percent of PLTW students planned to attend a community college, technical school or four-year college or university. In the sample of students from comparable career/technical fields, 69 percent planned to attend a postsecondary institution, and among students from all career/technical fields, 63 percent planned to attend college. When compared with both matched sample groups, there were slightly higher percentages of PLTW students planning to attend a four-year institution. (See Figure 8.) PLTW students are more likely to pursue postsecondary studies and be successful because of the discipline of their high school studies than are other career/technical students.

Figure 8
Percentages of Students Planning Postsecondary Study



274 PLTW Students 274 CTE Students from Similar Fields 274 CTE Students from All Fields

Source: Special analyses of 2004 *HSTW* Assessment data

Implications for Improving Other Career/Technical Programs

What lessons can state career/technical leaders take from the PLTW pre-engineering curriculum to apply to other career fields? The results of the analyses of PLTW students suggest that to improve the quality of high school career/technical studies, these actions need to be taken:

- Invest in developing high-quality instructional and curriculum guides that define course objectives, outline the content to be covered, and provide challenging, authentic projects — projects that require students to apply academic and technical knowledge.
- Require teachers for each course to participate in two weeks of training that strengthens their knowledge and skills in relevant underlying academic and technical content. Help them use a project- and problem-based instructional pedagogy and learn how to assess academic and technical achievement based on this type of instruction.
- Create end-of-course exams that teachers can use to determine whether their students have met course expectations and standards.
- Provide training to counselors so they understand the program of studies, the need for preparation in terms of the job market, and the sequence of courses students must take.
- Define the sequence of mathematics, science and career/technical courses that students are expected to complete. Have schools commit to requiring that students complete the sequence of challenging academic courses.

- Seek out faculty in postsecondary technical and career programs that relate to your programs and form a team that will work to align the curriculums of the secondary and postsecondary programs. It may take a superintendent-to-dean or some other official connection to get a team formed and operating. The alignment work can be done in phases to make the workload manageable and to develop an alignment process that works for both faculties.
- Only invest in such a program when the school district is willing to modernize laboratories and acquire the necessary equipment and instructional supplies.

Implications for Improving the PLTW Pre-engineering Program

National and state leaders for PLTW can improve the achievement of their students by doing the following:

- Continue to stress to PLTW teachers, counselors and school leaders that PLTW students are to complete four years of mathematics — Algebra I and higher — and four years of lab-based science courses.
- Provide special workshops and model project units in which PLTW teachers work with mathematics and science teachers to plan and carry out integrated projects that blend together the learning of mathematics, science and technical concepts.
- Train PLTW teachers how to integrate into their project units strategies that will engage students frequently in reading, interpreting and analyzing technical materials, and writing technical reports.
- Provide materials, workshops and online support to improve the rigor and quality of mathematics and science instruction at the high schools participating in PLTW.

This publication is supported by Project Lead the Way. The opinions expressed here do not necessarily reflect the positions or policies of the funding entity, and no official endorsement should be inferred.

Documentation Overview

Criterion (C)(1)

This document provides a guide to the various pieces of additional documentation that demonstrate that Kentucky fully meets the America COMPETES Act.

Document	Contents	America COMPETES Act elements
C1 Appendix - Comparison to DQC elements.pdf	Compares each America COMPETES Act element to the 10 Data Quality Campaign elements in the context of Kentucky's SLDS	All 12 addressed
C1 Appendix - P-20 Data Collaborative MOA.pdf	Provides the contractual agreement between the state department and higher education agencies	America COMPETES Act item(s) 4, 12
C1 Appendix - P-20 Data Collaborative.pdf	Provides the organizational chart of the P-20 Data Collaborative	America COMPETES Act item(s) 4, 12
C1 Appendix - ILP for Parents overview.pdf	Provides an overview of the Individual Learning Plan to inform parents	America COMPETES Act items 11
C1 Appendix - Data Quality Issue resolution sample.pdf	Provides an example of a data issue flagged via data audit system	America COMPETES Act items 5
C1 Appendix - KSLDS Report ESS Progress Towards Proficiency sample.pdf	Provides report on whether students who participate in Extended School Services are likely to reach Proficiency by the goal of 2014	America COMPETES Act items 2, 6
C1 Appendix - High School Feedback report sample.pdf	Provides a sample High School Feedback report	America COMPETES Act items 4, 10, 11
C1 Appendix - KDE Web High School Transcript directive.pdf	Provides directive that all schools add the unique student ID to transcripts by Fall, 2008	America COMPETES Act items 1, 4, 9,10

Comparison of 12 America COMPETES Act Elements to 10 Data Quality Campaign elements in Kentucky's Statewide Longitudinal Data System

America COMPETES Act Element	Data Quality Campaign Element	Kentucky's response
1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system	1. Statewide student identifier	The Kentucky Department of Education implemented a statewide, unique, student identifier in 2005, prior to the development of an SLDS. Implementation of the identifier was facilitated by the Commonwealth's single, statewide student information system (SIS).
2. Student-level enrollment, demographic, and program participation information	2. Student-level enrollment data	Student level enrollment, demographic, and program participation info have been included within the SLDS since 2007. These data are currently populated from the Kentucky Core Content Test booklet information as well as from the student data collected by the statewide SIS.
3. Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs	8. Student-level graduation and dropout data	Detailed data describing the points at which students enter and exit the P-12 educational environment are collected by the statewide SIS and entered into the SLDS.
4. The capacity to communicate with higher education data systems	9. Ability to match student-level P-12 and higher education data	Various ad-hoc systems already provide the capacity to share data electronically between P-12 and post-secondary. These systems have been able to contribute data, such as High School feedback data, into the Kentucky SLDS.
5. A State data audit system assessing data quality, validity, and reliability	10. A state data audit system	Data quality audits currently take place primarily at two places: A) at the primary point of data collection, such

		as the state-level SIS repository; and B) at the Kentucky SLDS, where data from various systems are collected together for analysis and reporting. Similar data from different systems can be reviewed for consistency and to make sure they match previous formats.
6. Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6311(b))	3. Student-level test data	Test records for individual students have been available within the SLDS since 2007. Current assessments include the Kentucky Core Content Assessment, ACT, PLAN, and Explore.
7. Information on students not tested by grade and subject	4. Information on untested students	Data on untested students currently exists within the SLDS. It is collected as part of the annual Kentucky Core Content Test cycle and provided to the KSLDS along with student-level assessment results.
8. A teacher identifier system with the ability to match teachers to students	5. Statewide teacher identifier with a teacher-student match	The Kentucky SLDS contains detailed course information along with detailed and unique information about educators and students. This course information provides a connection between teachers with students.
9. Student-level transcript information, including information on courses completed and grades earned	6. Student-level course completion (transcript) data	Student-level course completion and grades earned data are collected by the student information system and provided to the Kentucky SLDS. Student transcripts provided to Institutions of Higher Education contain the unique student identifier.

10. Student-level college readiness test scores	7. Student-level SAT, ACT, and Advanced Placement exam data	ACT data are currently in place within the Kentucky SLDS and are utilized in multiple reports and analytics.
11. Information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework	9(a). Ability to match student-level P-12 and higher education data	Student transcripts provided to Institutions of Higher Education contain the unique student identifiers, enabling Institutions of Higher Education to report on and link students' postsecondary performance / transition information to those students' high school performance
12. Other information determined necessary to address alignment and adequate preparation for success in postsecondary education	9(b). Ability to match student-level P-12 and higher education data	Student transcripts provided to Institutions of Higher Education contain the unique student identifier, thereby enabling the linking of data from secondary and postsecondary sources. Any other information…? This will allow the evaluation and analysis required once these other items are determined

MEMORANDUM OF AGREEMENT
KENTUCKY DEPARTMENT OF EDUCATION (KDE)
COUNCIL ON POSTSECONDARY EDUCATION (CPE)
EDUCATION PROFESSIONAL STANDARDS BOARD (EPSB)

P-20 DATA COLLABORATIVE

WHEREAS, Kentucky has engaged in significant reforms of its educational system beginning with the passage of the Kentucky Education Reform Act of 1990 (KERA) in 1990, following with the Postsecondary Education Improvement Act of 1997, the Adult Education Act of 2000, and the Kentucky Innovation Act of 2000; and,

WHEREAS, the success of these reform efforts individually and collectively is dependent, in part, upon cooperation and collaboration between and among the groups and agencies who administer the reforms; and,

WHEREAS, there is a need to perform policy and applied research across the P-20 spectrum, from pre-kindergarten through college and beyond, and a need to analyze data without regard to the source of the data; and,

WHEREAS, the existence of federal and state laws requiring that student data be protected requires that formal safeguards be in place to ensure that confidentiality is maintained while joint research and analysis are conducted; and,

WHEREAS, it has been determined that a collaborative arrangement is the best method to ensure that proper accountability measures are in place for the evaluation of educational programs spanning these three agencies, that proper safeguards are in place to protect personally identifiable data consistent with state and federal law, and that the entities who are responsible for collecting, analyzing and using data from various parts of the educational system are willing to share data with other partners consistent with federal and state restrictions;

NOW THEREFORE, the Kentucky Department of Education (KDE), the Council on Postsecondary Education (CPE), and the Education Professional Standards Board (EPSB), do hereby enter into this Memorandum of Agreement for the purpose of creating a P-20 Data Collaborative to oversee the project of merging P-20 data and making it available for reporting, analysis and research.

SECTION 1. The P-20 Data Collaborative

1. The parties through this Memorandum of Agreement hereby establish the P-20 Data Collaborative for the purpose of merging P-20 data to facilitate educational research and development of reports; provide feedback to Kentucky's educational institutions; and get information into the hands of stakeholders.

2. The parties hereby establish a governing board consisting of the chief executive officers of the three participating agencies: the Commissioner of KDE, the President of the CPE, and the Executive Director of the EPSB. The parties further agree that the Secretary of the Education and Workforce Development Cabinet shall be a full member and chair of the governing board of the P-20 Data Collaborative.

3. Decisions of the governing board shall be made by unanimous consent.

4. The governing board may create work groups to carry out specific aspects of the overall project.

5. The governing board shall have final authority over all aspects of the Collaborative, including, but not limited to, timeline, roles, responsibilities, project objectives, expenditure approval processes, main stakeholders, scope and participants.

6. Each party remains the owner of its own data.

7. The parties agree that business rules governing access to and the use of the data shall be developed during the planning year.

SECTION 2. Term of the Agreement

This agreement shall become effective on the date that it is fully executed by the parties and shall remain in force through April 30, 2012. Any extension of the current agreement shall be by unanimous consent of the parties.

SECTION 3. General Terms

1. The parties agree that the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this agreement for the purpose of financial audit or program review. Furthermore, any books, documents, paper records, or other evidence provided to the Kentucky Department of Education (KDE), the Council on Postsecondary Education (CPE), or the Education Professional Standards Board (EPSB), the Finance and Administration Cabinet, the Auditor of Public Accounts, or the Legislative Research Commission which are directly pertinent to the Memorandum shall be subject to public disclosure regardless of the proprietary nature of the information, unless specific categories of information are identified and exempted and agreed to by the Secretary of the Finance and Administration Cabinet as meeting the provisions of KRS 61.878(1) prior to the execution of the Memorandum, or if the excluded information meets the provisions of KRS 164.6014(6). The Secretary of the Finance and Administration Cabinet shall not restrict the public release of any information that

would otherwise be subject to public release if a state government agency was providing the services.

2. This agreement may be cancelled by any member of the P-20 Data Collaborative with thirty (30) days written notice to the other parties.

3. This agreement may be amended at any time with unanimous consent of the governing board in writing.

Approved:

Robert L. King, President
Council on Postsecondary Education

8/20/09
Date

Terry Holliday, Commissioner
Kentucky Department of Education

8-20-09
Date

Phillip Rogers, Executive Director
Education Professional Standards Board

8-20-09
Date

APPROVED AS TO FORM AND LEGALITY:

Dennis L. Taulbee, General Counsel
Council on Postsecondary Education

8-18-09
Date

Kevin C. Brown, General Counsel
Kentucky Department of Education

8-18-09
Date

Alicia Sneed, General Counsel
Education Professional Standards Board

8-18-09
Date

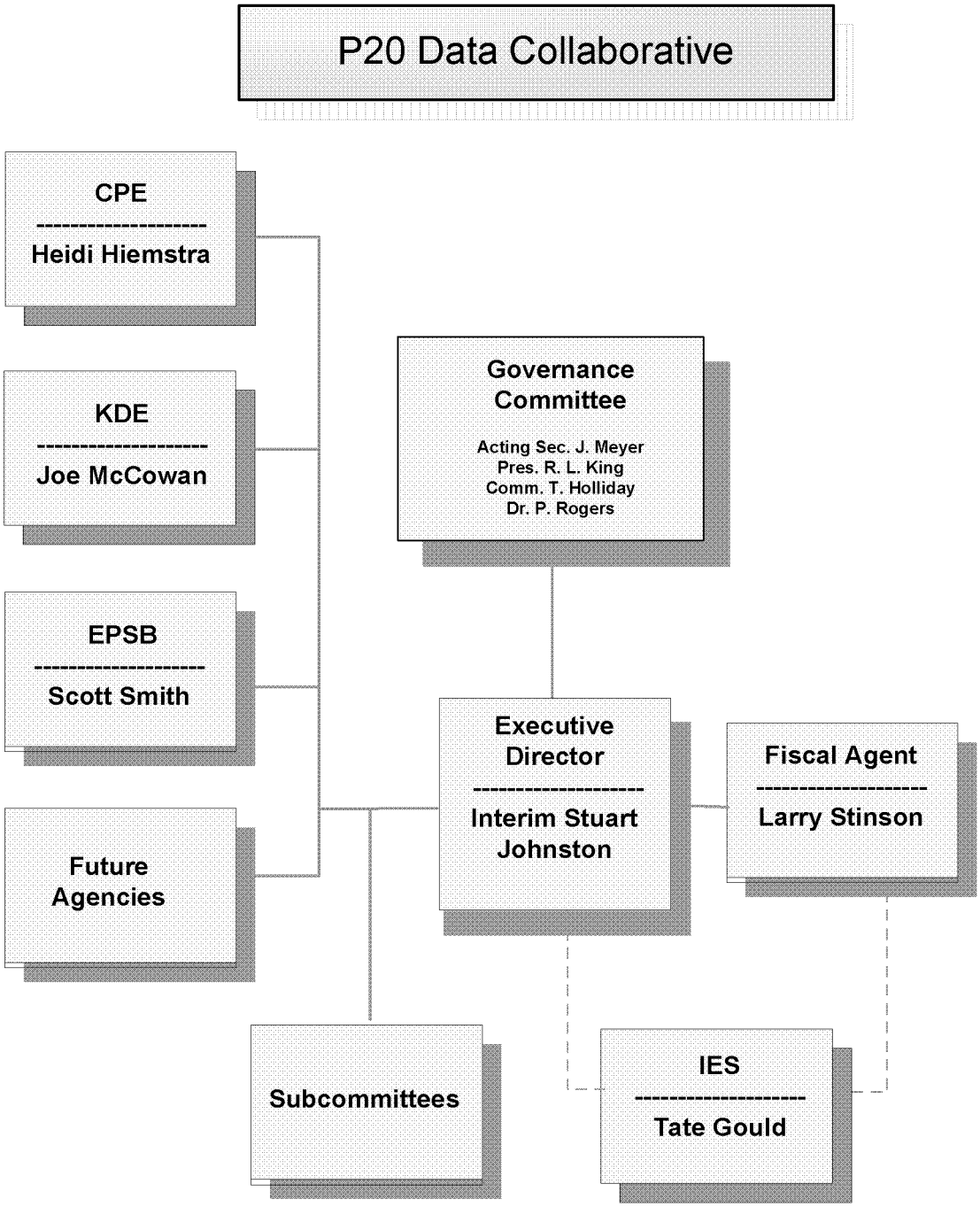
HAVE SEEN AND AGREED TO:

Helen W. Mountjoy, Secretary
Education and Workforce Development Cabinet

8/20/09
Date

Randall K. Justice, General Counsel
Education and Workforce Development Cabinet

8/19/09
Date


P20 Data Collaborative
CPE
Heidi Hiemstra
KDE
Joe McCowan
EPSB
Scott Smith
Future Agencies
Governance Committee
Acting Sec. J. Meyer
Pres. R. L. King
Comm. T. Holliday
Dr. P. Rogers
Executive Director
Interim Stuart Johnston
Fiscal Agent
Larry Stinson
Subcommittees
IES
Tate Gould

For Parents: What is the ILP?

Students across Kentucky are required to complete an Individual Learning Plan (ILP). The Career Cruising ILP Tool is designed to help students bring together their academic achievements, extracurricular experiences, and career and education exploration activities. This enables the student, parents or guardians, teachers, and counselors to work together to develop a course of study that meets the student's needs and goals.

The **Student ILP Tool** allows students to:

- Record their career, education, and life goals.
- Bookmark careers and schools that are of interest to them and include their thoughts about each.
- Explore the Kentucky Career Clusters and track the clusters that interest them.
- Store their results from standardized tests and assessments, including Career Matchmaker
- Keep track of their career and educational exploration activities.
- Record their extracurricular activities, hobbies, and interests.
- Document their community services and work experience.
- Develop their four-year high school education plan.
- List awards and recognitions they have received.
- Document learning services and programs they have participated in.
- Upload related files, such as essays, scanned artwork, and letters of reference.
- Create personalized, professional-looking resumes.

The **Parent/Guardian ILP Tool** allows you to:

- View the work your child has entered in his or her ILP.
- Learn more about the careers and schools that are of interest to your child.
- Record your thoughts and comments about your child's learning plan.
- Email your comments to your child's advisors.

To log into the Parent ILP Tool, go to www.careercruising.com/ILP/ and enter your parent/guardian username and password.

Please contact your child's career advisor for your Parent/Guardian ILP Tool login information.

CareerCruising
The Complete Guidance System

KIDS Project All Sites Advanced Search

Education Portal > KIDS > KIDS Project > Data Quality Issues > Data Quality Issue

Data Quality Issues: Data Quality Issue

New Item | Edit Item | Delete Item | Manage Permissions | Alert Me | Version History

Issue	2008 Kossa data has 641 duplicate records (based on SSID, Student Name and District/Location Code) Also had 119 records where the District Number does not match the official KDE District Code, and 185 records where the Location Code does not match the official KDE Location Code. The total number of records in the file was 12224.
Issue Status	Active
Comments	Dillard, Marvin (5/15/2009 10:25 AM): File of errors provided to Mary, who forwarded the file to Pam for corrections. The data was not loaded into the warehouse.
Priority	(2) Normal
Due Date	
Assigned To	Lowe, Mary - Office of Internal Administrative & Support
Data Loaded	No
Number of Occurances	
Data Year	School Year 2008
eScholar Template	Student
Primary Source	KOSSA 2008 Data file
Source Column	
Decision	This represents an error rate of about 7.7 percent which is definately acceptable for data warehouses. The data is loaded with a goal of reducing the error rate in future years.
Related Issues	
Title	Data Quality Issue
Category	(2) Category2

Version: 1.0
Created at 5/15/2009 10:25 AM by Dillard, Marvin
Last modified at 5/15/2009 10:25 AM by Dillard, Marvin

Keep this version Add this report

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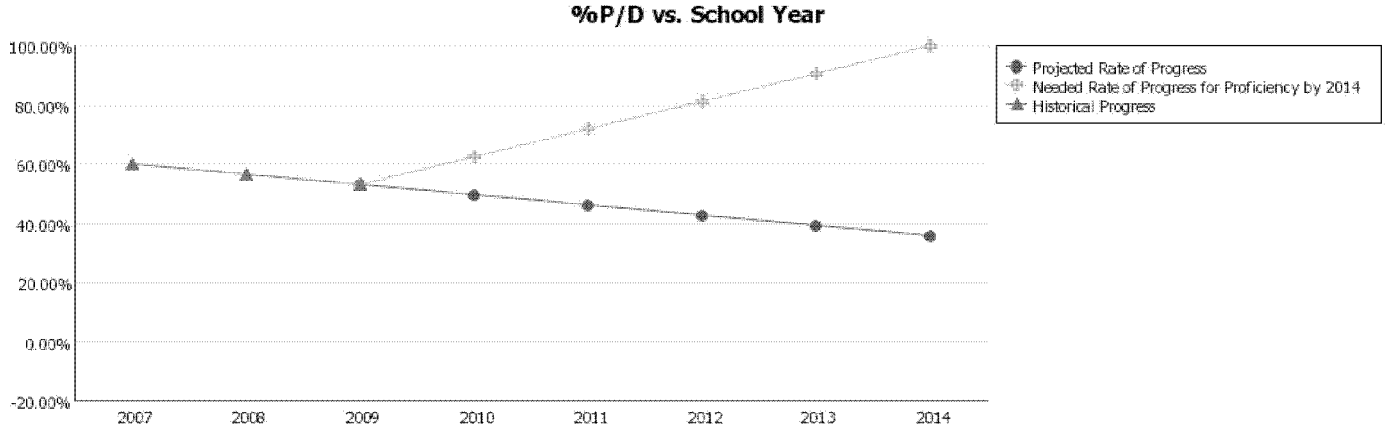
PROGRESS TOWARD PROFICIENCY

Mathematics
Adair County (001000)
Adair County High School (001010)
Grade(s) 11
Extended School Services

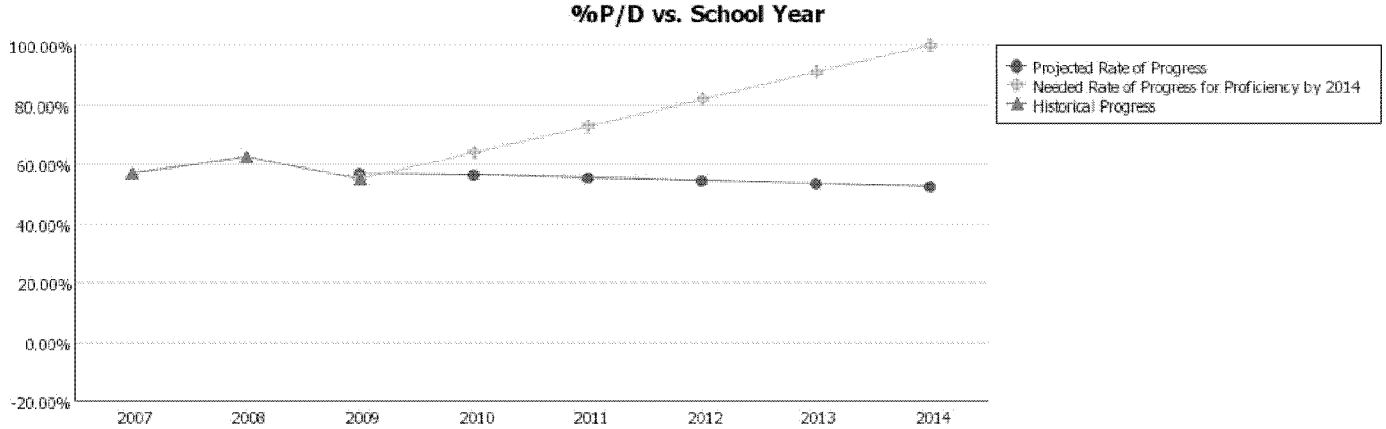
Graphical representation of path to proficiency by subject, grade, or disaggregated group based on current rate of improvement in academic index (change from SYE 2006 TO 2007) and the projected improvement rate needed to reach an academic index of 100 by 2014 from the 2007 value.

EXT



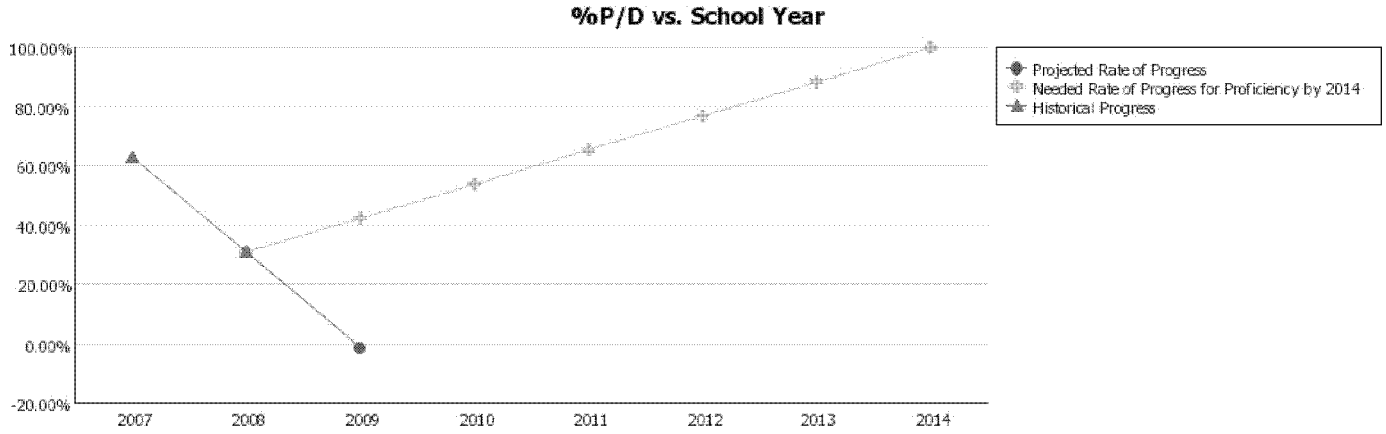
%P/D	2007	2008	2009	2010	2011	2012	2013	2014
Historical Progress	60.19%	56.73%	53.19%					
Needed Rate of Progress for Proficiency by 2014			53.19%	62.55%	71.91%	81.28%	90.64%	100.00%
Projected Rate of Progress			53.21%	49.72%	46.22%	42.73%	39.24%	35.74%

EXT_After



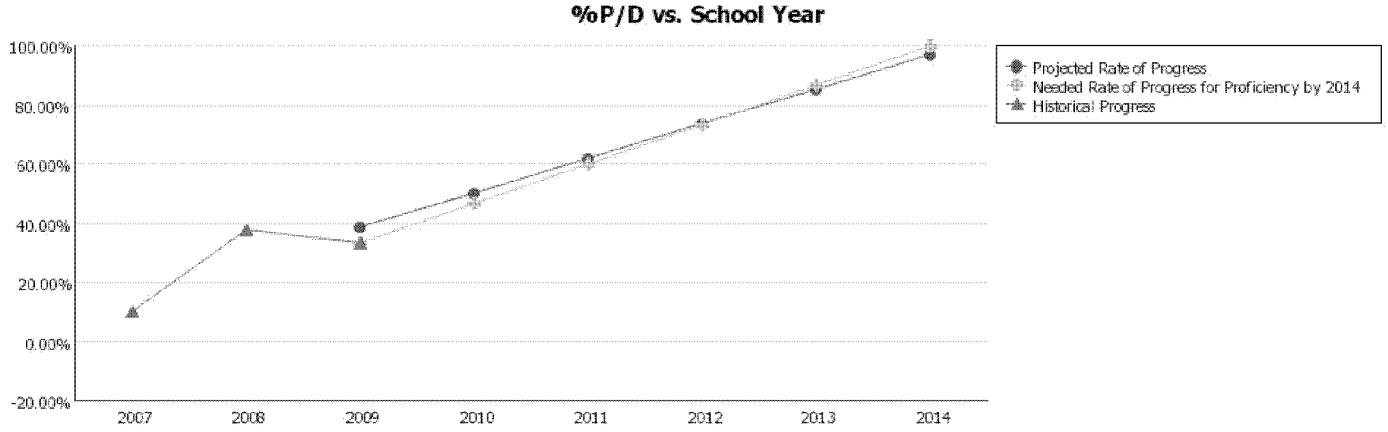
%P/D	2007	2008	2009	2010	2011	2012	2013	2014
Historical Progress	57.14%	62.50%	55.26%					
Needed Rate of Progress for Proficiency by 2014			55.26%	64.21%	73.16%	82.11%	91.05%	100.00%
Projected Rate of Progress			57.36%	56.42%	55.48%	54.54%	53.60%	52.66%

EXT_During



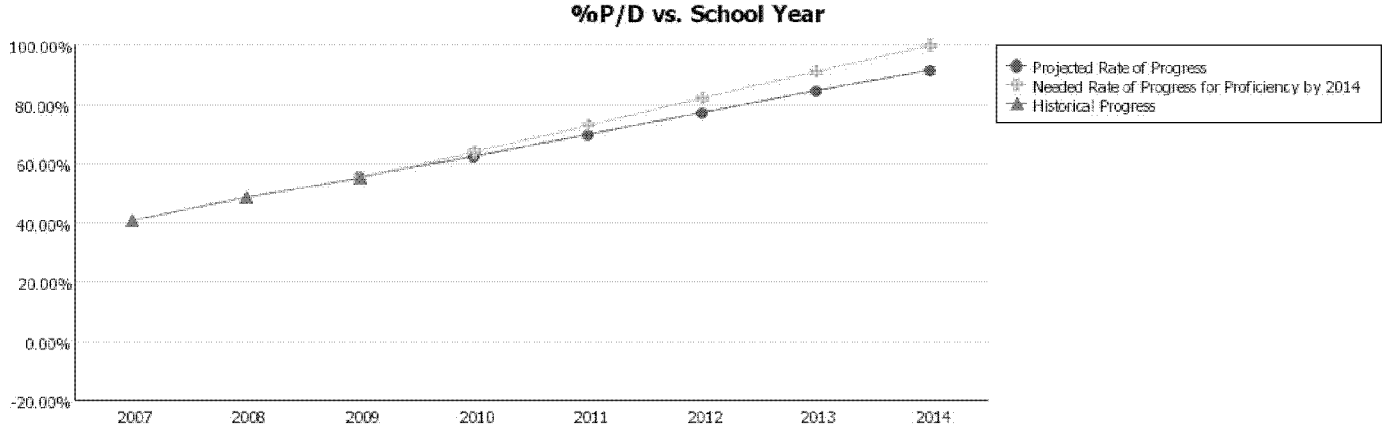
%P/D	2007	2008	2009	2010	2011	2012	2013	2014
Historical Progress	62.92%	30.77%						
Needed Rate of Progress for Proficiency by 2014		30.77%	42.31%	53.85%	65.38%	76.92%	88.46%	100.00%
Projected Rate of Progress		30.77%	-1.37%					

EXT_Summer



%P/D	2007	2008	2009	2010	2011	2012	2013	2014
Historical Progress	10.00%	37.93%	33.33%					
Needed Rate of Progress for Proficiency by 2014			33.33%	46.67%	60.00%	73.33%	86.67%	100.00%
Projected Rate of Progress			38.75%	50.42%	62.09%	73.75%	85.42%	97.08%

Not in EXT Program



%P/D	2007	2008	2009	2010	2011	2012	2013	2014
Historical Progress	40.79%	48.51%	55.38%					
Needed Rate of Progress for Proficiency by 2014			55.38%	64.31%	73.23%	82.15%	91.08%	100.00%
Projected Rate of Progress			55.53%	62.83%	70.12%	77.42%	84.72%	92.02%

Data source(s): KCCT test results from OAA.

Please help KDE to continuously improve KSLDS functionality and usefulness by telling us how you use this report.
Send your comments by email to:KSLDSFeedback@education.ky.gov

This report generated from the Kentucky Statewide Longitudinal Data System (KSLDS) by (Hackworth, Robert - Secondary & Virtual Learning)

Jan 13, 2010 1 11:02:00 AM

Kentucky High School Feedback Report
Class of 2004

Adair County High School

Adair County Schools

The Kentucky High School Feedback Report is collaboratively produced by Kentucky's Council on Postsecondary Education (CPE), the Kentucky Department of Education (KDE), and the Kentucky Higher Education Assistance Authority (KHEAA) with the assistance of ACT, Inc., and The College Board. Its purpose is to provide information about this school's 2004 class of high school seniors including the number who matriculated to a postsecondary institution in Kentucky and how well they performed compared to their peers from the district and the state as a whole.

A. Basic Information About the Class of 2004

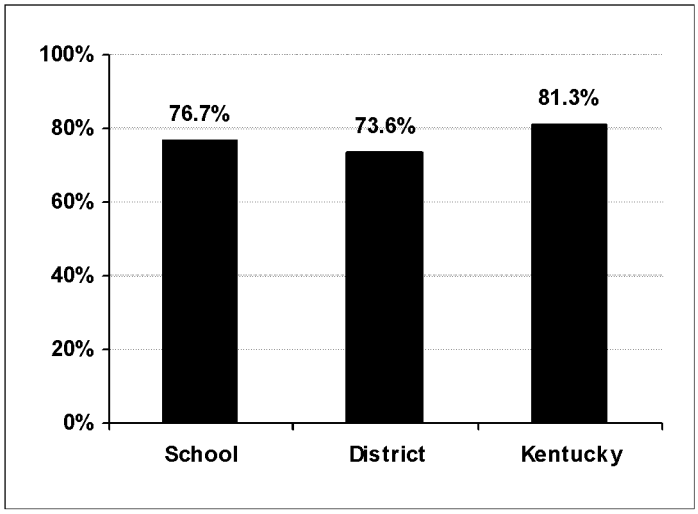
District numbers may include alternative high schools.
Refer to the Technical Notes for explanation of blanks.

	School	District	Kentucky
1. Number of high school graduates:	151	156	41,328
2. Mean cumulative high school GPA:	2.70	2.70	2.81
3. Mean ACT scores for this class:			
English	17.5	17.5	20.0
Reading	19.4	19.4	21.4
Mathematics	17.9	17.9	19.9
Science	19.3	19.3	20.7
Composite	18.6	18.6	20.7
4. Number of Advanced Placement (AP) tests taken by members of this class:	2	2	7,848
5. Percentage of Advanced Placement (AP) tests with scores of 3 or higher (the minimum necessary to receive college credit):			46.2%
6. Mean Kentucky Educational Excellence Scholarship (KEES) award earned by members of this class:	$896	$896	$1,054
7. High school graduation rate:	76.7%	73.6%	81.3%
8. In-state college-going rate:	52.5%	52.5%	50.9%

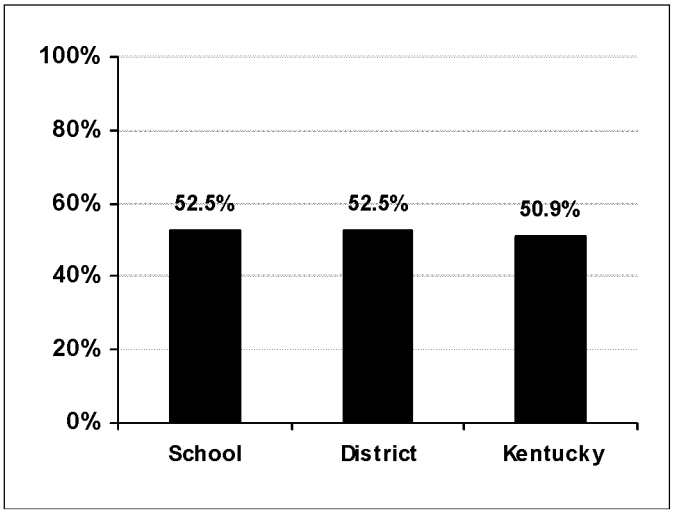
Important School Statistics

High school graduation rate:	76.7%
In-state college going rate:	52.5%
Percentage with developmental needs in one or more subjects:	68.8%
Percentage with developmental needs in English:	48.1%
Percentage with developmental needs in mathematics:	59.7%
Six-year (bachelor's degree) postsecondary graduation rate for the class of 2000:	50.0%
Three-year (associate's degree at KCTCS) postsecondary graduation rate for the class of 2003:	0.0%

High School Graduation Rate



In-State College-Going Rate



For more information visit http://www.cpe.ky.gov/news/reports/highschoolfeedback/

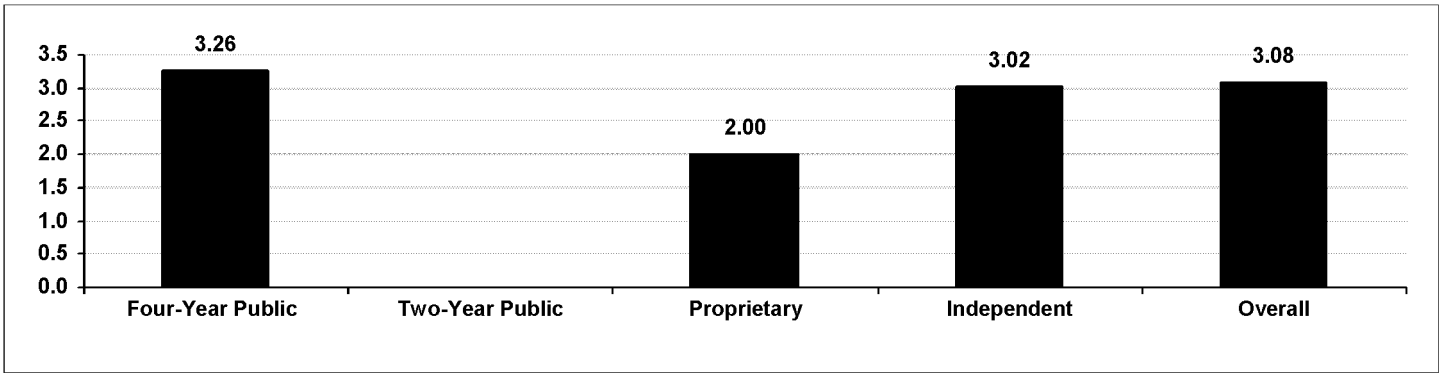
March 2007

B. In-State Postsecondary Enrollment Information

This information, with the exception of item B.7, is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. District numbers may include alternative high schools. Refer to the Technical Notes for explanation of blanks.

	School	District	Kentucky
1. Number and percentage of this school's 2004 high school graduates who enrolled as degree- or credential-seeking students at one of Kentucky's public or participating independent postsecondary institutions in summer or fall 2004 by institution type. These data are not available for proprietary schools.			
Four-year public university:	31	31	11,548
	36.9%	36.9%	60.8%
Two-year public community or technical college (KCTCS):	3	3	4,298
	3.6%	3.6%	22.6%
Participating independent college or university:	50	50	3,147
	59.5%	59.5%	16.6%
Total:	84	84	18,993
2. Number and percentage who entered college as full-time students:	83	83	18,075
	98.8%	98.8%	94.7%
3. Number and percentage who entered with undeclared degree status:	1	1	2,518
	1.2%	1.2%	13.3%
4. Number and percentage who entered a certificate or diploma program:	0	0	377
	0.0%	0.0%	2.0%
5. Number and percentage who entered an associate's (two-year) degree program:	12	12	3,896
	14.3%	14.3%	20.6%
6. Number and percentage who entered a bachelor's (four-year) degree program:	71	71	12,161
	84.5%	84.5%	64.2%
7. Mean cumulative high school GPA by postsecondary institution type:			
Four-year public university:	3.26	3.26	3.27
Two-year public community or technical college (KCTCS):			2.88
Participating independent college or university:	3.02	3.02	3.31
Proprietary college, university, or school:	2.00	2.00	2.73
Overall mean for students entering any postsecondary institution in Kentucky:	3.08	3.08	3.15

Mean Cumulative High School GPA by Postsecondary Institution Type

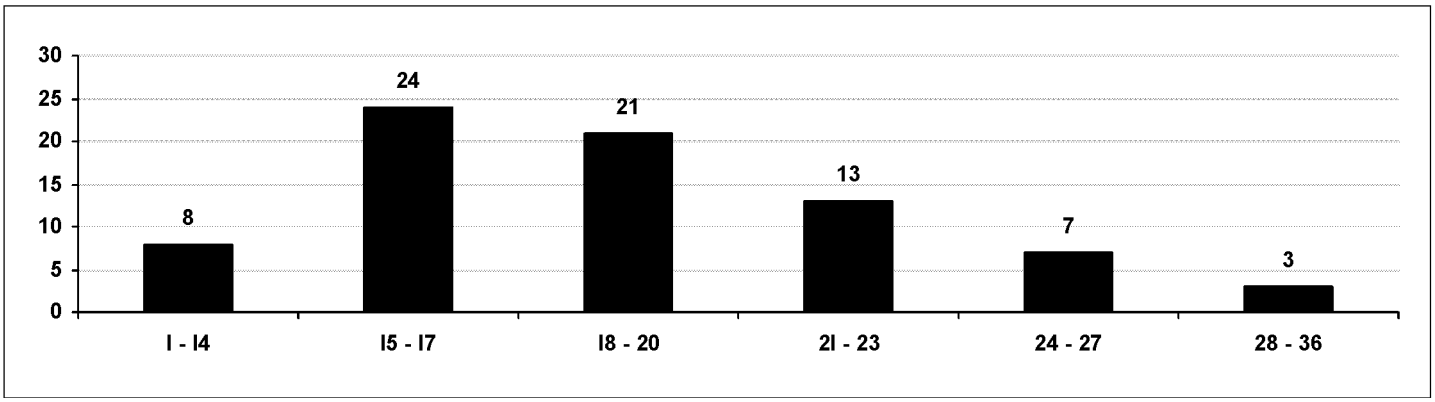


B. In-State Postsecondary Enrollment Information (continued)

8. Mean ACT scores of postsecondary students who graduated in this school's class of 2004 by subject and institution type:	School	District	Kentucky
English			
Four-year public university:	20.6	20.6	21.2
Two-year public community or technical college (KCTCS):			20.0
Independent college or university:	16.3	16.3	20.8
Overall mean for students entering any public or participating independent college or university:	18.0	18.0	21.1
Reading			
Four-year public university:	21.5	21.5	22.5
Two-year public community or technical college (KCTCS):			25.0
Independent college or university:	18.9	18.9	22.3
Overall mean for students entering any public or participating independent college or university:	19.8	19.8	22.4
Mathematics			
Four-year public university:	19.6	19.6	20.5
Two-year public community or technical college (KCTCS):			17.0
Independent college or university:	17.5	17.5	20.5
Overall mean for students entering any public or participating independent college or university:	18.4	18.4	20.7
Science			
Four-year public university:	20.7	20.7	21.6
Two-year public community or technical college (KCTCS):			22.0
Independent college or university:	19.2	19.2	21.3
Overall mean for students entering any public or participating independent college or university:	19.8	19.8	21.5
Composite			
Four-year public university:	20.4	20.4	21.1
Two-year public community or technical college (KCTCS):			21.0
Independent college or university:	17.8	17.8	21.2
Overall mean for students entering any public or participating independent college or university:	18.8	18.8	21.3

9. Percentage who enrolled in a public or participating independent institution in Kentucky and were identified as having developmental needs (an ACT subscore of less than 18 or an equivalent score on an alternative test by subject area):			
English:	48.1%	48.1%	27.4%
Reading:	41.6%	41.6%	21.4%
Mathematics:	59.7%	59.7%	33.6%
Developmental needs in one or more subject areas:	68.8%	68.8%	44.5%

Distribution of ACT Composite for Students Who Entered Postsecondary Education



C. Student Postsecondary Performance

This information, with the exception of item C.7, is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. District numbers may include alternative high schools. Refer to the Technical Notes for explanation of blanks.

In Kentucky, ACT scores are used to determine if students need developmental courses before they take certain college level courses. Students are assessed as having developmental needs in English, mathematics, and reading if their ACT subscore is less than 18, or if they have an equivalent score on the SAT or another standardized placement exam. Much of the following academic performance data is presented to show how students with developmental needs perform compared to those without developmental needs.

College Grades

	School	District	Kentucky
1. Percentage of this high school's 2004 class enrolling in college-level English during the first two years of college who earned a grade of "C" or better, by developmental need:			
All students:	93.8%	93.8%	84.2%
Students with an ACT English subscore less than 18 or equivalent:	78.6%	78.6%	76.2%
Students with an ACT English subscore of 18 or above or equivalent:	100.0%	100.0%	86.3%
2. Percentage of this high school's 2004 class enrolling in college-level mathematics during the first two years of college who earned a grade of "C" or better, by developmental need:			
All students:	70.0%	70.0%	74.1%
Students with an ACT mathematics subscore less than 18 or equivalent:	66.7%	66.7%	63.0%
Students with an ACT mathematics subscore of 18 or above or equivalent:	71.4%	71.4%	76.8%
3. Mean college GPA of this high school's 2004 class at the end of the first year in college:			
All students:	1.88	1.88	2.28
Students with developmental needs in one or more subjects:	1.61	1.61	1.78
Students without developmental needs:	2.59	2.59	2.68

College Retention, Credit Hours, and KEES Awards

Retention, credit hours earned, and KEES awards maintained are all influenced by a student's level of academic preparation. The following items are broken out by whether a student has developmental needs or not.

4. One semester postsecondary retention rate of enrolled freshmen (i.e., entered in fall 2004 and returned for the spring 2005 semester):			
All students:	91.2%	91.2%	89.1%
Students with developmental needs in one or more subjects:	85.0%	85.0%	83.4%
Students without developmental needs:	100.0%	100.0%	93.6%

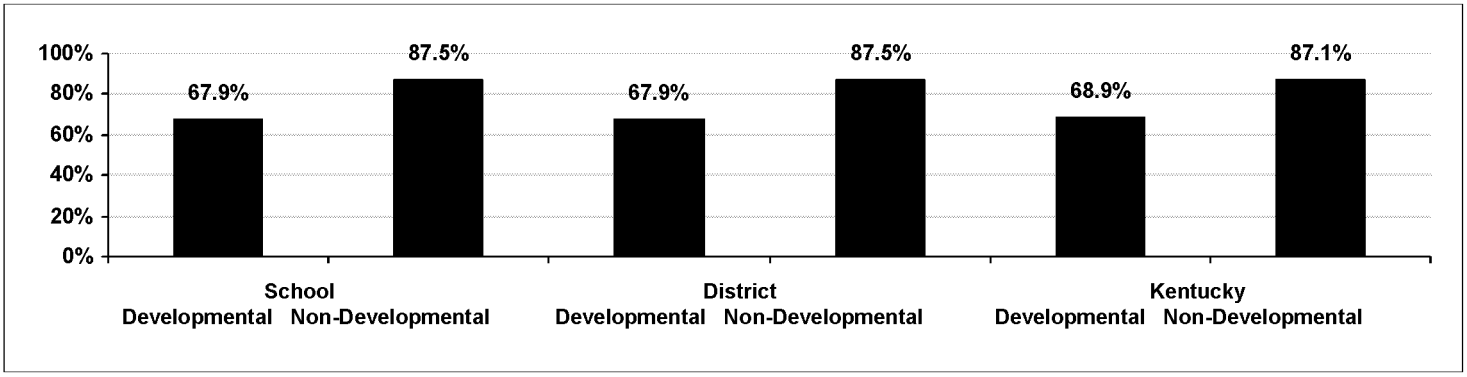
C. Student Postsecondary Performance (continued):

College Retention, Credit Hours, and KEES Awards (continued)	School	District	Kentucky
5. First-to-second year postsecondary retention rate (i.e., entered in fall 2004 and returned for the fall 2005 semester):			
All students:	72.6%	72.6%	79.1%
Students with developmental needs in one or more subjects:	67.9%	67.9%	68.9%
Students without developmental needs:	87.5%	87.5%	87.1%
6. Median number of college credit hours earned during the first year in college:			
All students:	24.0	24.0	25.0
Students with developmental needs in one or more subjects:	21.5	21.5	22.0
Students without developmental needs:	26.5	26.5	28.0
7. Percentage of KEES recipients who maintained KEES awards for the second year:	58.3%	58.3%	60.6%

College Graduation Rates for Former Graduates:

8. Most recent graduation rate for students who graduated from this high school in 2003 and entered KCTCS in fall 2003 and earned an associate's degree within three years:	0.0%	0.0%	14.2%
9. Most recent graduation rate for students who graduated from this high school in 2000 and entered one of Kentucky's public four-year universities in fall 2000 and earned a bachelor's degree within six years:	50.0%	50.0%	48.2%

First-to-Second Year Postsecondary Retention Rate



D. Kentucky Institutions Students Entered

Public Four-Year Universities:

Eastern Kentucky University	
Kentucky State University	1
Morehead State University	
Murray State University	2
Northern Kentucky University	
University of Kentucky	8
University of Louisville	4
Western Kentucky University	16

Kentucky Community and Technical Colleges

Ashland Community and Technical College	
Big Sandy Community and Technical College	
Bluegrass Community and Technical College	
Bowling Green Technical College	
Elizabethtown Community and Technical College	
Gateway Community and Technical College	
Hazard Community and Technical College	
Henderson Community College	
Hopkinsville Community College	
Jefferson Community and Technical College	
Madisonville Community College	
Maysville Community and Technical College	
Owensboro Community and Technical College	
Somerset Community College	3
Southeast Kentucky Community and Technical College	
West Kentucky Community and Technical College	

Independent Colleges and Universities

Alice Lloyd College	
Asbury College	
Bellarmine University	
Berea College	
Brescia University	
Campbellsville University	1
Centre College	1
Georgetown College	
Kentucky Christian University	
Kentucky Wesleyan College	
Lindsey Wilson College	47
Mid-Continent University	
Midway College	
Pikeville College	
Spalding University	
St. Catharine College	
Thomas More College	
Transylvania University	
Union College	
University of the Cumberlands	1

E. College Majors

Undeclared	40
Agriculture, Agricultural Operations	5
Natural Resources and Conservation	
Architecture and Related Services	
Area, Ethnic, Cultural, and Gender Studies	
Communications, Journalism, and Related Programs	1
Communications Technologies/Technicians	
Computer and Information Sciences	3
Personal and Culinary Services	
Education	11
Engineering	2
Engineering Technologies/Technicians	
Foreign Languages, Literatures and Linguistics	
Family and Consumer Sciences/ Human Sciences	
Legal Professions and Studies	
English Language and Literature/Letters	
Liberal Arts and Sciences, General Studies	1
Biological and Biomedical Sciences	6
Mathematics and Statistics	
Multi/Interdisciplinary Studies	3
Parks, Recreation, Leisure, and Fitness Studies	1
Philosophy and Religious Studies	
Theology and Religious Vocations	1
Physical Sciences	1
Psychology	2
Security and Protective Services	1
Public Administration and Social Service Prof	
Social Sciences	1
Construction Trades	
Mechanics and Repair Technologies	
Precision Production	
Transportation and Materials Moving	
Visual and Performing Arts	1
Health Professions and Related Clinical Sciences	2
Business, Management, Marketing, Related Svcs	2
History	

NOTE: The information on this page is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. Majors not reported for some students.

Kentucky Department of Education

Student identifiers needed for P thru 20 data sharing SSID should be included on transcripts immediately

Last Updated on Wednesday, February 11, 2009 at 12:50 PM

RSS Available

Please share the information found below with guidance counselors in your districts, since many student transcripts are generated at the school level. I will also be forwarding this message to district technology officers and pupil personnel directors.

Recent discussions with higher education officials have increased our determination to begin sharing data between P-12 schools, colleges, universities and other higher education entities.

The P-20 data system will provide crucial linkages between the work of our public elementary, middle and high schools and higher education institutions. This cooperative venture will enable us to make better decisions and improve services to all students and teachers in the state.

Your assistance is needed to implement this system. The first step is simple and cost-free, but it is crucial to create the longitudinal data linkages between P-12 schools and higher education.

Please ensure that the unique state student identification (SSID) numbers already in place in your district are placed on the academic transcript report in both of the existing school information systems (STI and Infinite Campus). Most of you already have completed this step, and those who have not should make this a priority.

The SSID should be included on transcripts immediately to make it available to the higher education institutions for students entering in the fall of 2008. The Kentucky Department of Education is working to secure funding for an electronic system that will provide this data to higher education entities automatically.

For those districts currently using STI, the SSID is automatically placed within the STI transcript report unless that functionality has been disabled. For Infinite Campus districts, this feature must be enabled at the district level by checking the State ID box when your district's transcripts are configured.

Thank you for your support during this process. Please contact the STI or Infinite Campus help desks if you need assistance to ensure placement of the SSID in electronic transcripts.

For more information contact:

Teresa Perry
500 Mero Street, 1st Floor CPT
Frankfort, KY 40601
Phone: 502-564-3141
Teresa.Perry@education.ky.gov

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Data Quality: The Role of the Data Steward and Data Manager

Definitions
Data Steward: owner of a data element or data field responsible for hands-on work related to data.
Data Manager: an individual(s) representing an office within KDE working in conjunction with the Data Policy Committee coordinating the work of data stewards and use of data. The data manager will serve as the operations point of contact for the KDE Enterprise Data Dictionary and the metadata contained within the dictionary. The data manager will ensure data stewards are performing their duties as related to KDE's data governance.

RESPONSIBILITIES

You serve your supervisor by ensuring that the statistical information reviewed by your associate commissioner represents data that have been entered accurately and/or collected systematically. Furthermore, you enhance the information reporting process through staff development and collaboration with the various offices and programs responsible for producing data and information.

THINGS TO THINK ABOUT

- Does the information reviewed by senior leadership represent facts based on accurate data from programs and offices?
- Does everyone in your office understand how data are used to benefit instructional programs, student achievement and funding for KDE and school districts?
- Are data collected systematically in KDE and collaboratively with all program offices?
- Are the staffs responsible for collecting and entering data trained to do an effective job?
- Is there a process in place that allows "end-users" to request or modify reports, request or modify data definitions in the enterprise data dictionary?
- Do you work collaboratively with technology support?

THINGS TO DO

- Coordinate data collection processes through collaboration with other office data stewards, data managers and the Data Policy Committee (DPC).
- Audit and validate your data to ensure accuracy.
- Participate in a cross-agency team environment resolving data issues.
- Recommend data policies and processes to the DPC for adoption.
- Assist with the implementation of DPC data policies.
- Participate in the development of an enterprise data calendar; maintain and update.
- Participate in the development of an enterprise data dictionary; maintain and update.
- Coordinate with other stewards to ensure updates to the longitudinal data system (KSLDS).
- Participate and encourage professional development leading toward a Culture of Data Quality in KDE, schools and districts.
- Resolve discrepancies in information before reports are forwarded to executive leadership.
- Recommend a process to your DPC member that allows staff to request new reports or modifications of existing reports.
- Educate other office staff on the importance of data accuracy and data-based decisions.
- Collaborate with the technology support to enhance the ability of computer programs to determine effective editing procedures for reports and other information.

OUTCOMES (WHAT'S IN IT FOR ME?)

By helping KDE, schools, districts and other staff members see the process that leads to data-driven decisions, you are directly involved in courses of action that lead toward improved student achievement and increased services to schools and districts.

Adapted from U. S. Department of Education, *Forum Curriculum for Improving Education Data*

U.S. Department of Education

Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEM RECOVERY ACT GRANTS
CFDA # 84.384A
PR/Award # R384A100020

Closing Date: NOV 19, 2009

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5. *ED 80-0013 Certification* e10
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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

OMB No.4040-0004 Exp.01/31/2012

Application for Federal Assistance SF-424 Version 02

* 1. Type of Submission	* 2. Type of Application:	* If Revision, select appropriate letter(s):
[ ] Preapplication	[X] New	
[X] Application	[ ] Continuation	* Other (Specify)
[ ] Changed/Corrected Application	[ ] Revision	

* 3. Date Received:	4. Applicant Identifier:
12/3/2009	

5a. Federal Entity Identifier:	* 5b. Federal Award Identifier:
	NA

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Kentucky Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
610600439	102594426

d. Address:

* Street1:	500 Mero Street
Street2:	
* City:	Frankfort
County:	Franklin
State:	KY
Province:	
* Country:	USA
* Zip / Postal Code:	40601

e. Organizational Unit:

Department Name:	Division Name:
Bureau of Learning and Results Services	

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:	Dr.	* First Name:	Larry
Middle Name:			

* Last Name: Stinson

Suffix:

Title: Deputy Commissioner

Organizational Affiliation:

Kentucky Department of Education

* Telephone Number: (502)564-5130 Fax Number: (502)564-4007

* Email: LARRY.STINSON@EDUCATION.KY.GOV

Application for Federal Assistance SF-424 Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

10. Name of Federal Agency:

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.384A

CFDA Title:

Statewide Longitudinal Data System Recovery Act Grants

*** 12. Funding Opportunity Number:**

ED-Grants-072909-001

Title:

Statewide Longitudinal Data Systems Grants under the American Recovery and Reinvestment Act of 2009

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

KY-All

*** 15. Descriptive Title of Applicant's Project:**

Kentucky Statewide Longitudinal Data System

Attach supporting documents as specified in agency instructions.

Attachment:
Title :
File :

Attachment:
Title :
File :

Attachment:
Title :
File :

Application for Federal Assistance SF-424 Version 02

16. Congressional Districts Of:
* a. Applicant: KY-All * b. Program/Project: KY-All

Attach an additional list of Program/Project Congressional Districts if needed.
Attachment:
Title :
File :

17. Proposed Project:
* a. Start Date: 7/1/2010 * b. End Date: 6/30/2013

18. Estimated Funding ($):

a. Federal	**$ 19572239**
b. Applicant	**$**
c. State	**$**
d. Local	**$**
e. Other	**$**
f. Program Income	**$**
g. TOTAL	**$ 19572239**

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

[ ] a. This application was made available to the State under the Executive Order 12372 Process for review on .
[ ] b. Program is subject to E.O. 12372 but has not been selected by the State for review.
[X] c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

[ ] Yes [X] No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

[X] ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	Dr.	* First Name:	Terry
Middle Name:			
* Last Name:	Holliday		
Suffix:			

Title:	Commissioner		
* Telephone Number:	(502)564-3141	Fax Number:	(502)564-5680
* Email:	TERRY.HOLLIDAY@EDUCATION.KY.GOV		
* Signature of Authorized Representative:		* Date Signed:	

Application for Federal Assistance SF-424 Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:
Kentucky Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION A - BUDGET SUMMARY

U.S. DEPARTMENT OF EDUCATION FUNDS

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	$ 92,000	$ 92,920	$ 93,850	$ 0	$ 0	$ 278,770
2. Fringe Benefits	$ 27,600	$ 27,876	$ 28,155	$ 0	$ 0	$ 83,631
3. Travel	$ 10,000	$ 15,000	$ 15,000	$ 0	$ 0	$ 40,000
4. Equipment	$ 262,416	$ 787,250	$ 0	$ 0	$ 0	$ 1,049,666
5. Supplies	$ 595,741	$ 3,374,000	$ 2,099,000	$ 0	$ 0	$ 6,068,741
6. Contractual	$ 2,150,000	$ 4,424,000	$ 4,541,000	$ 0	$ 0	$ 11,115,000
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
9. Total Direct Costs (lines 1-8)	$ 3,137,757	$ 8,721,046	$ 6,777,005	$ 0	$ 0	$ 18,635,808
10. Indirect Costs*	$ 102,273	$ 494,881	$ 315,277	$ 0	$ 0	$ 912,431
11. Training Stipends	$ 0	$ 12,000	$ 12,000	$ 0	$ 0	$ 24,000
12. Total Costs (lines 9-11)	$ 3,240,030	$ 9,227,927	$ 7,104,282	$ 0	$ 0	$ 19,572,239

***Indirect Cost Information** ***(To Be Completed by Your Business Office)*:**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? [X] Yes [ ] No
(2) If yes, please provide the following information:
Period Covered by the Indirect Cost Rate Agreement: From: 7/1/2007 To: 12/31/2010 (mm/dd/yyyy)

Approving Federal agency: [X] ED [ ] Other (please specify): _____ The Indirect Cost Rate is 14.1%
(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

[ ] Is included in your approved Indirect Cost Rate Agreement? or, [ ] Complies with 34 CFR 76.564(c)(2)? The Restricted Indirect Cost Rate is 0%

ED Form No. 524

U.S. DEPARTMENT OF EDUCATION BUDGET INFORMATION NON-CONSTRUCTION PROGRAMS	OMB Control Number: 1894-0008 Expiration Date: 02/28/2011
Name of Institution/Organization: Kentucky Department of Education	Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2. Fringe Benefits	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
3. Travel	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
4. Equipment	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
5. Supplies	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
6. Contractual	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
9. Total Direct Costs (lines 1-8)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
10. Indirect Costs	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
11. Training Stipends	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
12. Total Costs (lines 9-11)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Standard Form 424B (Rev.7-97)

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management, and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. "4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. "1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. '794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. "276a to 276a-7), the Copeland Act (40 U.S.C. '276c and 18 U.S.C. "874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. " 327-333), regarding labor standards for federally assisted construction sub-agreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. "1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. "7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. "1721 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance

of 1975, as amended (42 U.S.C. " 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) " 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. " 290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. ' 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with the provisions of the Hatch Act (5 U.S.C. "1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. '470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. "469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. "2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. "4801 et seq.) which prohibits the use of lead- based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Signature of Authorized Certifying Representative:
Name of Authorized Certifying Representative: Dr. Terry Holliday
Title: Commissioner
Date Submitted: 11/18/2009

Approved by OMB 0348-0046 Exp.

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action: [ ] Contract [ ] Grant [ ] Cooperative Agreement [ ] Loan [ ] Loan Guarantee [ ] Loan Insurance	**2. Status of Federal Action:** [ ] Bid/Offer/Application [ ] Initial Award [ ] Post-Award	**3. Report Type:** [ ] Initial Filing [ ] Material Change **For Material Change only:** Year: 0Quarter: 0 Date of Last Report:
4. Name and Address of Reporting Entity: [X] Prime [ ] Subawardee Tier, if known: 0 Name: Address: City: State: Zip Code + 4: - **Congressional District, if known:**	**5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:** Name: Address: City: State: Zip Code + 4: - **Congressional District,** if known:	
6. Federal Department/Agency:	**7. Federal Program Name/Description:** CFDA Number, if applicable:	
8. Federal Action Number, if known:	**9. Award Amount,** if known: $0	
10. a. Name of Lobbying Registrant (if individual, last name, first name, MI): Address: City: State: Zip Code + 4: -	**b. Individuals Performing Services** (including address if different from No. 10a) (last name, first name, MI): Address: City: State: Zip Code + 4: -	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.	Name: Dr. Terry Holliday Title: Commissioner Applicant: Kentucky Department of Education Date: 11/18/2009	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements.

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal Loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance.

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

APPLICANT'S ORGANIZATION	
Kentucky Department of Education	
PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
Prefix: Dr. First Name: Terry	Middle Name:
Last Name: Holliday	Suffix:
Title: Commissioner	
Signature: _____	Date: 11/18/2009

ED 80-0013 03/04

SUPPLEMENTAL INFORMATION REQUIRED FOR DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Dr.	Larry		Stinson	

Address:

* Street1: 500 Mero Street

Street2:

* City: Frankfort

County:

* State: KY* Zip / Postal Code: 40601 * Country: **USA**

* Phone Number (give area code)	Fax Number (give area code)
(502)564-5130	(502)564-4007

Email Address:

LARRY.STINSON@EDUCATION.KY.GOV

2. Applicant Experience

Novice Applicant [ ] Yes [X] No [ ] Not applicable

3. Human Subjects Research

Are any research activities involving human subjects planned at any time during the proposed project period?

[ ] Yes [X] No

Are ALL the research activities proposed designated to be exempt from the regulations?

[ ] Yes Provide Exemption(s) #:

[ ] No Provide Assurance #, if available:

Please attach an explanation Narrative:

Attachment:
Title :
File :

Project Narrative

Project Narrative - Project Abstract

Attachment 1:
Title: **Project Narrative - Project Abstract** Pages: **1** Uploaded File: **C:\Documents and Settings\ptrotter\My Documents\SLDS 2009\DRAFTS\FINAL STUFF\Abstract final 12-1.pdf**

Abstract

The P-20 Data Collaborative is a unique collaboration with the Kentucky Department of Education (KDE), the Council on Postsecondary Education (CPE), the Educational Professional standards Board (EPSB), the Kentucky Higher Education Assistance Authority (KHEAA) and the Education and Workforce Development Cabinet. The Collaborative is seeking funds to expand and enhance the Kentucky Statewide Longitudinal Data system (KY SLDS) in order to meet the statewide longitudinal data system requirements and thus improve its ability to support and improve student achievement, ensure that all students are adequately prepared for postsecondary education, the workforce or Armed Services, and to inform education and workforce policy across the Commonwealth.

Kentucky has made great strides in building the infrastructure necessary for a robust statewide longitudinal data system. The memorandum of agreement, signed by the Collaborative, provides a governance arrangement for managing the implementation of the current KY SLDS expansion and will be the foundation for the creation of a comprehensive and flexible governance structure necessary to the future credibility and success of this endeavor.

To accomplish this ambitious task four key goals will be addressed: 1) adding additional data from the Education and Workforce Development Cabinet, KHEAA, and Kentucky Adult Education (KyAE); 2) expanding and updating existing data sources and collection processes; 3)enabling widespread access through the establishment of an identity management solution and the development and implementation of a comprehensive communications and training package; and 4) refining the administration of the KY SLDS by revisiting the governance structure, conducting a data audit, establishing a data audit system and providing for enhanced research and program evaluation capabilities.

The expected outcomes of this project include the establishment of an identity management solution which will result in the ability to authenticate and authorize users from a variety of stakeholder groups. Another outcome is the establishment of a state data audit system, one of the required data capabilities that Kentucky has yet to meet. Focus groups and the subsequent development and implementation of a comprehensive communications, training and evaluation process will ensure that all stakeholders not only have access to the KY SLDS, but can use it to make changes in policy and practice to improve student learning, measure the effectiveness of teachers and administrators, ensure that the labor market pipeline meets the state's projected workforce needs, etc. Identity management will be a critical element within the review process for the governance structure.

The addition of new data from the student financial aid sector, adult education and the labor market, is critical in Kentucky's move to create a seamless P-20 data system that will inform education policy at all levels. The KY SLDS will, among other things, be used to evaluate how well students are being prepared for college or the 21st Century workforce; determine how well the state's postsecondary educator preparation programs are preparing our future teachers and administrators; demonstrate whether or not all students have access to highly effective teachers; explore the relationship between the state's scholarship program and college-going/college completion rates; track employment outcomes for each institution of higher education; and connect the education pipeline to earnings, job retention and job stability.

Project Narrative

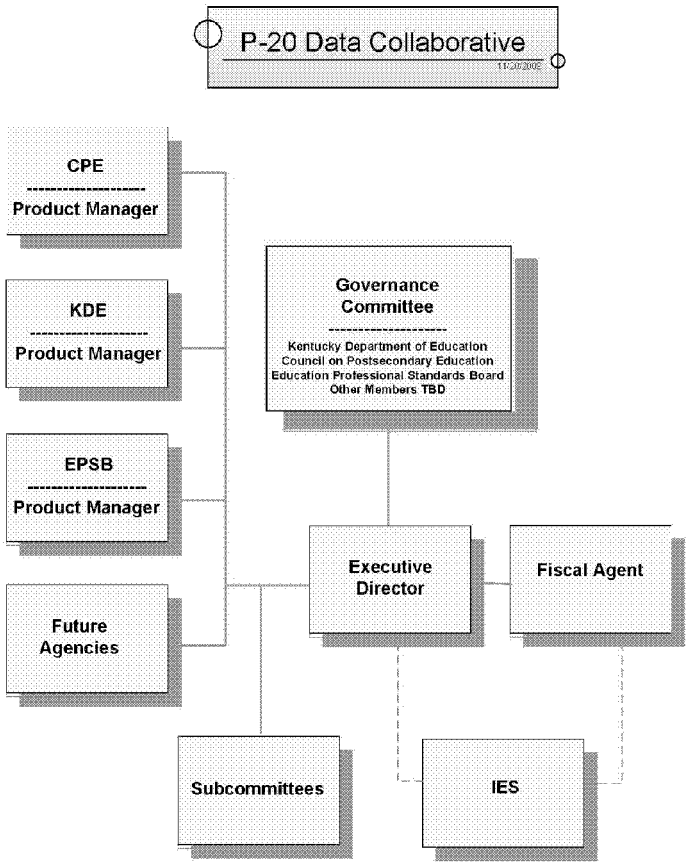
Project Narrative - Project Narrative

Attachment 1:
Title: **Project Narrative** Pages: **30** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Project Narrative\FINAL NARRATIVE 12-02-09.pdf**

PROJECT NARRATIVE

Introduction

This proposal, which is being submitted by the Kentucky Department of Education (KDE) was developed through a collaboration of the KDE, the Council on Postsecondary Education (CPE) and the Education Professional Standards Board (EPSB) and is a request for $19.6 million over three years from the U.S. Department of Education, Institute for Education Sciences (IES) to support further expansion of Kentucky's multi-agency longitudinal data system. This new initiative will address four main objectives: 1) administration refinement, which will include a review of the governance structure, a one-time data audit and establishment of a state data audit system; 2) expansion of existing sources, including updating and re-engineering of data collection processes of the partner agencies; 3) addition of new data from workforce and the student financial aid system and 4) establishment of an identity management system. These are more fully discussed under the Project Outcomes and Objectives section. As the state education agency (SEA), KDE will serve as the fiscal agent for this grant award.



A major issue facing Kentucky is how to address the issues and concerns of each of the agencies participating in the expansion of the Kentucky Statewide Longitudinal Data System (KY SLDS). On August 20, 2009, KDE, CPE, and EPSB entered into a unique Memorandum of Agreement for the purpose of creating a P-20 Data Collaborative (hereafter referred to as the Collaborative) to oversee the process of merging P-20 data within a shared repository, creating rules governing access to and use of the data, and making it available for reporting, analysis and research. The need for a review of this governance structure as additional agencies become partners in the KY SLDS is addressed under the governance section of this grant application. The Collaborative supports the merging of P-20 data to facilitate educational research and development of reports; provide feedback to Kentucky's educational and workforce institutions; and put information in the hands of stakeholders. Decisions of the governing board, composed of the three agency heads and the Secretary of the Education and Workforce Development Cabinet, are made by unanimous consent. Each principal member of the Collaborative is the owner of the respective feeder systems and therefore, part owner in the Kentucky Statewide Longitudinal Data System (KY SLDS). The

Collaborative is responsible for the support and maintenance of the KY SLDS. Additional members of the Collaborative will be added as more agencies participate in the statewide data system. This collaboration is unique among state agencies and provides a vehicle for continuous dialogue across agencies regarding the development of the KY SLDS.

For the past 20 years, Kentucky has been a consistent leader in education reform and after three years of fluctuation in education leadership, now has strong leadership in place that is needed to launch a bold new vision for education in the Commonwealth. The KDE is led by a newly appointed Commissioner of Education, Dr. Terry Holliday, who brings with him a strong background in advancing student achievement and turning around low performing schools, and a strong commitment to ensuring that every child is taught by a highly effective teacher. He also is a committed user of data to inform decisions. Under his leadership, the KDE has developed a Learning Framework to provide a roadmap for the 21st Century reform upon which it has embarked. The foundation of the framework resides in four basic areas: that every student learns under the guidance of a highly effective teacher, in a school led by a highly effective principal, in a district led by a highly effective superintendent; that a continuum of interventions is customized to meet the needs of every child; that the use of a single set of content standards leads to the readiness standards deemed necessary by institutions of higher education; and that the data system provides timely information about what is effective, where it is effective and for whom so that the education and workforce communities can shift from "autopsy" data use to preventive data use..

The CPE also welcomed new leadership in January 2009, with the hiring of Robert King, J.D. as President. A hallmark of Mr. King's first year leading CPE's staff is his focus on K-12 education, including both the continuous improvement of teacher education and professional development and the establishment of a single state-wide standard for college readiness. Mr. King recognizes higher education's critical relationship with K-12 through the provision of teacher preparation and the career-long support of teachers through active involvement in professional development and research. As an avid user of data for decision-making, President King is also looking forward to expanding the capacities of the KY SLDS to improve postsecondary education in Kentucky through the inclusion of the new postsecondary data sources and other enhancements proposed here.

Under the leadership of Dr. Phillip Rogers, the EPSB has established its highest priority as strengthening the quality of educator preparation so that every Kentucky child has a highly effective teacher and school leader. Recent bold board actions include sun-setting all master's degree and principal preparation programs and requiring all new program proposals to focus on improving student learning. Dr. Rogers has led the EPSB to migrate from its old paper file system to an electronic data system that permits the board to make data-driven and research-based decisions and now makes the EPSB a valuable partner in the KY SLDS. A strong advocate of the KY SLDS who understands the value of sharing data across agencies in order to make more informed decisions, Dr. Rogers is working closely with his counterparts in the Collaborative to ensure the sustainability of the KY SLDS in the Commonwealth.

Kentucky, as a state, has also begun a fundamental re-thinking of how it organizes and administers information. Education and labor market groups recognize that education is a lengthy, lifelong process that evolves at different rates and in different ways for individuals. P-20 and workforce sectors are inextricably intertwined and the way in which information is collected, stored, shared and

used should contribute to student achievement and success in life. Kentucky also recognizes that the success of the education reform efforts individually and collectively is dependent, in part, upon the cooperation and collaboration between and among the groups and agencies that are responsible for overseeing the reforms.

In late October 2009, Governor Beshear announced the formation of the Transforming Education in Kentucky Task Force (TEK Task Force – see appendix) comprised of over 30 individuals representing all areas of the state and various stakeholder groups. Kentucky's education commissioner serves as co-chair of the task force. The task force work is scheduled to begin in December. The first several months will be focused on fact-finding about the many excellent programs that already exist and challenges the state faces. Among those specific items that the governor requested the task force to review are: increasing early childhood education opportunities, increasing opportunities for students to get college credit while in high school, increasing the rigor of Kentucky's career and technical programs so they are seen as options of first choice, and decreasing dropouts and increasing graduation rates. The use of data is critical to this work as is access to a robust statewide longitudinal data system (SLDS). The expansion of the KY SLDS for which funds are being requested in this application will provide the robust data tool needed to guide this work.

As the United States moves to a knowledge economy requiring higher educational levels and improved workforce skill levels among its population, it is critical for a high poverty/low educational level state like Kentucky to determine the status of its workforce in terms of educational levels and workforce skill levels. Kentucky needs to examine its current educational levels and workforce skill levels, compare them to education and workforce skill levels needed in the developing knowledge economy, and track over time the state's movement to ensure the workforce is better prepared for today's and tomorrow's economy. As of the date of this writing, the current KY SLDS contains data from pre-K though high school. Through a second round of funding from IES the KY SLDS is in the early stages of acquiring data that will enable the tracking of student and teacher information from early childhood, adult education and post-secondary institutions. This includes the process of incorporating data on teacher education, certifications, and assignments. Student financial aid data, and employment information from outside the educational environment have not yet been incorporated into the KY SLDS nor has information about non-degree teaching certifications, alternative routes to teaching, or the military. Funds are being requested in this grant proposal to allow expansion of the KY SLDS into these areas, with the exception of the military, by the addition of new data as well as to: address source data collection problems, quality and validity; ensure a strong operating discipline for managing data and information as a key enterprise asset; and, establish an identity management solution that allows access to a broad spectrum of users based on their role identification and authorization.

The Collaborative understands that without a robust decision support system, easily accessible to a broad-based constituency and which uses valid and reliable data to inform policy and practice from the state down to the classroom level the reform effort will not get off the ground. Data provide the roadmap to reform. They tell us where we are, where we need to go, and who is most at risk.

The creation of the KY SLDS, formerly known as the Kentucky Instructional Data System (KIDS), was made possible by a $5.8 million grant from IES in the first round of competition, and $2.9 in

the third round. The initial funding supported the building of the KY SLDS as a K-12 enterprise. Funding provided from round three is currently being used to design the architecture necessary to expand the system to include data from the Collaborative partner agencies, collecting that data and creating reports. In addition, access to the KY SLDS tools is already available to all 174 Kentucky school districts. By the end of the calendar year 2009, superintendents, district assessment coordinators, chief information officers, and other district staff from all 174 districts as well as principals from all 1300 public schools, will have access. The KY SLDS is also moving forward with its long-term process to develop better data practice and governance. In order for the KY SLDS to become a true statewide longitudinal data system, which provides role-based access to information needed by a variety of stakeholders, it is imperative that governance, data quality, issues of authentication and authorization, and statewide training for all stakeholders be addressed. Thus, a significant amount of funding requested now will be used to design and implement an identity management solution, create a state data audit system, develop a more comprehensive and flexible governance structure and design and deliver statewide training on the use of the KY SLDS. Unless these segments of the project are addressed Kentucky cannot move forward with updating and re-engineering data sources nor add additional data. The addition of workforce and student financial aid information is contingent upon having a broad governance structure, identity management solution and assurance of data quality and validity. Kentucky recognizes the importance of having high level champions to ensure the success of a KY SLDS. The Collaborative partners not only understand data, but demand its use in day to day decision-making giving Kentucky the champions it needs from the highest possible level to continue to build and make available for use a broad-based SLDS.

Since becoming operational in January, 2008, the KY SLDS has continued to increase the number of data sources it receives as well as the quality of the analytics it provides. However, the local district and school end users of the system have not yet had adequate training in the use of the system and how it can be utilized to affect classroom practice and improve student learning. Policy-makers at the state and local levels also are not well versed in the potential ways they can use the KY SLDS to inform decision-making. Funds are also being requested to develop a statewide marketing and training plan to ensure that the KY SLDS meets the needs of all stakeholders. As the KY SLDS is rolled out to the 174 districts and 1300 schools, and ultimately to all stakeholders, it is imperative to ensure easy access and a user-friendly interface. Parallel to that effort is a focused communication and training program so that stakeholders are trained in the use of the system and begin to acquire an understanding of how to effectively use the data that reside in the system.

I - NEED FOR THE PROJECT

Although Kentucky has developed a robust cross-agency longitudinal data system, it now needs to address how it will increase the use of those data by legislators, administrators, and educators to improve education. The main objectives outlined for the project address the basic needs of the KY SLDS going forward::

- Refine administration (i.e. governance, data audit, data collection)
- Expand and enhance data system capabilities
- Add new data
- Enable broader access (i.e. identity management)

In addition, Kentucky has targeted other ARRA funds to support focused interventions in the state's lowest performing schools. These interventions, which include additional support for special needs students, content specialists and curriculum specialists to support classroom teachers and ensure a guaranteed, viable curriculum are currently being implemented. However, a more innovative approach to turning around the state's chronically lowest performing schools is on the drawing board and represents a key component of Kentucky's Race to the Top (RTTT) grant application. Under this bold initiative, schools would be identified as Educational Recovery Schools when they become "persistently low performing" (i.e. they have been in the lowest 5% of all schools on state accountability measures for three consecutive years). Educational Recovery requires action on a number of fronts such as requiring schools to relinquish much of the control of the school to either the local district or state and making fundamental changes in the conditions under which these schools operate. The KY SLDS will be a critical linchpin in this recovery plan as the department will rely heavily on the KY SLDS to provide data necessary to identify these schools and track their progress over time. Students in these lowest performing schools are most at risk for not being college or workforce ready, thus data about these schools in particular is of great interest to the Collaborative.

CURRENT KY SLDS

In mid 2008, Kentucky sought to build upon its foundational K-12 SLDS by establishing a shared data repository to serve as the Kentucky Statewide Longitudinal Data System (KY SLDS). The Collaborative partners in this endeavor, each collects and stores their own data. A second grant in the amount of $2,878,373 was awarded from IES to the State Educational Authority (SEA), KDE, on April 8, 2009 to cover three distinct phases related to this initiative: K-12 data expansion, including the shared repository plan and design; addition of P-20 data sources to the KY SLDS; and design and develop reports. This work is currently underway and ultimately the KY SLDS will reflect the interests of all educational agencies and provide state and local policy-makers with the necessary information to effect change and improve student learning and increase the number of Kentuckians not only graduating from high school but completing a college degree as well. The current status and additional needs of the KY SLDS as they relate to the required seven capabilities and twelve system requirements as required in the RFA are discussed below under System Capabilities as outlined in the RFA.

Seven Required Data System Capabilities

Examining Student progress and outcomes over time

Kentucky's various educational agencies each have pockets where data from each level of a student's career, through workforce, are collected and maintained. However, these are generally systems designed for a specific need and will not provide the functionality or flexibility required for a decision support system or even a longitudinal data system. The KY SLDS enables Kentucky to examine student progress and outcomes over time within the K-12 system. Currently, for early childhood development the KY SLDS only contains data about students requiring special assistance. More detailed early childhood data is a planned enhancement of the system under the current expansion. The current expansion work will also provide the capability to track students through their post-secondary career and will help inform college readiness needs of Kentucky's high school students. The system is not currently able to examine progress and outcomes that lead to the

workforce or Armed Forces. We intend to begin including workforce data,(i.e. unemployment, wages, etc.,) through funding from this grant and will gather information about what military data may be in scope for the future.

The KY SLDS lacks a standard student-level transcript which would include courses completed and grades earned. This has not been due to system incapability but rather to the lack of common course codes linked to common core standards and an electronic means of capturing the data. This matter is being addressed by KDE which plans to implement standardized course codes linked to nationally agreed-upon common core standards for language arts and math and expected learning outcomes for students enrolled in those courses. The course content and expectations will be linked to college readiness standards. Once this system is in place, the standard student transcript data will become part of the shared repository in the KY SLDS. An outcome of this work will be the ability to track specific course taking success for all students so interventions can occur in a timely and effective manner.

Facilitate and enable exchange of data among agencies and institutions

The work being done under the current IES grant, makes it possible for the KY SLDS to facilitate and enable the exchange of data among the three current partners, CPE, EPSB and KDE. This funding will also enable Kentucky to share data among the Collaborative partners using standard data structures, data formats, and data definitions to insure interoperability.
Kentucky has a single, statewide application for both P-12 student management and accounting systems. This application provides a great deal of vertical integration from the schools to the KDE for the data contained within either system. However, there is no horizontal integration of user IDs among the various applications which must occur if the exchange of data across agencies and among institutions is to be realized in the KY SLDS.

Detailed data describing the points at which students enter and exit the P-12 educational environment are collected by the statewide student information system and entered into the KY SLDS. Post secondary data will be added as part of the current expansion grant. Test records for individual students have been available within the KY SLDS since 2007. Current assessments include the KY Core Content Assessment, ACT, PLAN, and Explore. Even data on untested students currently exists within the KY SLDS. Kentucky is currently exploring more robust data sharing agreements with the College Board to allow for the use of AP exams data within the KY SLDS that is available for reporting.

CPE is committed to implementing interoperability through the use of national postsecondary data standards. Their postsecondary data definitions and codes are synched with those of the Departments' Integrated Postsecondary Education Data System (IPEDS). Kentucky Adult Education (KYAE), follows the guidelines set forth by the National Reporting System for Adult Education (NRS) which was developed by the U.S. Department of Education's Division Adult Education and Literacy (DAEL). The NRS has a set of guidelines which all states are required to follow for data collection, data matching and quality control.

In order to facilitate the future exchange of data among agencies and support interoperability, funding is requested in this grant to develop the business requirements for the IT infrastructure needed to produce high school transcript data for graduates applying to Kentucky's public and

private colleges and universities. This enhancement would ensure the correct link between high school students' K-12 ID to their college or university records. Currently, PDF versions of high school transcripts are electronically available to colleges and universities, but must then be printed and entered by hand, a process which leaves room for data entry error. An enhancement of the student information system, Infinite Campus (IC), will need to be made in order for this to occur and funds are requested in this grant to support these enhancements. These data then will be made available in KY SLDS for reporting and analysis.

Link student data with teachers

The Education Professional Standards Board currently has and maintains the most accurate unique teacher identifier, although many systems across the EPSB and the KDE utilize their own unique teacher identifiers. The EPSB identifier is expected become the authoritative source used by all educational agencies in Kentucky for educators within the current expansion phase of SLDS development. The unique teacher identifier assigned by the EPSB is not shared or used by the other agencies, including KDE. Consequently, it is very challenging to combine data from the student information system, accounting and other applications. Within the portion of the project that calls for re-engineering and updating of data systems we will determine the most effective and efficient way to remedy this disconnect between student and teacher data.

Matching teachers with certification and teacher preparation

As Kentucky moves toward developing a comprehensive approach to measure the effectiveness of teachers and leaders new measures of performance and student learning will be developed making it imperative that student and teacher data are linked and that teacher data include certification and teacher preparation program course taking. In addition to adding data from sources not currently participating in the P-20 shared repository, there is a need to address the inclusion of additional data collected by the EPSB and the CPE. Detailed certification and preparation data will be available as part of the current KY SLDS expansion and is expected to be available in 2010.

Under the current grant funding, CPE is providing student-level information on colleges and universities attended, courses taken and course outcomes, degrees and credentials earned, and other information of interest to link with KDE and EPSB teacher data. Information on K-12 teachers who also teach in the adult education system, including professional development received through that system, would be added with the expansion of Kentucky Adult Education Data into the shared repository under this request for funds.

To support improvement in postsecondary instruction, CPE requests funds to expand its already-developed PD Tracker application and database, used by Kentucky Adult Education's professional development efforts, to track the professional development college faculty receive to teach remedial education. This leveraging of an already-developed application will provide efficient and essential support to Kentucky's new effort to improve teaching and learning for postsecondary students with developmental education needs.

Easily generate data

The Collaborative's vision is, through the KY SLDS, to enhance the ability of state education agencies, governing boards, legislators, state and local educators, researchers, policy-makers, parents, students, and others to collect, analyze, and use longitudinal data to conduct research across the

education spectrum to inform decision-making to improve the education, college-going rate, career opportunities, and outcomes of the citizens of Kentucky. The system is currently limited to users within the Kentucky Educational Technology System (KETS). It will be opened up to parents and users external to the KETS network, and to state agencies, upon the implementation of an identity management system, and a state data audit system (which is a system requirement as discussed below),to be funded through this grant.

A major concern expressed by the National Center for Education Statistics (NCES) in earlier funding rounds is that states were failing to adequately consult with their end users about their needs. KDE hopes to take positive steps to now establish an on-going process to obtain information from a variety of stakeholders about their initial and ongoing needs. Funds from this proposed project will be used in year one to design, conduct and report on focus groups in each geographic quadrant of the state to obtain information about their current needs and perceptions about how the KY SLDS can and should be used. Prior to the focus group meetings on-line materials explaining the KY SLDS and how to access it will be developed and made available to each of the focus group invitees. The focus groups will be followed up with periodic checks as the development of the system continues to make sure that the needs are being met and to obtain formative feedback. These focus groups will provide the information needed to design and develop statewide training for the KY SLDS. Through this process the KY SLDS will facilitate and enable exchange of data among agencies and institutions according to their needs.

Ensure quality and integrity of data

Data quality audits currently occur at two points in the data collection stream. A primary audit occurs at the point of data collection, such as the state-level Student Information System (SIS) repository. A secondary, but less detailed audit, where data from various collections are compared, is carried out as data are readied for input to the SLDS. For the first time, similar data from different systems can be reviewed for consistency and to make sure they match previous formats. While this secondary audit provides an external review, it has not yet been formalized. Even so, it is has helped grow the understanding among stakeholders of the importance of data quality and data review.

The KDE, as part of an overall data quality push, is planning to implement a closed-loop data correction process. This process, when complete, will continue to allow audits to be conducted at the collection points but will require corrections to be made at the point of data entry.

Because of the increasing maturity of the KY SLDS has now become necessary to improve upon the sophistication for managing the metadata. The Commonwealth of Kentucky proposes to create a metadata repository for KDE, EPSB, CPE and the Education and Workforce Development Cabinet. A robust metadata system is critical for users of the KY SLDS. It will: 1) assist in meeting stakeholder needs; 2) increase the probability of correct data interpretation and use; 3) identify what data exist, the authoritative source and format for the data; 4) identify redundant data and the differences in data sets; 5) improve the accuracy of data transfer from systems into the KY SLDS; 6) reduce user expertise required to conduct ad-hoc queries; 7) promote data quality throughout KDE, EPSB, CPE and the Education and Workforce Cabinet; 8) sustain data quality and assist stakeholders in making data-driven decisions. A metadata system will serve as the backbone for master data management, the data stewardship framework and training modules to be rolled out during year two of this grant.

Meet reporting requirements
The current KY SLDS has been designated as the system which will generate the reports for the federal EdFacts data collection. While the KY SLDS is able to provide these reports, it is currently limited by the amount of data available for reporting. As new data are added, more EdFacts reports are able to be developed and tested. Current capabilities allow for 10 reports to be generated. As more detailed data from the SIS and other areas are included, the system will be able to develop and test more EdFacts reports. It is expected that 7 more reports will be made available within the current phase of expansion.

Twelve Required Data System Elements

Pre-school through Grade 12 and Postsecondary Education
Student level enrollment, demographic, and program participation information have been included within the KY SLDS since 2007. Detailed data describing the points at which students enter and exit the P-12 educational environment are collected by the statewide student information system, Infinite Campus (IC), and entered into the KY SLDS. Post-secondary data will be added as part of the current expansion grant funded by IES and are expected to be complete by the end of 2011. Various ad hoc systems already provide the capacity to share data between P-12 and post-secondary. More authentic data sharing will be added as part of the current expansion grant and is expected to be in place by the end of 2011.

Work is ongoing to ensure that the K-12 statewide student identifier is captured when former students of Kentucky's public schools enroll in Kentucky's colleges and universities.

In order to ensure that the KY SLDS has the capacity to communicate with higher education data systems, the Council on Postsecondary Education needs to make improvements to its Kentucky Postsecondary Education Data System (included in KY SLDS in the currently-funded effort), pull together other internal data sources and create a single external data exchange system that will make CPE data collection and reporting more efficient, seamless, accurate and interoperable.

A major component of this proposed project is the establishment of the required state data audit system. Data quality audits currently take place primarily at the point of data collection. Data audits between systems are also carried out by the KY SLDS. For the first time, similar data from different systems can be reviewed for consistency and to make sure they match previous formats. Kentucky expects to build upon the existing audit capability with a more robust, enterprise system once more data systems are feeding into the repository.

Preschool through Grade 12
Test records for individual students have been available within the SLDS since 2007. Current assessments include the Kentucky Core Content Test, ACT, PLAN, and Explore. Kentucky is currently exploring more robust data sharing agreements with the College Board to allow for the use of AP exam data within the KY SLDS. Additionally, the KY SLDS is currently expecting to open up functionality which will allow for individual districts to upload formative assessment data and allow

for those data to be included in reports. Data on untested students are also contained within the KY SLDS.

The Education Professional Standards Board currently has and maintains the most accurate unique teacher identifier, although many systems across the EPSB and the KDE utilize their own unique teacher identifiers. The EPSB identifier is expected to become the authoritative number used by all educational agencies in Kentucky for educators within the current expansion phase of SLDS development.

ACT data are currently in place within the KY SLDS and are used in multiple reports and analytics. In the fall of 2006, 45% of recent Kentucky high school graduates entered college with developmental needs in at least one core subject (math, English, reading) [CPE]. The costs of developmental education are high for both the state and the student. The KY SLDS database will enable Kentucky to look quantitatively at college readiness across the education spectrum. This would enable educators/staff to implement strategies to reduce the need and cost of remedial education.

With the passage of Senate Bill 1(SB1) in the 2009 session of the Kentucky General Assembly, the Commonwealth of Kentucky is poised at the beginning of a new era in public school assessment and accountability. SB 1 mandates a move toward a new testing and accountability system that will, for the first time, measure individual student achievement over a period of time. It will allow the state to understand how Kentucky students are doing compared to each other and with students nationally through the adoption of national common core standards and assessments. SB 1 also mandates closer cooperation between the state's schools and Kentucky institutions of higher education in an attempt to lower the numbers of school children who need remediation and improve college readiness. These data will be reported in the KY SLDS. Under this legislation the Commissioner of Education and the president of CPE are charged with ensuring that revised academic standards in reading and math are aligned with postsecondary course and assessment standards. In addition, CPE is directed to collaborate with KDE to develop a unified strategy to reduce college remediation rates by at least 50% by 2014 in comparison to the 2010 rate and increase the college completion rates of students enrolled in one or more remedial classes by 3% from 2009 to 2014.

Postsecondary education

The current expansion grant award will fund the connection of post-secondary student performance information allowing public schools and districts to better understand how they are preparing students for success. This capability is expected to be in place by the end of 2011.

As part of general implementation of the KY SLDS, interviews have taken place with potential stakeholders in state agencies not directly affiliated with education. The hope is that these discussions will help direct the implementation team to areas of need not evidenced within the educational environment. Interviewees include representatives from the Kentucky Chamber of Commerce and the Cabinet for Health and Family Services. Thanks to organizations such as the Council of Chief State School Officers (CCSSO) and the Data Quality Campaign (DQC), much research has been done and is available on how best to prepare students for success. Kentucky

wants to build on those data by adding information from areas not typically considered when a state embarks on development of a SLDS.

Currently, CPE collects data from public and private postsecondary institutions in multiple ways. These data are formatted in separate applications, emails, SQL and Access databases and spreadsheets, creating time-consuming manual work for staff to manage, consolidate and match data as needed for reporting and analysis. These hand processes also slow access to data and impair the quality of the data. This issue will be addressed under the second goal of updating and re-engineering of data sources.

CPE has conducted considerable research on dual enrollment students in recent years to evaluate the college-going and college success of these students. Because the majority of these dual enrollment courses are technical, rather than academic, the growth of dual enrollment in Kentucky has not increased college going or success in general. However, there is evidence that students who took academic college-level courses in high school earned Bachelors degrees faster than those who did not. Further exploration of this data has been hampered by the lack of a link to K-12 data such as Advanced Placement and International Baccalaureate course-taking and students' year in high school. Also, there has been much interest in the impact of dual enrollment on high school graduation, but without student-level links, the students who are taking college-level courses on their own, rather than through their high school, cannot be identified. Additional funding is requested to ensure that needed data is included in the repository and to develop the queries and reports needed to expand the information available to policy makers on this important topic.

In addition to the comments above concerning how Kentucky is meeting, or planning to meet, the system capabilities and system requirements, certain issues surrounding the KY SLDS effort require further discussion. These are addressed in the following sub-sections: data quality needs, addition of new data, expanding access, identity management, re-engineering collection processes and storage, and need for expanded research and utility.

Data Quality Needs

As the KY SLDS expands, ensuring the quality and integrity of the data contained in the system becomes more complex. The Collaborative plans to contract with a non-education entity to perform an audit of the technology and data processes. Subsequent to this audit a data audit system for the KY SLDS will be designed and implemented which will continuously assess data quality, validity, and reliability.

The Collaborative has implemented procedures and plans to insure high quality data are in the KY SLDS. Among those procedures are: extract data from sources where data quality procedures exist and are being applied that enable users to believe the data are reliable; and perform data profiling prior to being loaded to the KY SLDS so any issues can be addressed before they are loaded into the repository.

Kentucky's data requirements have increased over the last decade creating a need for automated data collections and reports. As a result, KDE programs began collecting data based on individual program needs, often ignoring the fact that data may be available from another office. In addition,

spreadsheets in Excel and/or Access databases have been utilized assuming no one else would be interested in seeing or using the data. Thus, local districts receive repetitive data requests from KDE or data may be collected and used to serve the purposes of a single user. KDE has morphed into silos of collected data, repeatedly undergoing a clean-up process which has slowed the development of the KY SLDS.

KDE established the Data Policy Committee (DPC) in 2008 to define the policies for collecting, using and reporting data within KDE. Decisions of the DPC are binding on all staff within KDE when creating, collecting, using or considering data to conduct the business of KDE including, but not limited to, the provision of services to districts, schools, students, parents or other education partners. The committee's mission is to ensure data assets are planned for, developed and used to meet the needs of all education stakeholders, avoiding unnecessary program-by-program approaches to data collection and reporting.

KDE has demonstrated an on-going commitment to improve its use of data to analyze the effectiveness of its work and inform decision-making. One of the ways it has done this is to request that the Commonwealth Office of Technology conduct a portfolio analysis to analyze the data system applications used by KDE to better manage costs, provide support, and provide user value. This analysis is currently in progress and will be followed by a data audit.

CPE is also committed to the continuous improvement of postsecondary data quality and integrity. The Council has long experience with the challenges of collecting comparable data from different types of colleges and universities with a variety of student information systems and varying levels of IT and analytical sophistication. For many years, CPE staff has performed data edits to ensure that the data submitted match coding schemas and established business requirements. To further improve the quality of data submissions, CPE instituted a data quality policy in 2008 that requires all public colleges and universities to develop internal data quality policies, report these policies to CPE, run and report the results of internal data quality checks, and host an on-site data quality audit by CPE staff every five years. Additionally, Kentucky Adult Education contracts with the commonwealth's Auditor of Public Accounts to conduct program audits every four years, which include a reconciliation of the student and faculty data electronically submitted to Kentucky Adult Education with the information retained by the local provider.

Additional Data to be Included in KY SLDS

The Kentucky Higher Education Assistance Authority (KHEAA), is a division of the Finance and Administration Cabinet, and is charged with administering the preponderance of the Commonwealth's postsecondary student financial aid programs. It is in that capacity that KHEAA assembles and maintains data bases on applications, eligibility and disbursements for eleven different student aid programs. Collectively, these programs are broadly charged with increasing access to postsecondary education, retaining qualified recipients through degree completion, and thus enhancing graduation rates of recipients.

Effective administration of student financial aid programs requires KHEAA to continually evaluate the programs' effectiveness. Given the current variables contained in the various KHEAA data bases, KHEAA is able to analyze applications received and track retention of recipients, however

there is no in-house information set which allows KHEAA to estimate postsecondary completions and perform formal cost-benefit analyses. Furthermore, since the KHEAA data "window" effectively begins when students actually file applications for benefits, the agency lacks the data capability to empirically evaluate the pipeline of potential future applicants. This causes an over-reliance on published secondary data sources with the associated error problems inherent in those compilations complicating budget and utilization projections.

Over the past few years, CPE and KHEAA have collaborated to produce innovative research such as cohort tracking to determine the impact of state financial aid on college access and success, estimates of college-going among students from low-income families, and the distribution of state aid dollars by students' income and college preparation levels. This is vital policy research for the Commonwealth of Kentucky, as student financial aid dollars are both increasingly limited by economic conditions and increasingly important to students facing ever-higher college costs. The addition of KHEAA data to the KY SLDS will also expand the data on high school students available for analysis by KDE and others. Because Kentucky's merit-based financial aid program, the Kentucky Educational Excellence Scholarship (KEES), is based on student performance during all four years of high school, KHEAA maintains student-level records of all students at Kentucky's private high schools, which represented 8 percent of all high school seniors in Kentucky in 2007. KHEAA is the only source for this data that could greatly assist in tracking student outcomes as they move between public and private high schools. The Council currently uses this data to calculate college-going rates and other statistics that include private school students; these research endeavors would be greatly facilitated by the inclusion of this data in the KY SLDS.

KHEAA participation in the KY SLDS will allow the agency to more effectively measure the performance of the state's student financial aid programs against the policy objectives for each program thereby providing the General Assembly with better and more accurate information with which to shape the public policy on postsecondary student aid. The KY SLDS would also provide KHEAA analysts the opportunity to better predict the financial requirements of each program and project future needs which might be necessary to achieve program objectives.

Another of the newest partners to be included in the KY SLDS, should this grant be awarded, is the Kentucky Office of Employment and Training (OET) which recently applied for a Labor Market Improvement Grant, focused on career pathways to green industries. The proposed project would connect target populations and careers in energy efficiency and renewable energy industries. In addition to collecting information on current and future job openings, OET will use the Labor Market Improvement Grant (LMIG) to develop a database to provide detailed data on the existing labor supply. One of the key components of this database is information on the education and training levels of the available labor supply. KY SLDS will be able to provide some of the additional information OET hopes to incorporate in its labor supply database. This labor supply data will be matched to existing and future green jobs, as well as all jobs in the Commonwealth. Data from this labor supply (human capital) warehouse and the green jobs survey should increase Kentucky's ability to identify gaps between skills available and skills needed to meet the challenges in the changing economy.

This proposed project will include data from the Office of Unemployment Insurance. The utilization of unemployment insurance data would allow Kentucky to track individuals across time as

to their educational attainment, their employment experience and their wages. The implementation of this program would provide "real world" data on employment and wage outcomes as individuals move through the education system getting their high school degree, certificates, technical or vocational training, 2 year degrees and 4 year degrees as well as advanced education beyond a four year degree.

Another important component of the KY SLDS is the addition of expanded data from Kentucky Adult Education (KYAE) some of which is included under the 2009 IES grant award. KYAE's mission is to raise the educational levels of more than one million Kentucky adults with low literacy skills and to assist the nearly 786,000 adults who do not have a high school credential to earn a GED® diploma.

Each year, KYAE provides instruction to approximately 35,000 adults; produces 9,500 GED graduates; and 2,100 GED graduates go onto postsecondary education of which 87 percent enroll in a Kentucky Community and Technical College (Adult Education Reporting Information Network Database and the Kentucky Postsecondary Education Data System.) In addition, on average 30 percent of KYAE students already have a high school or GED credential (self-reported data collected in the Adult Education Reporting Information Network Database).

The education community needs to know why students dropped out of the K-12 system only to continue their education within the adult education system. It is imperative that adult education data be collected within the KY SLDS in order to inform research and policy decisions not only between K-12 and adult education but also postsecondary and workforce. Adults without a high school or GED credential and who cannot read and write proficiently may not be able to participate fully in society in the future, contributing to problems such as increased crime and decreased economic productivity (August and Shanahan 2006).

Inclusion of adult education data in the KY SLDS will provide research capabilities to better understand the attrition/retention patterns of students who drop out of the K-12 system and enter the adult education system; to better inform adult educators about student's educational background in the K-12 system to better engage students in learning; and, to expand the information that is currently provided to the K-12 system concerning the outcomes of their former students especially recent dropouts age 16-18 that earn a GED diploma through adult education.

Future plans for the KY SLDS include sharing data with the Office of Vocational Rehabilitation (OVR). With access to information from the Kentucky Education system, OVR could target students with disabilities who are transitioning into the workforce and educate them on the availability of its services. OVR would be able to identify areas of the state where there may be a need for transition services. The education system may subsequently benefit by seeing how students with disabilities become employed after they exit the school systems. OVR may also be able to assist school systems, including career and technical education entities, in identifying specific areas of need with regard to training students with disabilities by providing them with information about training or education needs noted during their vocational rehabilitation program. According to the 2008 Report of Children and Youth with Disabilities Receiving Special Education and Related Services, Kentucky reported 107,732 students within the k-12 community.

Expanding Access to KY SLDS

The KY SLDS makes available a variety of reports, each of which can be an analytic system on its own, based on data identified at the most granular level possible. This allows for easy analysis at the individual student level, groups of students aggregated by demographic elements, or groups of students aggregated by school and district, for example. The data warehouse is securely accessible by a variety of stakeholders including teachers, school administrators, state officials, and legislators. However, until statewide training on data quality and the use of the system can be rolled out it remains largely unused, especially at the local level. This is being addressed on one level by the KDE Office of Education Technology which recently presented an on-line training session for district assessment coordinators and district technology coordinators. A process is also being developed to allow access to KY SLDS and provide training on the use of the system for the General Assembly and its research arm, the Legislative Research Committee prior to the 2010 legislative session.

Another way in which KDE is expanding the use of the KY SLDS is through data steward training at the agency level. KDE, under the direction of the DPC, began its first phase of Master Data Management (MDM) by establishing data governance and rolling out its first round of data stewardship training. MDM at a basic level seeks to identify the critical data which are required by KDE while making those data more reliable and available to all staff through improved tools and processes. The data steward training now needs to be scaled up to a statewide delivery model to change the data culture in the local districts and ensure that data quality and validity is addressed at the source. The statewide district level training will include instruction about data quality, longitudinal data systems, accessing and using the KY SLDS, and how to effectively make use of the information gleaned from KY SLDS to improve student learning at the classroom and school level. Grant funds are being sought to develop and deliver this training module for all 174 school districts.

Identity Management (IDM)

Kentucky needs longitudinal data tracking of our elementary and secondary schools academic and skill level performance in preparing our children for the education and skills needed for higher education and the workforce of tomorrow. It is necessary to determine which elementary and secondary schools are succeeding at a high level and which schools are not being successful. The goal is not only to create a tracking system that follows students through continued education or a job, but one which can look at the economic outcomes as to pay, and continue to track their performance as to education, skill levels, employment and economic outcome over time. This system must be accessible and easy to use by educators at all levels.

For all of this to come together in the most efficient, effective and secure manner, the KY SLDS needs to institute an identify management system. KDE's Office of Education Technology has explored identity management as it relates to the data collected and used by KDE This groundwork provides a base from which to design and implement an identity management system for the KY

SLDS enterprise. The expansion into the employment and financial aid sectors is contingent upon the development of Identity Management.

Funds are being requested in this grant to establish an IDM system for the KY SLDS that will be scalable. An IDM system is necessary to appropriately and automatically match people with meaningful and timely resources within an electronic environment where the identities of both the people and the electronic resources must be unique, and include appropriate descriptions of their roles that are consistent across the state. Authorization is particularly important in education environments given the strict protections afforded to student information in the Family Education Rights and Privacy Act, and other Federal, state and local statutes and regulations. Effective authorization must be designed to prevent unauthorized access of personally identifiable student data. By establishing an IDM system tailored to the specific needs of Kentucky, a comprehensive information environment can be created to provide the entire state unprecedented access to education resources, collaboration capabilities, data-driven decision tools and other functionality to create a connected learning community.

In addition, IDM will likely be the only way to allow educators and administrators to have any method of viewing even large groups of student numbers. It is far too cumbersome to manually add and delete users or change their permissions by hand from a centralized, state level. KDE has established common information systems for school districts throughout the state for managing student, human resource and user account information. This statewide commonality of core systems provide school districts and KDE great opportunities for efficiencies and levels of service that do not exist in most states where such consensus among state and local education agencies has not been achieved.

One challenge that the Collaborative faces, however, is that the common systems are administered autonomously to some degree in school districts resulting in differences and redundancies in how people are identified. As the Collaborative moves forward with further expansion of the KY SLDS, the differences in information captures about people by the various systems become more visible and problematic. In order to appropriately target information and resources to people who use information systems, their identities must be unique, and include appropriate descriptions of their roles that are consistent across the state. Correct implementation of IDM uses role information to authorize access only to the data, information and resources that are needed for that role.

The KY SLDS must be seen as a vital tool for educators across the state to use to inform decision-making, improve classroom practice, increase student learning, increase enrollment in institutions of higher education, etc. Our task is to educate our teachers and administrators about data-driven decision making. Teacher preparation programs must come to understand that data-driven decision making is much more than an assessment course or introductory statistics, but rather is comprised of a composite of skills and knowledge that typically would be accumulated through a variety of courses. These might include assessment, statistics, instructional psychology, pedagogy, differential psychology, and classroom management, among others. But none of these courses deal specifically with how educators transform data into actionable knowledge, whether in a classroom or in a school or central office. Thus, data-driven decision making often falls through the cracks and educators are ill-prepared in data literacy skills. To date, there are few pre-service courses on data-driven decision making that help prepare our future educators. The cohort of current educators may or may not

have received in-service training, but generally it is comprised of a one-time event, rather than ongoing professional development so that they can integrate data skills and knowledge into every day practice. By providing school and classroom-level educators access to a robust data support system (i.e., KY SLDS) and on-the-job training in how to use the system to improve instructional practice, Kentucky can make giant leaps in student achievement and improving low-performing schools. It is vitally important that teacher preparation courses include a measurement and evaluation component, which KDE and CPE can jointly develop with the colleges and universities within the Commonwealth.

Reengineering Collection Processes and Storage

At the time that the participating agencies began data collection, a statewide longitudinal data system was just over the horizon. The methods of collection, storage and reporting on the data were adequate to address the individual needs of each agency for tracking and reporting. With the creation of the KY SLDS the landscape has changed dramatically. Before the KY SLDS can import teacher preparation and multiple certification pathway data some of the agency source systems must be reengineered and further aligned.

In 2003, the EPSB was awarded an $11 million Teacher Quality Enhancement Grant (TQEG). A major component of this grant involved evaluating and revising the new teacher induction process, Kentucky Teacher Intern Program (KTIP). In addition, the grant supported a state-wide initiative to align educator preparation curricula to Kentucky's K-12 core content and program of studies. As a part of the grant, the EPSB brought together members of the educator preparation community from across the state to discuss technology issues and solutions in order to improve the quality of educator preparation programs. This collaborative group is known as the Kentucky Information Technology in Educator Preparation (KITEP) group. One of the most successful KITEP initiatives was the development and implementation of a bi-directional data sharing project between the EPSB and three university partners. Since 2006, the initiatives funded by this grant have continued to be supported and sustained. In 2008, the changes to KTIP initiated by the TQEG were implemented state-wide. The data collection systems developed and implemented through the grant are still in place and supported by EPSB's technology budget and will become part of the KY SLDS. But other data needs must be addressed to improve the means by which the data are extracted and loaded into the shared repository. EPSB does not have the capacity to effect these changes without the support of funding from this grant.

As evidenced by the development of new applications, the EPSB continues to show its commitment to sustaining ongoing technology initiatives. In fact, the development and sustainment of the EPSB IT infrastructure comprises 21% of the agency's general fund budget. In addition, the agency continues to support and sustain state-wide projects in order to improve the quality of Kentucky's P-12 educators.

For several years, the EPSB has discussed the level of accountability for educator preparation programs to assist P-12 educators in helping their students reach proficiency by year 2014. In September 2005, the EPSB appointed the Master's Redesign Committee to develop recommendations resulting in the redesign and approval of advanced rank change programs that integrate job-embedded content through collaboration with P-12 school districts and arts and

science faculty. All facets of the Master's Redesign have been completed and the first redesigned program was presented to the EPSB for review in August 2008. . In order to monitor and measure the successes of these programs, data analysis and research projects will need to be implemented and a repository of data to facilitate this process will need to be in place. Funding is requested to develop methods to collect this data within the EPSB feeder system.

A portion of the funds requested in the application will be used to expand and improve the EPSB current central data collection process and expand the necessary reporting for the program areas through the KY SLDS. The current certification process is paper driven with minimal data elements being captured during the certification process. Key data elements reside on the paper application ; however, they are not keyed into a database where they can be retrieved for reporting purposes. Expanding the system to collect this information in a database will improve the level of information available to describe the linkage between teacher preparation, certification and the student. Under this grant, EPSB's process would be enhanced so that data elements are captured and stored in databases and supplied to the KY SLDS. This data is a critical component of the KY SLDS as the state also moves toward a new teacher evaluation system.

The teacher certification system currently collects demographic data on teachers, teacher assessments, teacher education and other teacher data which will be shared within the KY SLDS. However, EPSB is unable to track individuals used as emergency substitutes, non-certified persons used as substitutes, and how many days they serve in a classroom. The issue of substitute teachers, their credentials, and number of days served in a classroom when tracked over time can inform policy-makers about establishing rigorous criteria for certification as a substitute to insure that students always have a highly effective teacher providing instruction. In addition, as Kentucky reviews alternative teacher certification processes that are not university-based (e.g. Teach for America) an entirely new set of data will need to be collected and stored in the shared repository. Issues of data collection and storage across the enterprise to address these deficiencies will be addressed through data governance.

The Council on Postsecondary Education needs to further align its internal databases and develop an application that gathers and delivers data to the KY SLDS that is timely and of the highest quality. The Council needs to make improvements to its Kentucky Postsecondary Education Data System (included in the KY SLDS in the currently-funded effort), pull together other internal data sources and create a single data exchange system that will make CPE data collection and reporting more efficient, seamless, accurate and interoperable.

Currently, CPE collects data from public and private postsecondary institutions in multiple ways. In addition to KPEDS and Adult Education Reporting Information System (AERIN), described above, CPE collects data through the Kentucky Postsecondary Program Proposal System, a financial data system, a campus crime reporting system , an Academic Program Inventory, Licensure data on private and out-of-state institutions operating in Kentucky, students pursing degrees out-of-state through the SREB's Academic Common Market, and the Virtual Campus Navigator which supports on-line courses and professional development. These data are formatted in separate applications, emails, SQL and Access databases and spreadsheets, creating time-consuming manual work for staff to manage, consolidate and match data as needed for reporting and analysis. These hand processes also slow access to data and impair the quality of the data.

The current process for collecting Federal program data within KDE is manual, paper forms entered into Excel spreadsheets at the state level. KDE would like to capture federal data in our new student information system whereby it could be easily extracted and loaded to the KY SLDS; however, no funds are available to make changes to the student information system. In late November, the State Budget officer directed all state government agencies to prepare a 6% budget reduction plan making it likely that KDE will face some level of budget reduction in its operating funds. Moving federal data into our KY SLDS will ensure all student populations are considered when stakeholders make decisions based on the KY SLDS data.

KDE currently houses its school facilities data in Excel sheets with manual paper forms completed by districts. It is estimated that over $9 million in facility plans and construction projects are maintained with no data controls resulting in poor data quality. Should this grant be awarded, KDE will use funds to build an operational system to collect facilities maintenance and project information which could easily be extracted and loaded into the KY SLDS. Due to such criticality of facilities data, the KY SLDS is pulling Excel sheets into its database tables; however, validity and accuracy of data are lacking due to no automated collection system.

P-12 transportation data is yet another critical component needed for the KY SLDS. What percentage of students is transported at public expense and how much does Kentucky spend on transportation on a per pupil basis? What impact does it have on student learning when a child boards a school bus at 6:00 a.m. and is returned home at 5:30 p.m.? How safe are our buses and our students? What are the student reports of bullying on our school buses and how does that affect student learning? It is almost impossible for KDE to answer these questions with its current manual data collections for transportation data.

The ability to manage statewide transportation data effectively has a direct impact on funding allocation to schools for bus procurement and depreciation as well as the safety of students. Bus transportation data is included in calculations for Support Education Excellence in Kentucky (SEEK) funding to school districts. SEEK calculations are based on manual paper collections from school districts. Should this grant be awarded, KDE will use funds for a data collection system and perform ETLs on the data directly transferring data into the KY SLDS.

Need for Expanded Research and Utility

The Collaborative recognizes the need for a more comprehensive approach to incorporating research and analysis into its decision-making process. This approach includes increasing the substantive capacity within the department to do analysis of short-turnaround issues, developing formal relationships with external organizations for longer-term studies and program evaluation, and making strategic applications for external grants to supplement state appropriated funds. Funding is requested to support these research and program evaluation needs.

Greater analytic capacity can make all agencies better consumers of analysis and help ensure that new initiatives are designed and implemented in a way that allows for a rigorous evaluation of their efficacy. Having staff well versed in analysis will also help when articulating the analytic rationale for

policy decisions outside of the department. The Commissioner of KDE will establish an office for research and analysis in 2010.

There is also a strong need for additional funding to develop the capabilities of the KY SLDS to facilitate the policy and applied research of student success at the postsecondary level. The remainder of this section details and explains the need for expanded postsecondary data to be included in the KY SLDS.

CPE's policy and applied research agenda includes many one-time, ad hoc data merges with other agencies for projects such as the High School Feedback Report, studies of student employment and migration after graduation or after drop-out, the dual enrollment of high school students, student financial aid studies, and of course college readiness. Funding is requested here to free these projects from the limitations of ad hoc merging and analysis by building them into the KY SLDS and expanding their scope and utility. When CPE staff present findings based on these ad hoc projects, there are always excellent questions raised by legislators, board members and agency leadership that cannot be answered using just the data merged for the given research project. Incorporating these research functions into the KY SLDS will enable the flexible, real-time analysis needed to meet policy-makers' needs and leverage the data sharing and analytical opportunities made possible by the generosity of the federal SLDS program..

II - PROJECT OUTCOMES RELATED TO SYSTEM REQUIREMENTS AND IMPLEMENTATION

The proposed expansion of the KY SLDS will enable the enhancement and refinement of the current statewide longitudinal data system which seeks to provide a seamless data structure across the P-20 and workforce environments. As presented in the introduction, there are four main objectives contained in this plan:

- Refine administration (i.e. governance, data audit, data collection)
- Expand and enhance data system capabilities
- Add new data
- Enable broader access (i.e. identity management)

Administration Refinement

This objective includes a review of governance structure, one-time data audit and the establishment of a state data audit system, the Collaborative will contract with an outside expert to evaluate the current governance structure, research proven models of governance in other states, and make recommendations on how Kentucky can establish an effective and flexible governance structure for its longitudinal data system. This review will result in the establishment of an operating discipline to manage data and information as a key enterprise asset. A data audit will be performed and will be used as the baseline for the subsequent development of a state data audit system. These actions will ensure effective data governance and data quality as well as provide new capabilities for saving and better utilizing limited resources. The resulting state data audit system will ensure that the public has confidence in the quality of the information coming out of the state's public education system. With a robust data audit system in place, policymakers and educators will know: whether or not the disaggregated student information used to rate schools for Adequate Yearly Progress (AYP) is valid; the districts that do the best job of reporting valid and reliable dropout data; whether or not districts

are reporting their numbers of untested students and reasons for not testing the students; the amount and type of data quality problems identified by districts and how those problems are being addressed.

Expanding Existing Sources

This segment of the proposed project includes the expansion, updating and re-engineering of the Collaborative's data collection processes. The collection capabilities of the current Collaborative partners must be enhanced in order to subsequently integrate additional data related to teacher certification, internships, emergency substitutes, facilities, student transcript data, and other data currently not easily transferrable into the KY SLDS. In some instances this will require re-engineering of the individual partner data collection processes. Critical to the success of this aspect of the project (and for the inclusion of new data) will be the data audit and the creation of a user accessible metadata repository for KDE, EPSB, CPE, KHEAA and the Education and Workforce Cabinet. This will provide for better tracking capabilities and analysis of the P-20 education system.

Adding New Data

New data from KDE, EPSB, CPE, KHEAA, the Office of Employment and Training (includes unemployment insurance) and the Office of Vocational Rehabilitation will be profiled and brought into the KY SLDS warehouse as part of this project. This will provide enhanced capabilities to extract and use data from sources outside the education system to insure that student learning is aligned with the needs of postsecondary education and success in the workplace.

Enabling Broader Access

This segment of the project involves two main objectives: establishing an identity management solution (IDM) and developing a communications and training plan that provides a consistent message and method of delivering training across the partner agencies. Completing these two objectives will ensure that role-based authorization protocols are consistent across the KY SLDS and that training and information provided to enable expanded use of the system will be comprehensive and standardized. Identity management implementation will result in the establishment of a comprehensive information environment which will provide the entire state unprecedented access to education resources, collaboration capabilities, data-driven decision tools and other functionality to create a connected learning community.

II-a Project Design

The project proposed is made up of three bodies of work that involve nine work streams required to meet the four key goals of the grant listed above:

Bodies of Work (See Chart # 1 in appendix)

1. Overall Planning, Governance, Data, and Reports
2. Data Audit and Technical Training
3. Identity Management

The project is designed in such a way to ensure efficiency and cost-effectiveness. We plan to organize scope, schedule and budget for the bodies of work and nine work streams with one project team assigned to each body of work for a total of three project teams.

More detailed planning will take place upon grant award to finalize the "depth" or extent of the project's scope in relation to the bodies of work, nine work streams and the three project teams. For example, Kentucky's assumption is that the implementation of identity management will remain within the scope of the project in order to ensure that the KY SLDS is accessible and easy to use by educators at all levels.

Body of Work (1.1) - Overall Planning, Governance, Data, & Reports
This body of work will be comprised of the following five work streams:

1.1.1 Conduct Advance Planning and Focus Group Requirements –
Upon grant award, the project will begin a nine month planning phase. The following comprise the major activities of the planning and business requirements definition phase:

- Conduct a gap analysis between the grant award and previous estimates. The analysis will evaluate monetary, personnel, time, hardware, and software assumptions and will serve as one of the inputs into the KY SLDS master project plan. During this period, areas examined will include scope, risks, issues, resources, time, revised stakeholder needs, personnel, governance and future sustainability requirements.
- Revise the KY SLDS Project Plan– This comprehensive project plan will serve as a "blue print," or "road map," for the entire project and will be conducted by the lead project manager who is working on the current KY SLDS IES grant-Specific inputs and outputs will be defined for each work stream.
    - Integration Management
    - Scope Management
    - Time Management
    - Cost Management
    - Project Quality Management
    - Human Resource Management
    - Communications Management
    - Risk Management
    - Project Procurement Management
- Develop Comprehensive Transition to Service Plan – This plan will detail the supportability expectations and requirements for transitioning all areas with the scope of the project to an on-going operational state and will be used to develop the Collaborative's joint budget request during the 2012 legislative budget session. (Kentucky is on a biennial budget cycle)
- Release RFPs – Request for Proposals will be released for professional services for the data audit, professional services for training development, and professional services for data governance analysis and recommendations.
- Focus Group Requirements – Contract with external vendor to develop, conduct and report on a series of regional focus groups structured to collect needs assessment data from current and future users of the KY SLDS.

1.1.2 Review KY SLDS Governance
The Collaborative will contract with an outside expert to analyze and evaluate the current governance structure, research proven models of governance in other states, and make recommendations on how Kentucky can establish an effective and flexible governance structure for its longitudinal data system. The re-engineering of existing KY SLDS feeder systems (1.1.3), will occur at the same time as this work stream.

1.1.3 Re-engineer and Update Existing KY SLDS Feeder Systems
During this phase, current systems must be modified and updated.

1.1.4 Add New Data, Reports, and Analytic Functions to KY SLDS
The data from the systems modified during the re-engineering work stream will be brought into the KY SLDS and related reports and analytic functions will be developed. This work steam will follow the re-engineering of existing KY SLDS feeder systems.

1.1.5 Expand and Improve User Accessible Metadata Repository
The KY SLDS's metadata capabilities will be improved to enhance the ability for Kentucky to continue and improve its master data management capabilities and provide users with a readily available system for accessing and understanding all the data that comprises the KY SLDS. This work stream will run concurrent with the addition of new data and reports work stream.

Body of Work (1.2) - Data Audit and Technical Training

This body of work will be comprised of the following three work streams. This body of work will ensue after completion of the initial planning phase of the project.

1.2.1 Perform One Audit of the KY SLDS's Data and Processes
As the KY SLDS expands, ensuring the quality and integrity of the data contained in the system becomes more complex. The Collaborative plans to contract with an independent entity to perform an audit of the technology and data processes. The details from this data audit will influence the KY SLDS's future data audit system.

1.2.2 Establish State Data Audit System
Subsequent to the one time audit, a comprehensive data audit system for the KY SLDS will be designed and implemented which will continuously assess data quality, validity, and reliability.

1.2.3 Develop and Implement Comprehensive KY SLDS Technical Training
Concurrent with the state data audit system work, one of the three project teams will oversee the development and implementation of comprehensive KY SLDS technical training by an external third-party vendor.

Body of Work (1.3) - Identity Management

Establish an identity management system tailored to the specific needs of Kentucky, in order to provide unprecedented access to education resources, collaboration capabilities, data-driven decision tools and other functionality. This body of work will ensue after completion of the initial planning phase of the project and will have a dedicated project team.

III - TIMELINE for PROJECT OUTCOMES (see Chart #2 in appendix)

Year 1

Upon grant award, the project will immediately commence an approximate 9 month planning phase. None of the other project sub-projects or phases will occur at the same time as this phase in order to provide the project team the ability to effectively conduct a gap analysis between the grant award and previous estimates. The planning phase also will include an evaluation of monetary, personnel, time, hardware, and software assumptions and will serve as one of the inputs into the KY SLDS master project plan. During this time the KY SLDS project plan will be revised and will serve as a "blue print," or "road map," for the entire project.

Also during this planning phase, a comprehensive transition to service plan will be developed that will detail the supportability expectations and requirements for transitioning all areas with the scope of the project to an on-going operational state and will be used to develop the Collaborative's joint budget request during the 2012 legislative budget session.

Additionally, the Collaborative will contract with external vendor to develop, conduct and report on a series of regional focus groups structured to collect needs assessment data from current and future users of the KY SLDS during the planning phase.

Request for Proposals will be released for professional services for the data audit, professional services for training development, and professional services for data governance analysis and recommendations early in the planning phase.

During the third quarter of Year 1, the effort to update existing systems in order to facilitate the later provision of new data into the KY SLDS will begin.

During the fourth quarter of year 1, it is anticipated that the planning activities will have coalesced to the point that the review of the KY SLDS governance, the onetime audit of the KY SLDS's data and processes and the identity management initiatives may commence.

Year 2

At the beginning of year 2, the KY SLDS governance analysis initiative, which will evaluate the current governance structure, research proven models of governance in other states, and make recommendations on how Kentucky can establish an effective and flexible governance structure for its longitudinal data system, will be nearing completion.

Also at this time, the onetime audit of the KY SLDS's technology and data processes will be approximately half way completed. The identity management effort will be well on its way at this time.

During the second quarter of year 2, the work to establish a comprehensive data audit system, and the work to develop and implement comprehensive KY SLDS technical training will begin.

At about the fourth quarter of year 2, the re-engineering and updating of existing KY SLDS feeder systems will be wrapping up. The work to establish the state data audit system and the development

of the comprehensive KY SLDS technical training will be well underway at this time. At this time the initiative to add new data and reports to the KY SLDS will begin. Also at this time the work to expand and improve the user accessible metadata repository will begin.

Year 3
The third year of the grant will see the continuation and eventual completion of adding new data and reports to the KY SLDS, expanding and improving the user accessible metadata repository, establishing the state data audit system, implementing comprehensive KY SLDS technical training, and implementing identity management.

IV - PROJECT MANAGEMENT and GOVERNANCE PLAN

Project Management Methodology
The complexities and communication needs of this cross-agency project will require effective utilization of best project management practices and approaches. Processes for risk management, communications, costs management, human resources, time management and scope management will be included in the project. An inventory of project planning documents will be developed and agreed to by the agencies. Additionally, specific roles and responsibilities, and a clearly defined and agreed upon governance structure will be required for success and will be developed as part of the project. Determination of the SEA entities that will have authority for the project will be addressed through the Collaborative.

Kentucky's P-20 de-identification model allows agencies to put a subset of their data into a shared, independent location. A third party will connect the records to create a seamless data network using information about individuals collected at many different parts of the educational spectrum in order to facilitate system-wide longitudinal research. Once the data are assembled, the identifiers will be removed and the data itself will be redacted where necessary to ensure that individuals could not be easily identified, including imposing some standards in terms of reporting data with small cell sizes. The establishment of an identity management solution will address authentication and authorization for all stakeholders provided access to the system.

Governance
In August of 2009, KDE, CPE and EPSB entered into a Memorandum of Agreement to form the Collaborative to oversee the project of merging P-20 data and make it available for reporting, analysis and research. A governing board was established consisting of the chief executive officers of the agencies: Dr. Terry Holliday (KDE), Dr. Philip Rogers (EPSB) and Mr. Robert King (CPE). Each of the three partners has assigned a Product Manager to work on the implementation of the current grant expansion.

The individual agencies continue to control their own systems, data, and resources. The board has final authority in decisions regarding operation of the project, expenditures, contracts, and access. The board is to establish clear agency-wide and cross-agency responsibilities and guidelines for handling data issues in an effective way to manage the quality of information. Roles and responsibilities within each agency are still in the process of being clearly defined as part of the data governance. The board recognizes that it is essential to create and communicate policies and

processes that define how the data are collected, reported and used to establish consistency across the system.

While the current governance structure (the MOA) is adequate to meet the needs of the KY SLDS expansion project, it is not a comprehensive and effective operating discipline for managing data and information as a key enterprise asset. The governance structure is no longer a broad enough organization to meet the requirements for governance which must be met to insure success of the magnitude and scope envisioned by Kentucky for the KY SLDS. The current MOA, which expires in 2012, is contemplated to be renewed or revised depending upon the recommendations made as a result of the governance review.

The data governance issue is not unique to Kentucky or to education data systems. Data is an important "currency" of the P-20 longitudinal data system and as such must be treated as a highly valuable enterprise asset. To this end Kentucky recognizes the importance of devising a governance structure that addresses organization, processes and tools for establishing and exercising decision rights regarding valuation and management of data. Key aspects of the governance structure that Kentucky wants to create include decision making authority, compliance monitoring, policies and standards, data inventories, full lifecycle management, content management, records management, preservation, data quality, data classification, data security and access, data risk management, and data valuation. In order to accomplish this, we are proposing to conduct a thorough review, using outside experts, of the KY SLDS with the charge to recommend a governance model that will be effective and adaptable and will address the decision-making needs of the future. The vendor will also research proven governance models in other states with well-developed longitudinal data systems and incorporate those best practices in the Kentucky model. Different agencies needs and responsibilities will change over time and their roles in this project and ongoing system will change over time – a flexible, effective governance structure must be identified and implemented.

Institutional Support

The 2011-2012 biennial budget submitted by KDE to the governor includes $2.2 million annually to: provide the ability to reload data and change loading programs in response to data structure changes; provide physical housing of servers; support existing personnel; support updates to operating systems, virus protection, monitoring and backups; provide support for users; provide the ability for users to display reports and to select different combinations of data selection criteria; provide the ability for developers to develop new reports and provide the data warehouse's underlying database structure, arrangement, linking and indexing of data. The inclusion of these funds represents a major commitment on the part of the state government because heretofore, no funds had been allotted to sustain and maintain the SLDS. This commitment is evidence of the recognition that the use of data to inform educational practice throughout Kentucky is an essential component for the future of education.

The Collaborative agencies have developed their own robust information systems and staff to provide data to meet their own individual needs. As the need to share data has increased, they have already absorbed some of these responsibilities and have dedicated staff time and technical resources in attempts to provide cross-agency data where needed. These efforts are both time and resource intensive. Examples include the Kentucky High

School Feedback Report, follow-up data for college-going rates for high school students, and workforce transition data for high school graduates, GED, postsecondary completers and educator preparation and certification data. This project will add data from additional state agencies whose staff time and resources will be redirected to this work. By providing more information in a systematic, usable format, these agency resources will be dedicated to using the KY SLDS so existing agency analytical resources including staff, licenses, and information systems will be leveraged and these existing investments can be directed toward using the KY SLDS system more effectively.

Overall, Kentucky has shown a strong commitment to data collection and continues to support and advocate for data driven decision making. The state has consistently worked to improve efficiency and quality of its educational technology infrastructure and has invested an additional $54 million to improve security, the network and network access over the past two years. In 2006, $50 million in bond funds were appropriated by the General Assembly for an education technology pool with the intent to provide modern instructional devices, stationary or mobile for public K-12 schools. In 2009, $2 million was invested to update Active Directory for all 174 districts. Kentucky is the only state in which Microsoft Active Directory is used across the entire K-12 education system and provides the means to manage the identities and relationships that make up network environments. This upgrade positions the agency to begin designing and implementing the identity management system proposed in this application.

Another initiative that the EPSB implemented on the basis of data collection and analysis was the KEPP report card. Since 2001, the EPSB has published the Kentucky Educator Preparation Programs (KEPP) report card. The KEPP report card was generated in order to address the necessary program qualities as identified by the 2000 General Assembly in Senate Bill 77, by the EPSB via the state accreditation process, and by the federal government in the Title II reporting requirements. Until recently, the KEPP report card system had been successful in focusing program resources on goals established by EPSB and other regulatory bodies, but the measures were due for revision. In May 2007, the EPSB appointed the Educator Preparation Program Quality measurement Committee (EPPQMC) to examine the existing program quality measures used by the EPSB and to recommend improved measures where needed. In June of 2007, this committee recommended that the current accountability measurement requirements be waived until more comprehensive and effective measures could be developed. The recommendation was accepted by the EPSB, and the measurement requirements were waived. The EPPQM committee submitted a final recommendation to the EPSB for consideration in January 2008. Several of the educator preparation quality measures proposed in this recommendation will require that P-12 educator information (e.g., preparation, certification, (e.g., preparation, certification, professional development, and additional education) be directly associated with student level achievement data and school level personnel data. The P-20 data warehouse project will enable these measures to be implemented in a timely and cost-effective manner. In addition, the data sharing initiative begun by this project will facilitate many of the new Title II data reporting requirements implemented by the 2008 HEA reauthorization.

KDE currently uses Kentucky's Commonwealth Office of Technology (COT) to manage the K-12 portion of the KY SLDS infrastructure. The Memorandum of Agreement covers tape backups and recovery, hardware maintenance and support, operating system patches and updates, and other

hardware maintenance and support. The COT data center supports redundant wide area connections, redundant power, security firewalls, security alerts, and 24/7/365 monitoring service. Disaster recovery and business continuity are also part of this support. The Collaborative anticipates using a similar agreement to support the expanded KY SLDS.

V - STAFFING

SEA Project Director
Dr. Larry Stinson will serve as the Project Director for this project. Dr. Stinson currently serves as the Deputy Commissioner for the Bureau of Learning and Results Services. As Deputy, he provides direction for five offices, which address issues of teaching and learning, assessment and accountability, leadership and school improvement, special instructional services, federal programs and financial and operational support for schools and districts. Dr. Stinson has also been designated as the Kentucky Department of Education (KDE) lead on implementation of the American Recovery and Reinvestment Act (ARRA). As such, he serves on the Governor's ARRA Kentucky-At-Work Team and is responsible for supervision of KDE's efforts over all areas of ARRA, including among other responsibilities, dissemination of State Fiscal Stabilization Funds and oversight of the development of the state's application for a portion of the $435 billion competitive Race to the Top funds. Approximately 5% of his time will be devoted to the KY SLDS which is intertwined with the overall ARRA effort.

Executive Director of the Collaborative
K. Ann Riggs serves as the Executive Director of the P-20 Data Collaborative. She oversees the implementation of the current expansion of the KY SLDS referred to in this grant and is the official liaison between the participating agencies involved in the effort. She is housed within the Education and Workforce Cabinet. Funds are being requested to support her full time position for the new project work which will be initiated as part of this grant if funded.

Ann most recently served as the Chief Information Officer and Director of the Division for Technology Services at the Education and Workforce Development Cabinet. Ann has 30 years experience in the technology field. She owned and operated Riggs Consulting Group, Inc., a successful technology consulting business, for 14 years prior to coming to the Education Cabinet. Ann joined the Cabinet in 2004. She has extensive experience with education data and the foresight and vision to oversee the monumental task of compiling data from pre-kindergarten through postsecondary education to evaluate educational programs in the state. Her foresight and vision have been central in the successful implementation of the Kentucky Education Network (KEN). She directs project team members on matters pertaining to the project, coordinates the collaboration of the project team members and manages changes to the project's approved scope, schedule and budget and 100% of her time is assigned to the KY SLDS project.

KDE KY SLDS Staff

Three full-time staff are assigned to the KDE and will continue to be supported by KDE general operating funds. Robert Hackworth currently serves as the technical advisor for KY SLDS project and spends 100% of his time on KY SLDS. He is a Project Manager and specialist with the Kentucky Department of Education. He has worked with the KDE for over 15 years and has played

an integral role managing or advising projects which have gone on to become national models for student empowerment and achievement, such as the Kentucky Virtual High School, the first statewide online high school; the Individual Learning Plan, an online tool that allows students beginning in their 6th grade to track their own progress towards explicit goals in secondary, postsecondary and the workforce; and an online version of the Kentucky Core Content Test that specifically engages Exceptional Children. Robert is expected to lead the team from KDE in the selection of vendors and personnel selected for this project.

Stephen B. Roark, Principal Project Management Consultant, has over 23 years of technology, large-scale enterprise project management and project office directorship experience across multiple industries including domestic and international business process outsourcing, education, government, healthcare, energy, insurance and cable television IT services. As Project Manager for the KY SLDS program 100% of his time is spent on the planning and implementation of the KY SLDS and related P20 shared repository. His most recent accomplishments include managing the statewide implementation of the original KY SLDS ("KIDS") project, which included implementing the foundation components of the KY SLDS resulting in over a dozen reports and sophisticated analytic functions using data from over 200 sources including assessment, student information, financial, and school directory domains. At the same time, Mr. Roark has provided project management and planning services for KDE's "Master Data Management" project – A long term business process change initiative focusing on improved data quality and related data management practices for KDE. Later stages of this long term initiative will focus on rolling out these practices through the state's 174 districts.

Mary Lowe has served as the only dedicated Business Analyst at the Kentucky Department of Education since April 2006. Mary brings nearly 30 years of experience in a variety of industries including government, not-for-profit, service organizations and manufacturing. Her background is in management and software consulting and has experience consulting in the areas of human resources, strategic planning, data analysis, IT strategy and marketing. At KDE she is focused on facilitating communication between the KDE staff, District staff and the SLDS implementation team. This communication involves gathering reporting requirements, documenting source system data definitions, documenting current business processes and identifying potential process improvements, validating that the reports and analytics meet user needs and identifying new reports and enhancements. The role of business analyst has become a nexus of information and has been critical in the effort to share knowledge and experience across offices and to begin to breakdown organizational silos. Mary has participated in development and delivery of the data steward training and is actively involved in data quality issue identification and resolution. She spends 100% of her time on the KY SLDS.

The Collaborative partner agencies have also designated staff to serve as product managers for the current KY SLDS expansion. Approximately 25% of staff time is devoted to this project. Existing staff at KHEAA and Office of Employment and Training will assume product manager duties should this grant be funded. Kentucky plans to create 34 full time jobs directly related to the implementation of the proposed project. These individuals will be hired beginning in year one as detailed in the budget narrative. It is anticipated that 10% of these positions will become permanent and will begin to be supported by state funds in year three. Per the required reporting

requirements of ARRA funding, these positions will be reported on at the end of each calendar quarter.

Joseph D. McCowan, currently serving as the Staff Assistant for the Office of Teaching and Learning at KDE, has been designated as Product Manager for KDE. Joe has 13 years experience in the education field, seven of those years were spent as an elementary school teacher prior to his joining the KDE staff as a mathematics consultant.

The Product Manager for EPSB is Scott Smith, Information Technology Manager in the Executive Office of the Education Professional Standards Board (EPSB). Mr. Smith has worked with the EPSB for over twelve years and is currently responsible for overseeing the application development, database management, and data reporting needs for the agency. Under Mr. Smith's direction the Information System Branch has successfully developed and implemented many of the key systems used by the EPSB.

Heidi Hiemstra, Ph.D. is Director of Information and Research at the Kentucky Council on Postsecondary Education, where she is responsible for the commonwealth's postsecondary data collections, policy research and reporting efforts. Heidi serves as the Product Manager for the KY SLDS project. Implementation and expansion of the Council's new data quality policies are central to her efforts, as is the completion of the Council's own LDS system, KPEDS. Prior to entering this position in April 2009, she was Senior Associate for Research and Analysis and then Research Coordinator at the Council, conducting policy studies of student financial aid, developmental education, the dual enrollment of high school students, and many other projects.

Project Narrative

Project Narrative - Appendix A, Optional Attachments

Attachment 1:
Title: **Attachment A optional** Pages: **6** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Appexdix A - Optional\OptionalA-al1l2-2-09.pdf**

Appendix A-1

Special Requirements

In compliance with the accountability and transparency requirements of The Recovery Act, Kentucky, if awarded these funds for the statewide longitudinal data system, will report the following information to the Department of Education 10 days after the end of each calendar quarter:

The total amount of recovery funds received from the Department

The amount of recovery funds received that were obligated and expended to projects or activities. This reporting will also include unobligated allotment balances to facilitate reconciliations

- A detailed list of all projects or activities for which recovery funds were obligated and expended, including:
  - The name of the project or activity;
  - A description of the project or activity;
  - An evaluation of the completion status of the project or activity;
  - An estimate of the number of jobs created and the number of jobs retained by the project or activity; and
  - For infrastructure investments made by State and local governments, the purpose, total cost, and rationale of the agency for funding the infrastructure investment with funds made available under the Recovery Act, and the name of the person to contact at the agency if there are concerns with the infrastructure investment.

Detailed information on any subcontracts or subgrants awarded by the recipient to include the data elements required to comply with the Federal Funding Accountability and Transparency Act of 2006 (P.L. 109-282), allowing aggregate reporting on awards below $25,000 or to individuals, as prescribed by the Director of OMB.

Kentucky understands it will be required to report at the end of each quarter on the amount of the grant funds obligated and expended; all activities for which those funds were obligated and expended; the completion status of those activities; the estimated number of jobs created or retained by the project and those activities; and detailed information on any contracts awarded with grant funds.

Appendix A-2

Press Release

Governor Beshear launches new education initiative
TEK task force will be catalyst to reinvigorate public support for K-12 education

LEXINGTON, Ky. (Oct. 19, 2009) – In a move to re-energize the support of public schools that nearly 20 years ago sparked Kentucky to implement the nation's most comprehensive school reform, Gov. Steve Beshear today launched his new education initiative, Transforming Education in Kentucky (TEK). The goal is to create a unified vision of what schools in the Commonwealth need to offer in order to better serve students today and tomorrow.

"Our world has changed dramatically since the reforms of 1990," said Gov. Beshear. "We must now turn our focus to the future and again to our schools to ensure that our strategies and programs are designed to meet the challenges of the 21st century."

To that end, Gov. Beshear appointed the TEK Task Force to help develop new strategies while reinvigorating public and business support for K-12 education in the Commonwealth.

The members of the task force include education advocates, teachers, superintendents, legislators, business leaders and others who have been handpicked for their commitment to education and to Kentucky.

The group will examine efforts currently underway in the state, such as the Common Core Standards Initiative, Graduate Kentucky, the Gates Foundation/SREB college and career readiness initiative, the Race to the Top competition and the Governor's Task Force on Early Childhood Development and Education. Against this backdrop of renewed energy and activity, the panel will recommend ways to channel all of these efforts into an integrated and comprehensive system of education in Kentucky.

In addition, the task force will explore career and technical education, expanded use of technology for learning, increased opportunities for students to earn college credit in high school and other issues that affect student success.

The goal is to formulate recommendations by the end of 2010, for consideration during the 2011 legislative session.

In an effort to build awareness of the initiative and to receive input from citizens statewide, Gov. Beshear is visiting 10 cities across the state for a series of press conferences and town hall forums. The Governor and the TEK Task Force will use this input as guidance for the work of Transforming Education in Kentucky.

"This effort seeks to build off the progress of the last 20 years in order to lay the foundation for the 20 years ahead," said Gov. Beshear. "Today, I'm calling on our state and our people to recommit ourselves to ensuring the future of our children."

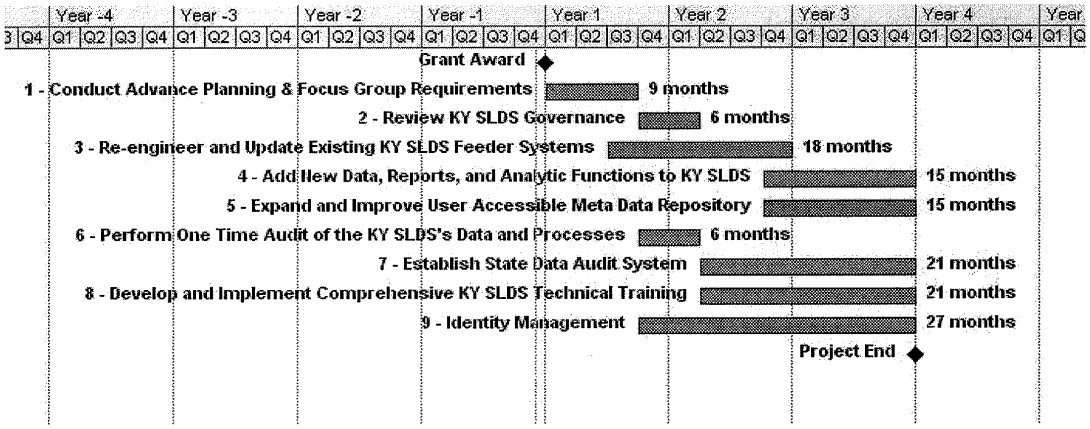
Gov. Beshear and Kentucky Department of Education Commissioner Terry Holliday will serve as co-chairs of the task force.

Other members of the task force include:

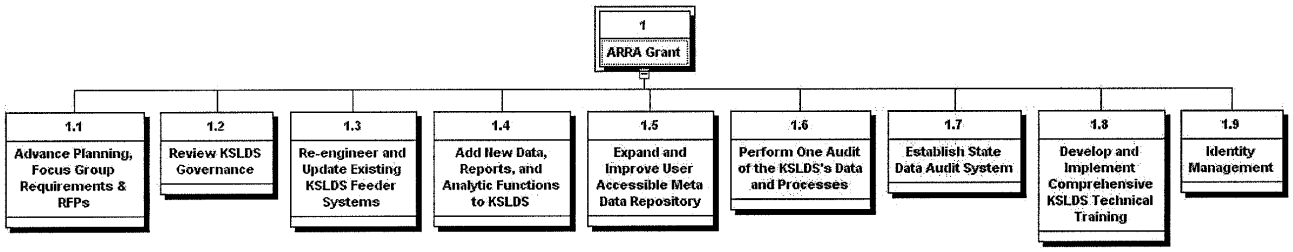
* Sen. Ken Winters, R – 1st District

* Sen. Jack Westwood, R-23rd District
* Sen. Tim Shaughnessy, D-19th District
* Rep. Leslie Combs, D-94th District;
* Rep. Jeffrey Hoover, R-83rd District;
* Rep. Carl Rollins, D-56th District;
* Helen Mountjoy, secretary, Education and Workforce Development Cabinet
* David Adkisson, president, Kentucky Chamber of Commerce;
* Sheldon Berman, superintendent, Jefferson County;
* Mary Ann Blankenship, executive director, Kentucky Education Association;
* Karen Cash, classroom teacher, Louisville;
* Margaret Cleveland, school board member, Woodford County;
* Sam Corbett, chair, Prichard Committee;
* Ben Cundiff, Cundiff Farms, Cadiz;
* Sharon Darling, president, National Center for Family Literacy;
* Betty Griffin, The Griffin Group, Frankfort;
* Tim Hanner, superintendent, Kenton County;
* Trichel House, classroom teacher, Russell (Greenup County);
* Nannette Johnston, superintendent, Hardin County;
* Eleanor Jordan, executive director, Kentucky Commission on Women;
* Robert King, president, Council on Postsecondary Education;
* Nana Lampton, American Life & Accident Insurance Company of Kentucky, Louisville;
* William Lovell, school board member, McLean County;
* Brent McKim, president, Jefferson County Teachers' Association;
* Bob Porter, mayor, City of Paintsville;
* Johnna Reeder, Duke Energy, Covington;
* Stu Silberman, superintendent, Fayette County;
* Stephen Trimble, superintendent, Johnson County; and
* Diane Whalen, mayor, City of Florence.

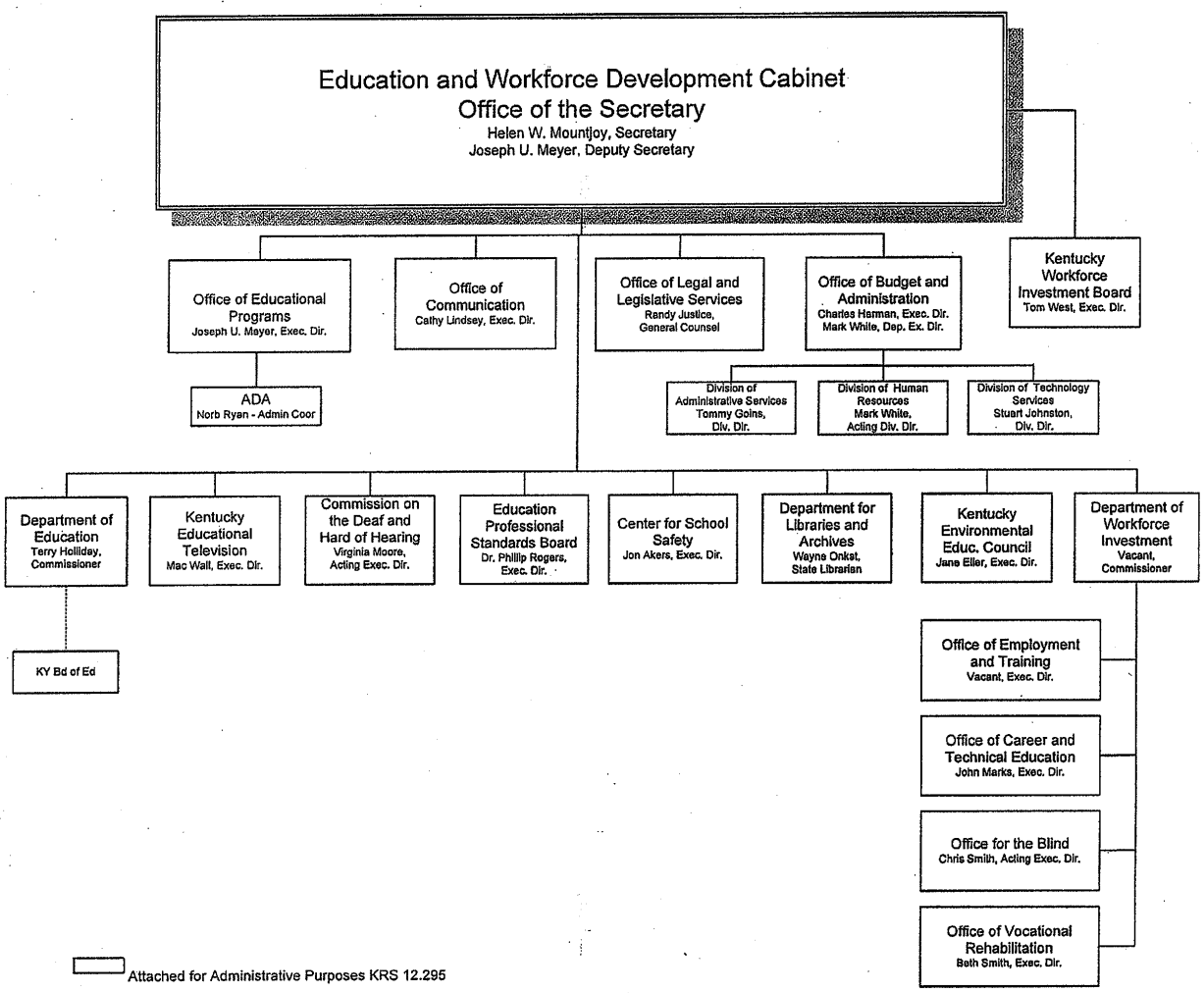
Appendix A-3 Project Timeline



Appendix A-4
Work Streams



PR/Award # R384A100020


Education and Workforce Development Cabinet
Office of the Secretary
Helen W. Mountjoy, Secretary
Joseph U. Meyer, Deputy Secretary
Office of Educational Programs
Joseph U. Meyer, Exec. Dir.
ADA
Norb Ryan - Admin Coor
Office of Communication
Cathy Lindsey, Exec. Dir.
Office of Legal and Legislative Services
Randy Justice, General Counsel
Office of Budget and Administration
Charles Herman, Exec. Dir.
Mark White, Dep. Ex. Dir.
Division of Administrative Services
Tommy Goins, Div. Dir.
Division of Human Resources
Mark White, Acting Div. Dir.
Division of Technology Services
Stuart Johnston, Div. Dir.
Kentucky Workforce Investment Board
Tom West, Exec. Dir.
Department of Education
Terry Holliday, Commissioner
KY Bd of Ed
Kentucky Educational Television
Mac Wall, Exec. Dir.
Commission on the Deaf and Hard of Hearing
Virginia Moore, Acting Exec. Dir.
Education Professional Standards Board
Dr. Phillip Rogers, Exec. Dir.
Center for School Safety
Jon Akers, Exec. Dir.
Department for Libraries and Archives
Wayne Onkst, State Librarian
Kentucky Environmental Educ. Council
Jane Eller, Exec. Dir.
Department of Workforce Investment
Vacant, Commissioner
Office of Employment and Training
Vacant, Exec. Dir.
Office of Career and Technical Education
John Marks, Exec. Dir.
Office for the Blind
Chris Smith, Acting Exec. Dir.
Office of Vocational Rehabilitation
Beth Smith, Exec. Dir.
Attached for Administrative Purposes KRS 12.295

Rev. 10/16/09

Project Narrative

Project Narrative - Appendix B Resumes of Key Personnel

Attachment 1:
Title: **Key Resumes** Pages: **15** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Resumes\Resumes-all120209.pdf**

TERRY HOLLIDAY

Kentucky Department of Education

Terry Holliday, Ph.D., was selected as Kentucky's fifth commissioner of education in July 2009.

Holliday, 58, served as superintendent of the more than 20,000-student Iredell-Statesville school district from 2002 until 2009. During his tenure, he has received recognition in a variety of areas, including being named 2009 North Carolina Superintendent of the Year; receiving the 2009 Grayson Medal for Innovation in Quality from the American Productivity Quality Council; being named the 2008 North Carolina Music Educators Association Superintendent of the Year; and selection as a 2008 Friend of NCAAHPERD, a physical education and health award.

Under his leadership, the Iredell-Statesville school district received the 2008 Malcolm Baldrige National Quality Award, which was created by an act of Congress in 1987 to recognize companies, organizations, businesses and other entities that have shown long-term improvement in quality and productivity.

Holliday served as North Carolina School Superintendent Association president and as a member of the North Carolina Race to the Top Committee, the North Carolina Blue Ribbon Commission on Testing and Accountability, the North Carolina Principal Evaluation Rubric Development Committee, the North Carolina E-Learning Commission/Virtual High School Advisory Committee, the Governor's Teacher Working Conditions Advisory Committee, the United Way Board of Directors, the Statesville and Mooresville Chamber of Commerce Board of Directors, the Boys and Girls Club Board of Directors and many others.

Holliday's previous experience includes: superintendent of the Transylvania County school system in Brevard, North Carolina; associate superintendent and director of accountability for Rock Hill School District 3 in York County, South Carolina; principal, assistant principal and director of instrumental music for Fort Mill High School in Fort Mill, South Carolina; and band director at Northside Junior High, Parker High and Gaffney High in South Carolina.

He earned a bachelor's degree from Furman University; a master's degree and education specialist degree from Winthrop University; and a doctorate from the University of South Carolina.

A native of Belton, South Carolina, Holliday and his wife, (b)(6) are the parents of two children: (b)(6)

Dr. Larry Stinson
Deputy Commissioner
Kentucky Department of Education

Larry Stinson currently serves as the Deputy Commissioner for the Bureau of Learning and Results Services. As Deputy, he provides direction for five offices, which address issues of teaching and learning, assessment and accountability, leadership and school improvement, special instructional services, federal programs and financial and operational support for schools and districts. Dr. Stinson has also been designated as the Kentucky Department of Education (KDE) lead on implementation of the American Recovery and Reinvestment Act (ARRA). As such, he serves on the Governor's ARRA Kentucky-At-Work Team and is responsible for supervision of KDE's efforts over all areas of ARRA, including among other responsibilities, dissemination of State Fiscal Stabilization Funds and oversight of the development of the state's application for a portion of the $435 billion competitive Race to the Top funds.

Dr. Stinson has 36 years of educational experience and was superintendent of the Ft. Thomas Independent school district from 1994 until June 2007. Along with the duties of a school superintendent, he also handled many duties traditionally handled by the finance officer, including tax rate calculations, state funding estimates and budget development. Stinson's prior experience includes serving as superintendent for the Bremen Public School District and the Whitley County Consolidated School District in Indiana. He also has served as an assistant professor/lecturer at Thomas More College, high school principal, teacher and band director.

Dr. Stinson earned bachelor's and master's degrees and a Rank I from Murray State University. He also earned a doctorate from Indiana University and holds certifications for school superintendent, secondary school principal, supervisor of instruction and high school teaching.

Phillip S. Rogers, Ed.D.

Phillip S. Rogers, Ed.D., of Scottsville, Kentucky, became executive director of the Kentucky Education Professional Standards Board (EPSB) in 2005. He has been with the EPSB since 2000, serving as director of the Division of Professional Learning and Assessment prior to becoming executive director. A native of Nashville, Tennessee, Rogers received a B.S. degree in counseling from Liberty University in Virginia, an M.A. in child development from Western Kentucky University, and a doctorate in education evaluation from the University of Louisville.

Before going to the EPSB, Rogers served as the founding director of the Allen County Schools' Family Resource Center, recognized in 1995 as Kentucky's Outstanding Family Resource Center by the Kentucky Association of Guidance Counselors.

As executive director of the EPSB, Rogers oversees the daily operation of the agency, which was established as part of the 1990 Kentucky Education Reform Act. Among other responsibilities, the Standards Board is charged with establishing standards of performance both for preparation programs and practitioners; accrediting educator preparation programs; selecting assessments for teachers and administrators; overseeing internship programs for new teachers and principals; and issuing, renewing, suspending, and revoking Kentucky certificates for professional school personnel.

Rogers has performed research and evaluations for a variety of organizations and programs, including the Kentucky Institute for Educational Research, the National Center for Family Literacy, the Kentucky Safe Schools Project, and the Kentucky Department for Juvenile Justice. Educational policy formation as it relates to educator preparation and professional development for experienced educators are two of his current research interests.

Robert L. King

Robert L. King became the third president of the Kentucky Council on Postsecondary Education January 16, 2009. He previously served as president and CEO of the Arizona Community Foundation, a statewide charitable foundation with a strong focus on education, economic development, and scientific research. Mr. King is the former chancellor of the State University of New York, one of the largest comprehensive systems of universities, colleges, and community colleges in the world.

Mr. King is very active in community service and has volunteered and served on numerous boards and organizations. He also has served on the White House Commission on Presidential Scholars; the Education Committee of the U.S. National Commission for the United Nations Educational, Scientific, and Cultural Organization (UNESCO); an advisor to the Middle State Commission on Higher Education regarding reauthorization of the Higher Education Act in Congress; the board of directors of the National Soccer Hall of Fame; and the board of trustees of A.T. Still University, a specialized university dedicated to training people for the health care professions, in Kirksville, Missouri, and Mesa, Arizona.

Mr. King received a bachelor of arts degree in 1968 from Trinity College in Hartford, Connecticut, and a juris doctor in 1971 from the Vanderbilt University School of Law. He is married to Karen, his wife of 32 years, and they have four grown children.

K. ANN RIGGS

K. Ann Riggs is the Executive Director of the P-20 Data Collaborative at the Kentucky Education and Workforce Development Cabinet. She will oversee the recently formed Education Collaborative that will create a longitudinal student data system that spans a student's entire educational career. collaborative will make it possible for the first time to link student, teacher, postsecondary and certification data so that informed decisions about education strategies can be formulated.

Ann most recently served as the Chief Information Officer and Director of the Division for Technology Services at the Education and Workforce Development Cabinet.

Ann has 30 years experience in the technology field. She owned and operated Riggs Consulting Group, Inc., a successful technology consulting business, for 14 years prior to coming to the Education Cabinet. Ann joined the Cabinet in 2004. She has extensive experience with education data and the foresight and vision to oversee the monumental task of compiling data from pre-kindergarten through postsecondary education to evaluate educational programs in the state, Her foresight and vision have been central in the successful implementation of the Kentucky Education Network (KEN). KEN is a seamless education-centric network that equitably supports the whenever, wherever, and whatever lifelong learning for all Kentuckians.

She currently serves on the Kentucky State University Information Technology Advisory Board and the ConnectKentucky's Advisory Board.

Ann lives in Frankfort with her husband, Gregg.

(b)(6)

502-564-4772 (w)
502-564-6470 (f)
(b)(6)

Robert F. Hackworth

Summary

- Seasoned program manager with expertise in human relations and project management
- Extensive background in education data and related issues
- Superb written and oral skills
- Experience with successful proposal development, contract negotiations and compliance
- Clear vision and excitement for the application of data and technology to improve student achievement
- Determined, yet flexible

Experience

2005–2009 KEANE, Inc. Frankfort, KY

Product Manager, Commonwealth of Kentucky

- Serves as the owner, administrator and primary spokesperson of the Kentucky Instructional Data System (KIDS) project; a statewide longitudinal data warehouse and decision support system.
- Guided development of the Kentucky response to the federal SLDS grant RFP, which eventually brought $5.8 million to the Commonwealth – the highest amount provided to any state during this grant cycle.
- Guided development of the Commonwealth's Request for Proposal to select a vendor to implement the KIDS. This RFP resulted in selection of tools which are consistently ranked at the top of their respective categories of Portal, Data Warehouse, and Business Intelligence.
- Determines and approves all business rules, functional requirements and system priorities for KIDS. Currently leading effort to include facilities data with other non-academic data, which is a first for the SLDS grant recipients.

2003–2005 KEANE, Inc. Frankfort, KY

Project Manager, Commonwealth of Kentucky

- Provided management and guidance in support of the Kentucky Board of Education's goals and objectives to increase and improve use of data within the Department of Education, public schools, and other state agencies.
- Represented the Commissioner of Education at Distance Learning Advisory Committee (DLAC); a group tasked with defining how education in Kentucky can best be served via electronic means.
- Served as Project Manager to implement the Individual Learning Plan (ILP), a unique statewide electronic tool utilizing information from the Student Information System in conjunction with career information and student goals to provide a traceable career path

for students in grades 6 through 12. Guided development of the Request for Proposal, the vendor selection process, and initial development of the system including how it would interact with existing systems such as KYConnect.

- Project management for research, visioning and development of the Kentucky Knowledge Management Portal -- an electronic system to link student performance data and instructional resources while providing students, parents, instructors, and administrators a central location to check student and district progress and find related instructional resources.

1994 –2003 SCB, Inc. Frankfort, KY

Project Manager, Commonwealth of Kentucky

- Established the first and only online assessment in the nation specifically for students taking a high stakes test (Kentucky Core Content Test) who also require special accommodations.
- Founding team member of the Kentucky Virtual High School. The KVHS was the first statewide virtual high school and is nationally and internationally recognized as a leader among peer institutions.
- Host Committee Project Manager for Intel 2002 International Science and Engineering Fair, Kentucky. Planned, organized, and managed science-centered presentations for 2500 international K-12 students and instructors. Recognized as "setting the bar" for subsequent ISEF events.
- Approved and managed yearly technology budgets totaling over $33 Million for 24 central Kentucky school districts, including Fayette County, the second largest district in the Commonwealth.
- Vital in the regional and statewide adoption of Universal Service Fund grant opportunities, which resulted in and continues to provide hundreds of millions of dollars in savings on technology services for Kentucky schools.
- Created, and aided in the creation of, state policies governing use and implementation of technology in Kentucky schools. Promoted integration of technology and educational curriculum.
- Provided a liaison between school districts and state government to ensure appropriate representation and conflict resolution.
- Provided leadership and assistance to increase student involvement in LAN/WAN operation to assist existing district staff and increase student interest and skills with technology.

Education

1989 –1990 Morehead State University Morehead, KY

- M.A., Master of Arts

1985 –1989 Morehead State University Morehead, KY

- B.A., Bachelor of Arts
- Graduated *Magna cum laude.*

Steve Roark, PMP

SUMMARY

- ***Experienced IT Professional*** - Industries include domestic and international BPO, education, government, healthcare, energy, insurance and cable television IT services. Business areas include IT, instructional improvement, vendor & contract management, claims processing and adjudication, open enrollments, QA, financials, HR, facilities, training, production control and insurance. Technical areas include data warehousing, longitudinal data systems, business intelligence, identity management, GIS, workflow processing, imaging, data capture, ERP, (SAP R/3), EAI, (Tibco).

- ***Experienced Project Management Office (PMO) Director*** – Responsible for overseeing 50 employee division with $5.6M budget. Accountable for successful delivery of outsourced BPO contracts using India IT resources representing $250M revenue.

- ***Experienced PMP Certified Project Manager*** – Direct experience in all project management (PMI) knowledge areas and software engineering (CMM) key process areas. Directly mange projects ranging from $5M - $25M annual revenue, and 6 months – 3 yrs in duration. Direct experience on both customer and provider sides.

- ***Project & Software Methodology Expert*** - Solution delivery expert responsible for formulation and rollout of Solution Delivery Framework (SDF) and related business processes for $1B corporate operating group. The SDF helps ensure quality delivery of outsourced IT solutions by integrating project management and software engineering, and effectively connecting Sales with Operations.

- ***Experienced College Instructor*** - Possess excellent communication and presentation skills. Conduct lecture and laboratory instruction in Operating System Concepts, Program Design and Development, and Microcomputer Applications Development courses.

- ***Global IT Problem Manager*** - Responsible for technical disaster backup and recovery planning, crisis planning, and best practices improvement for worldwide IT operations for broad spectrum of platforms and technologies.

WORK HISTORY

July, 2006 – Present – Keane Consulting / Kentucky Department of Education, Frankfort, KY, (3 years)

Principal Project Consultant - Responsible for planning and managing development of state-wide longitudinal data warehouse / decision support system for the Commonwealth of Kentucky. This first of its kind multi-agency business intelligence solution helps fulfill requirements of the No Child Left Behind (NCLB) act and is used to provide dashboard driven data visualization education analytics to educators in order to improve instruction.

EDUCATION

- Bachelor Business Administration in Data Processing, Morehead State University, Morehead, KY, May, 1986
- BA in Music Composition & Arranging, Morehead State University, Morehead, KY, May, 1986
- Certified PMP, Project Management Professional

Steve Roark • (b)(6) • http://www.linkedin.com/pub/steve-roark-pmp/2/136/a86

WORK HISTORY (*continued*)

Sept., 2002 – June, 2006 – ACS, Inc., Lexington, KY, (4 years)

- 07/2005 – 06/2006 – **PMO Director** - Reduce costs and improve quality of delivery and operation of outsourced implementations by managing project portfolio and delivery of solutions for unit's most complex and large value implementations. Improve productivity in the sales to implementation cycle by developing and implementing unit-wide Solution Delivery Framework methodology.
- 09/2002 – 06/2005 – **Regional Project Manager –** Directly manage projects for major healthcare providers covering all aspects of outsourcing contracted projects including IT, HR, facilities, high volume transaction processing, data capture and off shoring.

1992 - 2002 - Ashland, Inc., Lexington, KY, (10 years)

- 01/2002 – 09/2002 – **Enterprise IT Problem Manager** - Manage the analysis and resolution of complex IT problems across the corporation involving multiple IT Solutions Groups, Enterprise Operations, Business Groups, Executives and users.
- 05/2000 – 01/2002 – **Senior Systems Engineer –** Specialize in SAP R/3, ALE/IDOC, RFC/BAPI, TIBCO, EDI, and Oracle.
- 07/1997 - 05/2000 - **Systems Engineer** – Design and develop interfaces for SAP's FI and MM modules, implement and manage SAP EDI configuration, train new ABAP programmers, mentor new programmers for both a 3.1h to 4.6b SAP upgrade project, and a DB2 to Oracle conversion project.
- 09/1992 - 07/1997 - **Systems Analyst** – Support Human Resource, Salary Budgeting and Benefits functions using PL1, COBOL, IMS, DB2, Lotus Notes and LotusScript.

1990 – 1992 – Kentucky Central Insurance Companies, Lexington, KY, (2 years)

- **Systems Analyst** - Responsible for design and development for Property and Casualty division IT systems utilizing development using COBOL, CICS, DatacomDB and IDEAL

1987 – 1990 - American Express Cable Services Group, Lexington, KY, (3 years)

- **Programmer Analyst** - Responsible for design and coding of mainframe COBOL applications providing billing and accounting services for cable companies across the United States.

1989 – 1994 – Lexington Community College, Lexington, KY, (5 years part time)

- **Adjunct College Instructor** - Conduct lecture and laboratory instruction in Operating System Concepts, Program Design and Development, and Microcomputer Applications Development courses.

1986 – 1987 - BPS Computer Services - Portsmouth, OH, (1 year)

- **Microcomputer Programmer** - maintained and developed interactive programs for general ledger, accounts payable, and inventory control for a variety of business applications.

PRESENTATIONS / MEMBERSHIPS

- Interpersonal Communications Presentation: http://pmibluegrass.org/index.php?option=com_events&task=view_detail&agid=36&year=2009&month=05&day=05&Itemid=26
- American Management Association
- Project Management Institute
- Nominated Honorable Kentucky Colonel for donating computer instruction to the Winchester, KY community

Mary J. Lowe

(b)(6)

Experience

Consulting (Keane, Inc.; IBM-Business Consulting Services – Human Capital Management; Wm. M. Mercer, Inc.)

- Business Analyst on product development team at large state agency
- Acted as liaison between education subject matter experts, school district users and technical staff
- Guided vendor in requirements gathering efforts including facilitated requirements gathering workshops and consensus building workshops.
- Facilitated development of request for proposal for State agency data warehouse and decision support system
- Facilitated and coordinated evaluation of RFP responses for multiple clients
- Performed requirements gathering and documentation for multiple clients in multiple industries
- Prepared and delivered presentations to cross-functional project teams, leadership teams, peer groups, and national audiences
- Business analyst for multiple human resource, payroll and time and attendance projects on various platforms including Oracle (PeopleSoft v8.0) and Microsoft .NET
- Coordinated and delivered functional training for, HR/Payroll and financial software and decision support systems
- Performed analysis and documentation of processes and procedures for state agency data collection and reporting and for large insurance company HR and Payroll functions being outsourced
- Prepared fit-gap analysis for human resource, payroll and time and attendance system
- Designed and configured PeopleSoft Payroll and Time and Labor modules
- Developed functional interface and customization specifications
- Developed test scripts for HR, payroll, time and labor, and call center processes
- Payroll team member for technical systems design phase of payroll outsourcing services organization system development project
- Member of US Payroll testing team in Paris, France
- Lead three implementations of UltiPro Workforce Management software at: bio-tech, National non-profit, and network engineering firms. All completed on time and in budget.
- Developed Software Package Selection Methodology materials and documentation
- Lead multiple software system selections for financial and HR/Payroll systems including:
  - Strategic and functional requirements gathering and documentation
  - Preparation of Requests for Information (RFI) from vendors and Analysis of responses
  - Fit - gap analysis
  - Development of demonstration scenarios and facilitation of software demonstrations
  - Facilitation of decision sessions
- Acted as lead business analyst in six other software selection projects for: financials, CRM, manufacturing/distribution systems, data warehouse and analytic tools
- Implemented Microsoft Business Solutions Great Plains Financials
- Participated in IT strategy development projects
- Prepared and delivered sales presentations

Mary J. Lowe

(b)(6)

Industries served:

- Education
- State and Local Government
- Bio-technology
- Insurance & Financial Services
- Entertainment
- Transportation
- Religious non-profit
- Medical products and services

Management and Supervision (William M. Mercer, Inc.)

- Acted as project team leader for 5 years. Coordinated activities of technical, operations, and administrative team members.
- Supervised approx. 12 people for 2 years in various support functions including: desk top publishing, accounting, customer service, administrative services
- Participated in carrying out relocation of survey group from Deerfield, IL to Louisville, KY including: reassignment of resources, communicating changes, managing logistics, ensuring continuity, hiring and training new staff, oversight of on-going operations
- Trained new Operations Manager, Project Managers, and Project Coordinators.
- Updated and standardized look of 8 questionnaires and survey reports within 1 year to enhance image and improve user friendliness.
- Reduced printing and distribution costs by 20% in 1 year.
- Developed and implemented standard operating procedures and numerous time and labor saving procedures.
- Served on Quality Committee.

Project Management (William M. Mercer, Inc.)

- Assisted conversion to client server based survey processing system from mainframe system.
- Oversaw all aspects of survey production for 5-7 annual surveys including: questionnaire design, data collection and analysis, printing, marketing, and data processing.
- Worked closely with technical staff on quality control and data reporting issues.
- Worked in cooperation with members of Mercer's Compensation Practice to produce customized analyses for client projects and improve survey products.
- Worked with associations on co-sponsored survey projects.

Marketing (William M. Mercer, Inc.)

- Directed production and distribution of marketing materials for all Mercer NSG survey products.
- Set pricing for survey products, identified advertising opportunities, selected target audience and produced targeted direct mail efforts.
- Originated new survey projects producing additional recurring revenue of approx. $150,000 per year (Technology Leadership Survey, Special Skills Survey, Fortune 1000 Survey, Internet Survey)
- Heavy phone contact with clients explaining survey products and data services leading directly to sales of survey reports and customized analyses.

(b)(6)

Compensation (William M. Mercer, Inc.)

- Conducted numerous compensation surveys as part of Mercer's National Survey Group (see following page).
- Assisted on market pricing consulting projects including interviews, job matching, and pricing analysis.
- Advised survey users in proper application and use of survey data and appropriate customized analyses.
- Completed World at Work CCP (Certified Compensation Professional) designation.
- Made presentations to compensation and HR professionals about the National Compensation Survey Group's products and capabilities.

Sales and Sales Administration (Medline Industries and General Cable Corp.)

- Developed system for monitoring compliance with sales agreements and for administering volume purchase/rebate agreements.
- Worked with commission only sales force to improve profitability through system selling and pricing strategies.
- Made sales presentations for ACCESS Consignment Program and conducted on site inventory assessments.
- Implemented and enforced pricing policies.
- Manned booths at trade shows.
- Performed customer service duties for accounts of manufacturers' reps. and for internal sales force including: expediting, pricing, credits and returns, collections.
- Developed computerized value analysis system to support sales process.
- Coordinated and hosted customer visits to corporate headquarters.

Personal Characteristics

- Flexible and adaptable
- Team player
- Strategic thinker
- Excellent verbal and written communication skills
- Able to prioritize and focus
- Initiative
- Focus on continuous improvement
- Problem solving skills

Mary J. Lowe

(b)(6)

Employment History

4/06 - Present ***Keane, Inc.*** Frankfort, Kentucky; Principal Consultant

Responsibilities include: Assigned to Kentucky Department of Education (KDE), serve as primary liaison between functional experts and technical teams. Lead effort to develop request for proposal for multi-million dollar data warehouse and analytic tool software and professional services contract. Guide vendor in requirements gathering efforts including: facilitated requirements gathering workshops and consensus building workshops. Coordinate user and subject matter expert participation in testing and training efforts; conducted training; developed on-line training modules. Communicate with senior leadership, other agencies within Education Cabinet, representatives from other state departments of education, federal grant administrator, representatives from KDE offices and school Districts across the Commonwealth. Make presentations to various groups including Kentucky Association of Assessment Coordinators, Kentucky Teaching and Learning Conference, the IES (Institute for Education Science) sponsored annual data conference and the summer MIS conference. Work with vendor to develop and execute test plan and test cases; work with project managers to create and/or review project deliverables; work with vendor technical team in development and review of specification documents, design deliverables, and report prototypes.

5/98 – 3/06 ***IBM-Business Consulting Services/PwC Consulting***; Louisville, Kentucky; Sr. Consultant

Responsibilities included: Process documentation and analysis, process improvement, meeting facilitation, requirements analysis and documentation, fit-gap analysis, process improvement, system design, system testing, development of functional interface and customization specifications. Functional specialist in PeopleSoft HR, Payroll and Time and Attendance

Lead implementation of UltiPro HRMS/Payroll Software. Definition of project scope and milestones, development and maintenance of project plan, software configuration, unit testing, data mapping, data cleansing, planning and overseeing parallel processing and testing, transition to live processing, documentation of issues and resolutions, problem solving, development and testing of interfaces. Facilitate process improvement efforts.

Lead software selections for a variety of business needs including: HR/Payroll and Financial Systems, for middle market clients. Development and maintenance of project documentation including project plan, project scope, status reports, sign-offs and approvals. Knowledge of Microsoft tools including: MSAccess, SQL server, Windows 2000, Windows XP, Visio, MS Project and MSOffice (Word, Excel, PowerPoint).

Developed software package selection methodology.

3/89 – 10/97 ***William M. Mercer, Incorporated***; Deerfield, Illinois; Louisville, Kentucky (employee benefits and human resource consulting firm)

- 11/96 - 10/97 Survey Business Development Consultant

Responsibilities included: Developing and executing marketing plan for national survey products; identifying advertising opportunities, conducting direct mail campaigns, producing product specific marketing pieces as well as those for entire survey product line. Work in cooperation with other Business Development Consultants to maximize cross selling opportunities and with corporate public relations on Internet marketing strategy and other PR opportunities.

Mary J. Lowe

(b)(6)

- 10/94 - 11/96 Business Services Manager, National Compensation Survey Group

Responsibilities included: Responsibilities included: Developing and executing marketing plan for national survey products; identifying advertising opportunities, conducting direct mail campaigns, producing product specific marketing pieces as well as those for entire survey product line. Work in cooperation with other Business Development Consultants to maximize cross selling opportunities and with corporate public relations on Internet marketing strategy and other PR opportunities.

- 10/94 - 11/96 Business Services Manager, National Compensation Survey Group

Responsibilities included: Processing and reporting for corporate wide client satisfaction survey; managed marketing activities; acted as advisor for technology surveys.

- 3/89 - 10/94 Project Manager, National Compensation Survey Group

Acted as liaison with sponsoring organizations: ITAA, SHRM, Telecom groups. Lead project teams made up of 3-5 data analysts and programmers. trained new project coordinators and managers; facilitated job matching meetings and focus groups. Product Management Responsibilities included:

Information Systems/Telecommunications Dept. Survey
ITAA Compensation and Benefits Surveys
Compensation Planning Survey
Fortune 1000 Compensation Report
Long-Term Incentive Compensation Survey
Telecommunications Industry Survey
Executive Compensation Survey

1/84 - 3/89 ***Medline Industries, Inc.***; Mundelein, Illinois (manufacturer and distributor of hospital supplies)

* Marketing Manager, ACCESS Consignment Program
* Pricing Analyst
* Customer Service Representative

6/80 – 6/83 Various Sales Support positions in Chicago metro area

Education

- **DePaul University**, MBA - Marketing concentration, 1986
- **University of Wisconsin - Madison**, BBA - Finance and Banking, 1980

Continuing Professional Education

- **Cognos 8.0 - Introduction**
- **PeopleSoft HRMS – Time and Labor**
- **IBM - Business Process Fundamentals,**
- **PricewaterhouseCoopers Professional Development:** Foundation Consulting Skills, Performance Management, Data Modeling, Ascendant Methodology, Project Management Essentials
- **Microsoft Great Plains Business Solutions:** HR/Payroll Implementation, Core Financials Implementation
- **Lawson Software:** HR/Payroll Implementation
- **Ultimate Software:** HRMS Implementation, Employee and Manager Self Service Configuration

(b)(6)

- **Cognos Impromptu:** Report Building
- **Mercer Professional Development**: Performance Through People (18 hrs.), Project Management, Presentation Skills, Time Management, Leadership Skills
- **American Compensation Association**, CCP designation earned

Other Interests and Activities

Travel, reading, dogs, home maintenance, environmental community service activities

Project Narrative

Project Narrative - Appendix C Current Status of State's Longitudinal Data System

Attachment 1:
Title: **Current SLDS** Pages: **3** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Appendix C\CHART APPENDIX C 12-02-09.pdf**

PR/Award # R384A100020

Required Data System Capability	Current Status/ How Supported/How developed or improved if awarded funding	Relevant outcomes from the project narrative to address this requirement
Enable States to examine student progress and outcomes over time	Operational Additional pre-school data being added in 2010, workforce linkages to be added in 2011-2012. Funds: IES grant IES IES CFDA #84.372A for development. IES grant IES IES CFDA #84.384 for linkages to workforce; KDE budget for operational support.	New data added, ability to examine student progress through high school and post secondary education.
System must facilitate and enable the exchange of data among agencies and institutions within the State and between States.	Operational outside of KY SLDS - Interoperability between state agencies has been developed on an as-needed basis; not from an enterprise perspective. Propose to use IES Grant IES IES CFDA #84.384 for additional data source linkages, data audit, creation of business requirements and IT infrastructure Funding: IES Grant IES IES CFDA #84.372A	Re-engineering data collection processes. Establishment of ability to exchange data among partner agencies
System must link student data with teachers	Operational - The KY SLDS currently provides the ability to link students with their teachers.. Funding:IES Grant #84.372A SIS State funds or operations.	Function will be enhanced by the introduction of unique teacher identifiers shared from the Education Professional Standards Board in 2010
System must enable matching of teachers with information about their certification and teacher preparation programs	In progress. Basic teacher information exists within the SLDS. Detailed certification and preparation data will be available as part of the current SLDS expansion and is expected to be available in 2010. Funding: IES Grant IES IES CFDA #84.372A; IES Grant IES CFDA #84.384	Additional linkages would be made to teacher evaluations and professional development under grant proposal.
System must enable data to be easily generated for continuous improvement and decision-making,	In Progress. The system is currently limited to users within the Kentucky Educational Technology System (KETS) but will be expanded under this project. Funding: Repurposing agency resources IES Grant IES CFDA #84.372A; IES Grant IES CFDA #84.384	Broader usage of the KY SLDS by all stakeholders. Links to the labor market
System must ensure the quality and integrity of data contained in the system	In Progress - Data quality audits currently take place primarily at the point of data collection, such as the state-level SIS repository. Funding: IES Grant IES CFDA #84.372A; Data Policy Committee has been established.; IES Grant IES CFDA #84.384	Creation of state data audit system will result from one time data audit.
Ability to meet reporting requirements.	Operational. The KY SLDS has been identified as the reporting engine for the Kentucky Department of Education both for reports specific to the Commonwealth and for reports required for NCLB. Funding: KDE operational budget.; IES Grant IES CFDA #84.372A to fund expanding the development of new reports and reporting capabilities.	Creation of additional reports as required to meet state and federal reporting requirements

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PR/Award # R384A100020

Required Data System Elements	Current Status/ How Supported/How developed or improved if awarded funding	Relevant outcomes from the project narrative to address this requirement
Unique statewide student identifier	In place Funding : Kentucky Department of Education	Ability to track students into postsecondary enrollment
Student level enrollment, demographic, and program participation info	In place from K-12 accountability system and student information system College level data coming 2011 Funding: IES CFDA 84.372A	Ability to address college readiness and develop strategies to reduce college remediation
Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs	K-12 in place. Higher education to be added by 2011. Funding: IES CFDA 84.372A	Ability to address factors which contribute to students not finishing high school or post-secondary course work and provide targeted interventions resulting in higher graduation rates.
Capacity to communicate with higher education data systems	In Progress – Various ad hoc systems provide capacity to share data between P-12 and postsecondary. Funding: IES CFDA 84.372A	Provide a more seamless view of course taking, college readiness, and remediation.
A State data audit system assessing data quality, validity, and reliability	Planned Funding: IES CFDA 84.834 request for funding	Continuous data monitoring; assurance of validity and reliability of data
Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965	In Place – will be modified to accommodate new accountability system to be in place in 2011 and addition of formative assessments Funding: KDE operational budget and IES CFDA 84.372A	Addition of formative assessment results will enable teachers to track individual student progress and change instructional strategies to address students not showing progress. Increased student achievement will result.
Information on students not tested, by grade and subject	Operational – exists in KY SLDS Funding: IES CFDA 84.372A	Target students not being tested so interventions can be put in place to ensure their progress is being tracked.
A teacher identifier system with the ability to match teachers to students	Proposed need for integration – Many systems still use their own unique teacher identifiers Funding: IES CFDA 84.834 request for funding	EPSB identifier will become the authoritative number

PR/Award # R384A100020

Required Data System Elements	Current Status/ How Supported/How developed or improved if awarded funding	Relevant outcomes from the project narrative to address this requirement
Student-level transcript information, including information on courses completed and grades earned	Proposed – technical infrastructure exists, gaps need to be addressed to insure seamless path from K-12 to post-secondary. Will also be linked to workforce. Funding: IES CFDA 84.834 request for funding	Ability to track course taking and grades to match with ACT, AP and other test scores to determine college readiness and address student deficiencies at the high school level and provide interventions to assist students.
Student-level college readiness test scores	Operational – EXPLORE, PLAN and ACT 11th grade scores are in KY SLDS, however 12th grade ACT scores are not. Funding: IES CFDA: 84.372A	Link with transcript information, AP scores and college enrollment to determine policies that will lead to greater student achievement and college-going.
Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework	In progress – current expansion grant award will fund connection of post-secondary student performance information. Expected to be operational by 2011. Funding: IES CFDA84.372A; IES CFDA 84.834 to continue and enhance development	Ability to report to legislature as mandated by Senate Bill 1 the number of students requiring remedial instruction, subject matter for the remediation courses, and ultimate outcomes related to college readiness and graduation from post-secondary institutions.
Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education	In progress - Interviews have been conducted with non-educational agencies to begin exploring need not evidenced in the education environment. Funding: IES CFDA 84.372A; KDE operational budget; IES CFDA 84.834 grant application request	Addition of workforce and student financial aid data will provide ability to link educational requirements with 21st Century labor market needs.

Project Narrative

Project Narrative - Appendix D Letters of Support

Attachment 1:
Title: **Support_letters** Pages: **19** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Support Letters\Supportall12209.pdf**

COMMONWEALTH OF KENTUCKY
OFFICE OF THE GOVERNOR

STEVEN L. BESHEAR
GOVERNOR

700 CAPITOL AVENUE
SUITE 100
FRANKFORT, KY 40601
(502) 564-2611
FAX: (502) 564-2517

November 23, 2009

US Department of Education
National Center for Educational Statistics
1990 K Street NW, Room 9023
Washington, D.C. 20006-5651

RE: CFDA 84.384 Grants for Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To Whom It May Concern:

I hereby offer my support of the grant application submitted by the Kentucky Department of Education which seeks to expand and improve the multi-agency P-20 Kentucky Statewide Longitudinal Data System (P-20 KSLDS). The enhancements the grant will enable would allow us to hold in one place all of the various pieces of data that provide critical information about the performance of our entire educational system – from preschool through postsecondary.

Kentucky has a history of collaboration within the education community. This grant would make it possible for us to implement an ongoing and rigorous evaluation of the effectiveness of each education component and thus to continuously improve our processes to best serve the needs of our students, our educators and our Commonwealth. By linking this information with out workforce data we will be able to provide useful information for researchers, program planners, economic developers, elected officials and the general public.

Kentucky believes that by harnessing the information from and the efforts of each part of our education system we will be positioned to improve instruction at all levels and to ensure that our students are prepared to compete successfully with any in the world.

Sincerely,

Steven L. Beshear

EDUCATION and WORKFORCE DEVELOPMENT CABINET
OFFICE OF THE SECRETARY

Steven L. Beshear
Governor

Capital Plaza Tower, 3rd Floor
500 Mero Street
Frankfort, Kentucky 40601
Phone (502) 564-0372
Fax (502) 564-5959
www.educationcabinet.ky.gov

Helen W. Mountjoy
Secretary

November 23, 2009

US Dept of Education
National Center for Educational Statistics
1990 K Street NW. Room 9023
Washington, DC 20006-5651

RE: **CFDA 84.384 Grants for Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009**

To Whom It May Concern:

I am pleased to offer this letter in support of the grant application submitted by the Kentucky Department of Education which seeks to expand and improve the multi-agency P-20 Kentucky Statewide Longitudinal Data System (P-20 KSLDS). This initiative, if funded, will allow us to build on the partnership which already exists among the Kentucky Department of Education, the Council on Postsecondary Education and the Education Professional Standards Board to further their efforts to implement a shared data repository.

Our goal is to build a system that collects and maintains detailed and high-quality data on student and teacher performance, links data across entities and over time to enable continuous improvement, and makes the data accessible through reporting and analysis tools. By linking this information with our workforce data, we will be able to provide information for researchers, program planners, economic developers, elected officials, the public, and others interested in Kentucky's human capital and economic landscape.

The Kentucky Cabinet for Education and Workforce Development is committed to working closely with the Education Professional Standards Board, the Department for Education, the Council on Postsecondary Education, the Department for Workforce Investment, and other agencies during the coming months to develop the P-20 KSLDS on behalf of the entire Commonwealth. We believe that this grant will give us the opportunity link agencies in a new and powerful way which will strengthen the performance of each of them. We appreciate your consideration of our proposal.

Sincerely,

Helen W. Mountjoy
Secretary

Steven L. Beshear
Governor

Terry Holliday, Ph.D.
Commissioner of Education

EDUCATION AND WORKFORCE DEVELOPMENT CABINET
DEPARTMENT OF EDUCATION

Capital Plaza Tower • 500 Mero Street • Frankfort, Kentucky 40601
Phone: (502) 564-4770 • www.education.ky.gov

November 9, 2009

U. S. Department of Education
National Center for Education Statistics
1990 K Street N. W.
Washington, DC 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

As Commissioner of the Kentucky Department of Education (KDE), I strongly support this application for funding from the U. S. Department of Education Institute for Educational Sciences for additional statewide longitudinal data system funding.

KDE is spearheading the development and deployment of the Kentucky Statewide Longitudinal Data System (KSLDS). We began development in 2005 and are forging ahead linking P-12 with higher education, teachers, preschool, workforce and adult education data.

We have an unprecedented opportunity in Kentucky with the passage of Senate Bill 1 relating to student assessment and implementation of the Kentucky Learning Framework (KLF). Our framework builds on Kentucky's history of existing and ongoing reform efforts to create and sustain learner-centered schools that meet the needs of every student and educator. The framework focuses on highly effective teachers and equitable teacher distribution; focused standards and a high-quality assessment system; a continuum of interventions for low-performing schools; and a comprehensive data system to support the needs and goals of each of the other framework elements.

Governor Steve Beshear established a Transforming Education in Kentucky Task Force comprised of state legislators and education cabinet officials, plus representatives from business, education, advocacy groups and several Kentucky cities. This 31 member task force will boost the efforts of our P-20 collaborative engaging all stakeholders in the education of Kentucky children.

We have established a P-20 Data Collaborative partnership with the Education Workforce Cabinet, the Council on Postsecondary Education and the Education Professional Standards Board. Kentucky is transitioning its view of education data to a P-20 view, establishing a 90 percent high school graduation rate and a 55 percent postsecondary graduation rate by 2020.

Without a robust state longitudinal data system, none of these initiatives will succeed. Longitudinal data is a cornerstone to effective interventions, planning and goal-setting for Kentucky's P-20 educational system.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Terry Holliday, Ph.D.

TH/ow

Kentucky Council on Postsecondary Education

Steven L. Beshear
Governor

1024 Capital Center Drive, Suite 320
Frankfort, Kentucky 40601
Phone: 502-573-1555
Fax: 502-573-1535
http://www.cpe.ky.gov

Robert L. King
President

September 29, 2009

US Dept of Education
National Center for Educational Statistics
1990 K Street NW. Room 9023
Washington, DC 20006-5651

RE: CFDA 84.384 Grants for Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

I strongly support this application for funds from the Department of Education Institute for Educational Sciences for additional Student Longitudinal Data Systems (SLDS) funding under the American Recovery and Reinvestment Act of 2009. Kentucky has already begun the important work of building a longitudinal student data system through the support of this grant program, and I greatly appreciate the Department's investment in improving policy and practice across the educational spectrum in through the SLDS program.

This current round of funding is particularly important to postsecondary education, because the proposed expansion to include Kentucky's workforce and financial aid agencies and the development of reports and tools to improve teaching and learning at our colleges and universities will further key state postsecondary policy priorities. A data link to KHEAA, Kentucky's financial aid agency, will help policymakers better understand the impact of state financial aid funding on students' ability to afford Kentucky's colleges and universities. Similarly, expanding to workforce data would enable our colleges and universities to assess how well their undergraduate and graduate programs are preparing students for the workplace, and help our institutions better meet the labor market needs of the commonwealth. We are also proposing the development of several innovative tools and reports that would deliver greatly improved information about student outcomes in the postsecondary sector to policy makers and institutional leadership alike.

The success of the Kentucky P-20 Data Collaborative to date makes me confident that these systems will drive real educational change in Kentucky, and may even serve as a model to the nation. I urge you to grant this funding request.

Sincerely,

Robert L. King
President
Council on Postsecondary Education

COPY

FINANCE AND ADMINISTRATION CABINET
KENTUCKY HIGHER EDUCATION ASSISTANCE AUTHORITY

Steven L. Beshear
Governor

P.O. Box 798
Frankfort, Kentucky 40602-0798
Phone: 1-800-928-8926
Fax: 502.696.7373
www.kheaa.com

Jonathan Miller
Secretary

Edward J. Cunningham
Executive Director

November 10, 2009

United States Department of Education
National Center for Educational Statistics
1990 K Street NW Room 9023
Washington, DC 20006-5651

RE: CFDA 84.384 Grants for Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To Whom It May Concern:

I am writing to affirm the Kentucky Higher Education Assistance Authority's (KHEAA) enthusiastic support for Kentucky's P-20 data warehouse initiative, known as the Kentucky State Longitudinal Data System (SLDS).

KHEAA's purpose is to make higher education more accessible and affordable for Kentucky students. The ability to access accurate, comprehensive, and relevant data is fundamental to evaluating the impact of the state's postsecondary student financial aid programs. This data system is also essential, in a broader context, for the Commonwealth to better understand the unique dynamics of education, which leads to the identification and definition of specific, measurable educational goals.

We have been pleased to regularly work closely with the Council on Postsecondary Education (CPE) on various data projects. We anticipated that continuing this work with the new SLDS will significantly enhance the value of these joint analyses for the Commonwealth and education professionals in general. We look forward to continuing these collaborative efforts with CPE, the Kentucky Department of Education, and other agencies to make the SLDS a reality. We believe that when fully realized, the SLDS has the potential to create a sea change in the analysis of educational opportunities and services provided to Kentuckians.

KHEAA is excited about this important initiative and will work with the other agency partners to make it a success for the Commonwealth.

If you have any questions, please contact me at (502) 696-7497.

Sincerely,

Edward J. Cunningham
Executive Director

EDUCATION and WORKFORCE DEVELOPMENT CABINET
OFFICE OF THE SECRETARY

Steven L. Beshear
Governor

Capital Plaza Tower, 3rd Floor
500 Mero Street
Frankfort, Kentucky 40601
Phone (502) 564-0372
Fax (502) 564-5959
www.educationcabinet.ky.gov

Helen W. Mountjoy
Secretary

Joseph U. Meyer
Deputy Secretary

November 9, 2009

U. S. Department of Education
National Center for Education Statistics
1990 K Street N. W.
Washington, DC 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

I am pleased to offer my support for the Kentucky Department of Education's Institute of Education Sciences request for funding to support its statewide, longitudinal data system. As Deputy Secretary and Acting Commissioner for the Department of Workforce Investment, I am committed to a system that accurately tracks Kentucky's students from preschool through college and into our workforce. A Kentucky shared data repository will effectively manage, analyze and use individual student data to improve student achievement.

This project will allow Kentucky to expand its P-20 data system supporting continuous improvement of education services facilitating research on student achievement and closing achievement gaps. Policy development and decision-making at the state and local levels will ensure Kentucky's students are prepared for success.

I look forward to working with you on Kentucky's statewide longitudinal data system.

Sincerely,

Joseph U. Meyer

Joseph U. Meyer

Kentucky Council on Postsecondary Education

Steven L. Beshear
Governor

Kentucky Adult Education
1024 Capital Center Drive, Suite 250
Frankfort, Kentucky 40601-8204
Phone: 502-573-5114
Fax: 502-573-5436
www.kyae.ky.gov

Robert L. King
President

Reecie D. Stagnolia
Vice President

November 13, 2009

US Dept of Education
National Center for Educational Statistics
1990 K Street NW. Room 9023
Washington, DC 20006-5651

RE: CFDA 84.384 Grants for Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

Kentucky Adult Education supports the application for funds from the Department of Education Institute for Educational Sciences for additional Student Longitudinal Data Systems (SLDS) funding under the American Recovery and Reinvestment Act of 2009. I am excited about the opportunity to be a part of the longitudinal student data system in Kentucky.

This funding opportunity is particularly important to adult education because the inclusion of adult education data within the SLDS will inform research and policy decisions not only between K-12 and adult education but also postsecondary and workforce. Inclusion of adult education data in the SLDS will provide research capabilities to better understand the attrition/retention patterns of students who drop out of the K-12 system and enter the adult education system. In addition, data from the workforce sector is crucial in helping Kentucky meet the challenges of an underprepared workforce.

A comprehensive P-20 data system will inform educational policy and practice in Kentucky. I encourage your consideration of this application.

Sincerely,

Reecie D. Stagnolia
Vice President
Kentucky Adult Education

Steven L. Beshear
Governor

Terry Holliday, Ph.D.
Commissioner of Education

EDUCATION AND WORKFORCE DEVELOPMENT CABINET
DEPARTMENT OF EDUCATION
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Phone: (502) 564-4770 • www.education.ky.gov

November 17, 200

U. S. Department of Education
National Center for Education Statistics
1990 K Street N. W.
Washington, DC 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

As chair of the Kentucky Board of Education (KBE), I am pleased to offer support for the grant application for the Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009.

Never in Kentucky's educational history has longitudinal data been more important than it is today. I am thrilled to know the Kentucky Department of Education is partnering with our peer agencies building a robust data system to view P-20 data. This system can show us, with much greater clarity, what effects our policies, programs and decisions have on student achievement and closing achievement gaps. We anticipate enlisting the aid of our research partners to forecast and conduct trend analyses using longitudinal data for national comparisons. This collaborative educational effort has gained even greater momentum since the passage of Senate Bill 1 relating to student assessment.

The board fully supports this proposal and will work with the education partners in Kentucky to sustain and foster the statewide longitudinal data system.

Sincerely,

Joe Brothers

Joe Brothers

Commonwealth of Kentucky

HOUSE OF REPRESENTATIVES

P.O. Box 273
Bedford, Kentucky 40006
Home: (502) 255-3392
Office: (502) 255-3286
FAX: (502) 255-9911

RICK W. RAND
HOUSE OF REPRESENTATIVES
Appropriations and Revenue Committee, Chairman

Room 366B
701 Capitol Avenue
Frankfort, Kentucky 40601
(502) 564-8100
FAX: (502) 564-5640

November 12, 2009

U. S. Department of Education
National Center for Education Statistics
1990 K Street, N. W.
Washington, DC 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To Whom It May Concern:

I am writing to offer my strong support for the Kentucky Department of Education's application for funding from the U. S. Department of Education Institute for Educational Sciences for additional statewide longitudinal data system development.

KDE is spearheading the development and deployment of the Kentucky Statewide Longitudinal Data System (KSLDS). The framework builds on Kentucky's history of ongoing reform efforts to create and sustain learner-centered schools that meet the needs of every student and educator. The framework focuses on highly effective teachers and equitable teacher distribution; focused standards and a high-quality assessment system; a continuum of interventions for low-performing schools; and a comprehensive data system to support the needs and goals of each of the other framework elements.

KDE has established a P-20 Data Collaborative partnership with the Education and Workforce Development Cabinet, the Council on Postsecondary Education and the Education Professional Standards Board. Kentucky is transitioning its view of education data to a P-20 view, establishing a 90-percent high school graduation rate and a 55-percent postsecondary graduation rate by 2020.

Longitudinal data is the cornerstone to effective interventions, planning and goal-setting for Kentucky's P-20 educational system. Without a robust state longitudinal data system, none of these initiatives will succeed.

Please give the Kentucky Department of Education's application your most thoughtful consideration.

Sincerely,

Rick W. Rand
State Representative

RWR/pjd

Commonwealth of Kentucky

STATE CAPITOL, ROOM 323
FRANKFORT, KENTUCKY 40601
502-564-3120
MESSAGE LINE 800-372-7181

DISTRICT OFFICE
P.O. BOX 666
BURKESVILLE, KENTUCKY 42717
270-864-5636

DAVID L. WILLIAMS
PRESIDENT OF THE SENATE

November 13, 2009

US Department of Education
National Center for Education Statistics
1990 K Street N.W.
Washington DC 20006

RE: CFDS 84.384 Statewide Longitudinal Data Systems under the ARRA of 2009

To whom it may concern:

I would like to express my support for the Kentucky Department of Education's application for additional statewide longitudinal data system funding from the US Department of Education.

The Kentucky State Senate has long advanced the importance of the availability of longitudinal information. The enactment of SB 1, relating to student assessment, during the 2009 Regular Session of the Kentucky General Assembly provides Kentucky schools with a unique opportunity to become national leaders in building focused standards to cultivate a culture of learning.

The Kentucky Department of Education's application will help ensure Kentucky has an effective statewide longitudinal data system. Without such a system, none of our other programs to improve student performance can be successful.

Thank you for your time and attention in this matter.

Sincerely,

David L. Williams
President of the Senate

Commonwealth of Kentucky

HOUSE OF REPRESENTATIVES

GREGORY D. STUMBO
95th Legislative District
PO Box 1473
108 Kassidy Drive
Prestonsburg, Kentucky 41653

STATE CAPITOL
Room 309
Frankfort, Kentucky 40601
(502) 564-3366

SPEAKER OF THE HOUSE

November 10, 2009

U.S. Department of Education
National Center for Education Statistics
1990 K Street N.W.
Washington, DC 20006-5651

RE: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To Whom It May Concern:

I am writing in support of the Kentucky Department of Education's (KDE) application to obtain additional funding from the U.S. Department of Education Institute for Educational Sciences for the Kentucky Statewide Longitudinal Data System (KSLDS).

This past legislative regular session, the Kentucky General Assembly enacted Senate Bill (SB) 1, which allows Kentucky to build upon ongoing education reform efforts for student assessment.

The ability to expand the KSLDS to implement this legislation would provide KDE greater clarity on the performance of our education system, on what is working and where we need to make improvements. KDE would greatly benefit from having better technology to connect student information along with teacher preparation, instructional practices, and professional development. This also would provide additional information on how well our students are prepared to meet the requirements of the 21st century workforce.

Thank you for your consideration of the Kentucky Department of Education's application. Please feel free to contact me if I can be of any additional help.

Sincerely,

Gregory D. Stumbo
Speaker of the House

GDS:bm

COMMONWEALTH OF KENTUCKY

KENTUCKY GENERAL ASSEMBLY

Representative Harry Moberly, Jr.
81st Legislative District

Home Address:
P.O. Box 721
Richmond KY 40475

Office Address:
Room 351 C-Capitol Annex
Frankfort KY 40601
502-564-8100

November 12, 2009

U.S. Department of Education
National Center for Education Statistics
1990 K Street N.W.
Washington, DC 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To Whom It May Concern:

I support the request for funding by the Kentucky Department of Education to the Institute of Educational Sciences for the Kentucky Statewide Longitudinal Data System. This system will enable the state of Kentucky to collect and maintain high quality data on students in the P-20 educational system.

Implementation of a statewide longitudinal data system would be a huge asset to our educational system, our school districts, and our communities. Having such an elaborate system, with various pieces of data in one location, would assist the state in viable changes to enhance Kentucky's education.

The Kentucky Statewide Longitudinal Data System will assist in closing achievement gaps, accurately reflecting students' progress, and determining student outcomes. Student success can be achieved through such initiatives and I give this request my full support.

Please contact me if I can be of further assistance.

Sincerely,

Harry Moberly, Jr.

Harry Moberly, Jr.
State Representative

HM:ps

Commonwealth of Kentucky

HOUSE OF REPRESENTATIVES

STATE REPRESENTATIVE
14TH LEGISLATIVE DISTRICT
P.O. Box 458
Owensboro, KY 42302
(270) 926-1740
Fax (270) 685-3242

CAPITOL ANNEX
Room 351
Frankfort, KY 40601
(502) 564-8100, Ext. 664
Email: tommy.thompson@lrc.ky.gov

TOMMY THOMPSON

December 1, 2009

U. S. Department of Education
National Center for Education Statistics
1990 K Street N. W.
Washington, DC 2006-5651

To whom it may concern:

Re: CFDA 84.384 Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

As co-chair of the Interim Budget Review Subcommittee on Primary and Secondary Education, I am pleased to support the application of the Kentucky Department of Education for funding to expand the Kentucky Statewide Longitudinal Data System (KSLDS).

In 2005, the Kentucky Department of Education established a partnership with other state agencies to develop a comprehensive system which would enable seamless linkage of data from preschool, elementary and secondary education, higher education, adult education, and workforce sources.

The passage of Kentucky's Senate Bill 1 with bipartisan support in the 2009 Regular Session has led to unprecedented collaboration across state agencies to ensure revision and alignment of Kentucky's academic content standards from prekindergarten through early postsecondary education. The legislation requires that P-20 educational data be available and used to improve instruction and achievement in elementary and secondary education programs, to enhance college readiness and reduce the need for postsecondary remediation, and to evaluate the outcomes of our educational system through national comparisons and its impact as our graduates enter the workforce.

Governor Steve Beshear has also established a Transforming Education in Kentucky Task Force to reexamine the tenets of the Commonwealth's landmark Kentucky Education Reform Act and to develop recommendations for improvement for consideration during the 2011 Legislative Session.

COMMITTEES:
APPROPRIATION & REVENUE - CHAIRMAN, BUDGET REVIEW SUBCOMMITTEE ON EDUCATION • BANKING AND INSURANCE • ECONOMIC DEVELOPMENT • STATE GOVERNMENT • RULES

We all recognize that technology and accurate data are critical for planning, effective decision making and continuous evaluation of public policy as we set aggressive new goals for the Commonwealth.

Thank you for your consideration of this application.

Sincerely,

Tommy Thompson
State Representative

Commonwealth of Kentucky

STATE SENATE

4787 West Highway 76
Russell Springs, KY 42642
(270) 866-3068

VERNIE McGAHA
15th Legislative District

State Capitol Annex
Room 203
Frankfort, KY 40601
Message Line: 800-372-7181

November 10, 2009

United States Department of Education
National Center for Education Statistics
1990 K Street Northwest
Washington, D.C. 2006-5651

RE: CFDA 84.384 Statewide Longitudinal Data Systems Under the American Recovery Act of 2009.

To Whom It May Concern:

As a Kentucky State Senator, I am pleased to send this letter of support for the application for funding from the United States Department of Education, Institute for Educational Sciences, for additional statewide longitudinal data system funding.

Kentucky has an unprecedented opportunity with the passage of Senate Bill 1, relating to student assessment and implementation of the Kentucky Learning Framework (KLF). This framework builds on Kentucky's history of existing and ongoing reform effort to make sure schools meet the needs of every student and educator. The framework focuses on highly effective teachers and equitable teacher distribution, focused standards, and high quality assessment system, a continuum of interventions for low-performing schools, and a comprehensive data system to support the needs and goals of each of the other framework elements.

Without a state longitudinal data system, none of these initiatives will succeed. Longitudinal data is a cornerstone to effective interventions, planning, and goal setting for Kentucky's P-20 educational system.

Thank you in advance for your consideration. Please do not hesitate to contact me if I can be of further assistance.

Sincerely,

Vernie McGaha
State Senator

Commonwealth of Kentucky

HOUSE OF REPRESENTATIVES

P.O. Box 424
Midway, Kentucky 40347
Home (859) 846-4407

STATE CAPITOL ANNEX
Room 466-F
Frankfort, Kentucky 40601
(502) 564-8100, Ext. 736
1-800-372-7181
Email: carl.rollins@lrc.ky.gov

CARL P. ROLLINS
56th Legislative District

November 9, 2009

U.S. Department of Education
National Center for Education Statistics
1990 K Street, NW
Washington, DC 20006-5651

RE: Stateside Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009

To Whom it may Concern:

As chair of the Kentucky House Education Committee, I have often seen the need for better data collection to guide our efforts as we strive to improve education for Kentucky's children.

We are making great strides as we have formed a strong partnership among various agencies to develop the P-20 Data Collaborative. In 2005 we began developing and deploying the Kentucky Statewide Longitudinal Data System (KSLDS) to link P-12 with higher education, workforce, and adult education.

In order to ensure the success of our current efforts and to expand on those efforts, it is vital that we acquire additional resources. I strongly support the application for additional funding for our Longitudinal Data System through the U.S. Department of Education Institute for Educational Sciences.

Sincerely,

Carl P. Rollins
State Representative
Chair, Kentucky House Education Committee

CPR/lfr

Commonwealth of Kentucky

STATE SENATE

209 Graves Avenue
Erlanger, KY 41018
859-344-6154

State Capitol Annex
Frankfort, KY 40601
Message Line: 800-372-7181
jack.westwood@lrc.ky.gov

JACK WESTWOOD
23rd Legislative District

November 13, 2009

U.S. Department of Education
National Center for Educational Statistics
1990 K Street N. W.
Washington, D.C. 20006-5651

Re: CFDA 84.384 Statewide Longitudinal Data Systems under the American Recovery and Reinvestment Act of 2009

To whom it may concern:

As the Senate Chairman of the Educational Assessment and Accountability Subcommittee (EAARS), I am writing to express my strong support for additional statewide longitudinal data system funding from the U.S. Department of Education Institute for Educational Services.

EAARS is working with the Kentucky Department of Education (KDE) in its development of a statewide data system designed to collect information on the academic growth of Kentucky students from pre-school through post secondary education. EARRS members are especially concerned with efforts to increase graduation rates in our secondary schools. Having an effective longitudinal data system will enable us to identify those students who are at risk of dropping out, allowing us the opportunity to implement more effective intervention programs.

With the passage of SB1 this year, legislators committed to further developing the educational reform efforts of the Kentucky Educational Reform Act of 1993 (KERA) by focusing on high academic standards, core content, intervention strategies, and closing various achievement gaps. Without a reliable longitudinal data system in place, our efforts to make those improvements will be substantially more difficult.

I have also been appointed as a member of Governor Beshear's Transforming Education in Kentucky Task Force. As we go about our work over the next few months, I am certain we will need the information provided by a dependable longitudinal data system in order to recommend policies to make sure every student in Kentucky is afforded the best educational opportunities possible.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Jack Westwood

Jack Westwood
Senator District 23

Budget Narrative

Budget Narrative - Budget Justification

Attachment 1:
Title: **Budget Narrative** Pages: **6** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Budget\BUDGET NARRATIVE 12-02-09.pdf**

Budget Narrative

The Commonwealth of Kentucky is requesting a total of $19,572,239 to be expended over a period of three years as presented in the budget form contained in this application (ED 524) to expand the scope and functionality of the KY SLDS.

These funds are being requested in order to implement an identity management solution for the KY SLDS that could also be scalable to other areas of the enterprise outside the scope of this grant. Under this project we will perform a one-time audit of all of the processes and data of the KY SLDS, including but not limited to data quality, validity, and reliability in order to arrive at a baseline for establishing a state data audit system that will provide for continuous monitoring. A contract will be secured with an outside expert to review the current governance structure, research proven governance models in states with well-developed statewide longitudinal data systems, and recommend a governance model that will be effective and adaptable for the KY SLDS and will address the decision-making needs of the future. Current feeder systems will be analyzed and modified in order to include new data elements that are required to meet the objectives of the grant, as well as improving the data collection, management and storage processes at KDE, CPE and EPSB to ensure that high quality data are available for the KY SLDS. In addition, new data, reports, and analytical functions will be added to the system. A comprehensive communications and training program will be developed to insure that all stakeholders have a clear understanding of how to use the system to meet their needs.

1 - Personnel Costs

An MOA will be written to hire an executive director for the project for a duration of 3 years at a cost of $92,000 per year plus fringe benefits and a 1% annual COL increase. Total cost $278,770

2 – Fringe Benefits

Fringe benefits will apply to the executive director at a rate of 30% for a total three year amount of $83,631.00

3 – Travel

In year one $10,000 will be allocated for necessary travel expenses, and in years two and three this expense is estimated to increase to $15,000 per year to accommodate the increased travel requirements associated with marketing and training for partners and stakeholders. Total for three years $40,000.00

4 – Equipment

Equipment needs have been estimated based on the following six out of the nine workstreams which will need additional hardware: identity management, state data audit system, re-engineering existing feeder systems, new data and reports, user accessible metadata repository, and technical training. With regard to server costs specifically, all KDE server estimates are based on IBM 3650's of varying configurations. Hardware needs total $1,049,666 are broken down as follows:

- Identity management – 26 servers; 3 direct attached storage devices, 1 router switch, and 1 load

balancer totaling (Total $230,231)

- State Data Audit System – 7 servers at a cost of $37,001 (Total $37,001)
- Re-engineering Existing Feeder Systems – 39 servers and workstations, 2 direct attached storage devices, 3 blade enclosures, and other equipment (Total $ $576,757)
- New data and Reports – 19 servers, 1 direct attached storage device, 1 router switch, and 1 load balancer (Total $161,430)
- Metadata Repository – 5 servers at a cost of $25,099 (Total $25,099)
- Technical training – 4 servers at a cost of $19,148. (Total $19,148)

In year one 25% of hardware budget will be expended with the remainder being expended in year two.

5 – Supplies / Software

General and administrative supplies are estimated to be $4,000 per year and will be prorated among the participating agencies depending upon the need for additional resources to support the project. An additional $10,000 in year one, and $20,000 in each of the remaining two years of the project will be used for the production and printing of training materials and information packets.

In the first year of the project the data model software will be modified, purchased or built to include the new data sources, estimated to cost $250,000 the first year and $150,000 in each of the final two years with Kentucky absorbing 50% of the cost of year three ($75,000). Additional software licenses; including the business intelligence software, will be required as new partners are incorporated into the Collaborative. $100,000 in y ear one and $200,000 in year two and three (Total $500,000).

It is estimated that in year one $100,000 will be spent on application level software including, but not limited to, applications such as SQL Server, ASP, IIS, etc. Associated costs for identity management software in year two is estimated to be $3 million and in year three $2 million.

Total amount requested for supplies and software is $6,068,741.

6 – Contractual

The total amount requested for contractual expenditures is $11,115,000. Of this total, $2,150,000 is estimated to be expended in year one, $4,424,000 in year two, and $4,541,000 in year three. Contractual costs are made up of two general areas: contractual 3rd party vendor costs, and contractual personnel costs.

For contractual 3rd party vendor needs, vendors will be engaged to develop the focus groups, professional services for the data audit and governance review, training development and delivery, and physical hosting services provided by the Commonwealth Office of Technology or similar entity. Additionally, research vendors will be utilized as needed to provide conceptual and methodological assistance in the combining of data and the generating reports. These costs are estimated to total $2,370,000.

For contractual personnel needs, Kentucky will contract with technical resource personnel as necessary for implementing the various work streams described in the project narrative. Care has been taken to budget for these FTEs only when their work is actually anticipated as reflected in the yearly budget figures. Estimates for 3rd party vendor services are based on a time and materials model and include roles at a fully burdened contractor rate of $120,000 per year. These costs are estimated to total $8,745,000.

Project Manager (5)
The scope of the effort will require multiple Project Managers. The Project Manager's responsibilities will include overseeing and helping to ensure that the activities associated with the portion of the project they are assigned to are completed on time within budget and adhere to high quality standards that meet the Commonwealth's expectations.

The initial Project Manager will be responsible for overseeing the advance planning and focus group design and implementation in year one and will shift to overseeing the re-engineering and updating of existing feeder systems. Duties will also include responsibility for enhancement of the KY KSLDS and user accessible data dictionary.

The second and third Project Managers will be hired in the 3rd quarter of the first year.

The second Project Manager will be directly responsible for the identity management design and implementation workstream and will remain assigned to this work stream through to the end of the project.

The third Project Manager will initially concentrate on the state data audit system, and then transition to the development and implementation of the comprehensive training capability and will remain assigned to this work stream through to the end of the project.

It is likely that the second and third Project Managers will be personnel provided by the vendors as part of the contracts secured.

The fourth and fifth Project Managers will be hired during the 2nd quarter of year one and will be housed at EPSB and CPE respectively to oversee the feeder system re-engineering at each respective agency and will remain assigned to those respective work streams through to the end of the project.

The total amount requested for project management expenditures is $1,470,000. Of this total, $300,000 is estimated to be expended in year one, $600,000 in year two, and $570,000 in year three.

Business Analysts (5)
As with the Project Management need, the scope of the effort will require multiple Business Analysts to effectively elicit, capture, and verify the business, functional, and technical requirements related to the work streams that make up the project.

The initial Business Analyst will be hired at the beginning of year one and will help elicit capture and analyze business requirements from focus group sessions in order to complete the initial advance planning phase of the project. This individual will then begin working with agency-focused Business Analysts to carry out the modification of existing feeder systems work and later the addition of new data sources work.

The second Business Analyst will be assigned to the identity management work stream and will be hired in the 3rd quarter of year one.

The third business analyst will also be hired in the 3rd quarter of year one and work specifically with the one-time data audit and then later, focus on the establishment of the state data audit system.

The fourth and fifth Business Analysts will be hired during the 2nd quarter of year one and will be housed at EPSB and CPE respectively to focus on the feeder system re-engineering efforts at each respective agency and will continue through to the end of the project.

The total amount requested for business analysis expenditures is $1,500,000. Of this total, $300,000 is estimated to be expended in year one, $600,000 in year two, and $600,000 in year three.

Data Analysts (3)
At the beginning of year one of the project one Data Analyst will be hired to work specifically with the planning and focus group processes and then shift focus to the re-engineering and new data reports work streams of the project. This individual will become a permanent member of the KY SLDS staff and Kentucky will absorb 25% of this individual's salary in the third year of the grant.

A second Data Analyst will be brought on board in the 3rd quarter of the first year to specifically address the one time data audit and establishment of the state data audit system. This individual will also become a permanent member of the KY SLDS and Kentucky will absorb 25% of the salary in year three.

The third data analyst will be hired for years two and three and will work specifically with the metadata repository. Year one costs $150,000; Year two costs $360,000; Year three costs $300,000.

Database Administrator (3)
In the 1st quarter of year two a database administrator will be hired to work on the re-engineering of feeder systems and the creation of new data reports.

In the 2nd quarter of year two a second database administrator will be brought on board to work specifically on the state data audit system.

A third database administrator will come on board at the beginning of the project with CPE to assist with the internal re-alignment and consolidation of CPE and KYAE's databases. Year one costs $120,000; Year two costs $330,000; Year three costs $360,000.

Application Developers (4)
Four application developers are needed to help re-engineer data collection at each agency in order to prepare the additional feeder systems and incorporate the data into the KY SLDS. These positions will begin during the 3rd quarter of year one and be held for years 2 and 3 of the grant. Year one costs $240,000. Year two costs $480,000. Year three costs $480,000.

Report Developers (3)
Two report developers will be needed beginning in year two to address reports for the new data being collected within the KY SLDS. A third report developer will be hired in the 3rd quarter of year two to work specifically with the state data audit system. Year one costs $0; Year two costs $330,000; Year three costs $360,000.

Trainers (2)
A training coordinator will be hired, at a rate of $75,000 per year, in year two to lead the comprehensive KY SLDS training which will be developed by an outside vendor. The training coordinator will be responsible for providing comprehensive training to regional training facilitators (see Training Stipends below) In year two, a technical trainer, hired at a rate of $60,000 per year will also be needed to provide training for the ad hoc reporting tool and will also work with the outside vendor designing the training. Year one $0 Year two costs $135,000; Year three costs $135,000

Implementation Support (1)
It is anticipated that a designated implementation support person will need to be available to assist with troubleshooting and leading test efforts on the project. Year one costs $60,000; Year two costs $60,000; Year three costs $60,000

Mainframe Developer (1)
A mainframe developer is needed to write the interface of the Workforce Development's feeder systems and new data and report work and will be hired in the 3rd quarter of year one. Year one costs $30,000; Year two costs $120,000; Year three costs $120,000.

ETL Developer (4)
Four ETL developers will be needed beginning in year two of the overall project. Two of these positions will support the extraction of new data and reports and two will be assigned to the state data audit system development and implementation. These latter two ETL developers will become permanent KY SLDS staff and Kentucky will pay 25% of their salary in year three of the project. Year one costs $240,000; Year two costs $480,000; Year three costs $420,000.

Systems Analysts (2)
The two systems analysts will be brought on board in the 3rd quarter of year one and will remain through the completion of the project. Their work will focus on updating and re-engineering of the feeder systems and the state data audit system. Year one costs $60,000. Year two costs $150,000. Year three costs $120,000.

Help Desk Personnel (1)
The implementation of the electronic certification system will require a temporary increase in help desk personnel to assist educators with logins and other technical assistance. This position will be held in the third year of the grant. Year one costs $0. Year two costs $0. Year three costs $75,000.

Other
No expenses in the category "other" are anticipated.

Indirect Costs
Indirect costs are based on a factor of 14.1% for all direct costs excluding equipment and contractual. Indirect costs are estimated for year one at $102,273, $494,881 for year two, and $315,277 for year three.

Training Stipends
Training on the local education association level on the use of the KY SLDS will be facilitated in year two and three by 10 independent trainers located within the districts and universities. These trainers will conduct up to 4 face-to-face or on-line training sessions for district technology coordinators and school administrators during years two and three of the grant at a cost of $24,000 based on a rate of $300 per day.

Budget Narrative

Budget Narrative - ED 524 Section C Spreadsheet

Attachment 1:
Title: **Budget Spreadsheet** Pages: **1** Uploaded File: **I:\GRANTS_External_OIAS\KSLDS2010\Budget\WORKING ARRA Grant Budget v6(3).pdf**

*Details of Contractual Line 6	Year 1	Year 2	Year 3	Totals
Project Manager 1, (Advance & Overall Planning, Data Source Re-engineering, New KSLDS Data & Rpts). Transition 25% of salary to operations in year 3.	120,000	120,000	90,000	330,000
Project Manager 2, (Begin Yr 1, Q3, Identity Mngt)	30,000	120,000	120,000	270,000
Project Manager 3, (Begin Yr 1, Q3, One Time Audit, then State Audit System along w/ Comprehensive KSLDS Training effort)	30,000	120,000	120,000	270,000
Project Manager 4, (EPSB Data Source Re-engineering)	60,000	120,000	120,000	300,000
Project Manager 5, (CPE Data Source Re-engineering)	60,000	120,000	120,000	300,000
BA 1, (Advance & Overall Planning, Data Source Re-engineering, New KSLDS Data & Rpts)	120,000	120,000	120,000	360,000
BA 2, (Begin Yr 1, Q3, Identity Mngt)	30,000	120,000	120,000	270,000
BA 3, (Begin Yr 1, Q3, One Time Data Audit, then, Data Audit QA system)	30,000	120,000	120,000	270,000
BA 4, (EPSB Data Source Re-engineering)	60,000	120,000	120,000	300,000
BA 5, (CPE Data Source Re-engineering)	60,000	120,000	120,000	300,000
Data Analyst 1, (Begin Yr 1, remain through project. Position initially focuses on planning and focus group requirements phase, then shifts to re-engineering of existing systems, and then shifts to the and new data and reports phase. Transition 25% of salary to operations in year 3.)	120,000	120,000	90,000	330,000
Data Analyst 2, (Begin Yr 1 Q3, remain through project. Position initially focuses on the one time audit of KSLDS processes and data, and then shifts to the ongoing data audit system work. Transition 25% of salary to operations in year 3.)	30,000	120,000	90,000	240,000
Data Analyst 3, (Begin Yr 2, remain through project. Position focuses soley on user accessible metadata repository work.)		120,000	120,000	240,000
Database Administrator 1, (Work on reengineering of feeder systems – same person moves to new data reports work).		120,000	120,000	240,000
Database Administrator 2, (State data audit system, begins year 2, second quarter)		90,000	120,000	210,000
Database Administrator 3, (CPE)	120,000	120,000	120,000	360,000
Application Developer 1	60,000	120,000	120,000	300,000
Application Developer 2	60,000	120,000	120,000	300,000
Application Developer 3	60,000	120,000	120,000	300,000
Application Developer 4	60,000	120,000	120,000	300,000
Report Developer 1, (New Data and Reports, begins year 2)		120,000	120,000	240,000
Report Developer 2, (New Data and Reports, begins year 2)		120,000	120,000	240,000
Report Developer 3 - New Data and Reports, (Focus on state data audit, begins year 2, Q2)		90,000	120,000	210,000
Training Coordinator, (Focus on comprehensive training, begin Yr 2)		75,000	75,000	150,000
Technical Trainer, (Technical training for ad hoc reporting tool – working with outside vendor who develops training. Begins Yr 2)		60,000	60,000	120,000
Implementation Support	60,000	60,000	60,000	180,000
Mainframe Developer, (Focus initially on re-engineering of existing feeder systems, then transition to new data and reports), Begin Yr 1, Q3, remain for rest of project)	30,000	120,000	120,000	270,000
ETL Developer 1, (Focus on new data and reports. Begin Yr 2)	120,000	120,000	120,000	360,000
ETL Developer 2, (Focus on new data and reports. Begin Yr 2)	120,000	120,000	120,000	360,000
ETL Developer 3, (Focus on state data audit system. Begin Yr 2). Transition 25% of salary to operations in year 3.	0	120,000	90,000	210,000
ETL Developer 4, (Focus on state data audit system. Begin Yr 2). Transition 25% of salary to operations in year 3.	0	120,000	90,000	210,000
Systems Analyst 1, (Initially focuses on one time audit of data and processes, then transitions to state data audit system work. Begins Yr 1 Q3).	30,000	120,000	120,000	270,000
Systems Analyst 2, (Focuses only on re-engineering existing feeder systems. Begins Yr 1 Q3, works for 6 months through 1st quarter of Y2).	30,000	30,000		60,000
Help Desk	0	0	75,000	75,000
Physical Hosting, Operating Systems, Patching, Monitoring	0	204,000	366,000	570,000
Professional Services for Data Audit	250,000			250,000
Professional Services for Training Development	0	375,000	375,000	750,000
Data Governance Contractual	250,000	0	0	250,000
Focus Group Contractual	50,000	0	0	50,000
Research Contractual	100,000	200,000	200,000	500,000
				0
Totals	2,150,000	4,424,000	4,541,000	11,115,000

Kentucky / Race to the Top

Evidence for section (D)(1)

Please see below for description of the State's applicable laws, statutes, regulations, or other relevant legal documents, including information on the elements of the State's alternative routes as well as a list of the alternative certification programs operating in the State under the State's alternative routes to certification and the application requirements of each.

161.048 Alternative certification program -- Purpose -- Options -- Testing and eligibility requirements -- Salary schedule.
(1) The General Assembly hereby finds that:
(a) 1. There are persons who have distinguished themselves through a variety of work and educational experiences that could enrich teaching in Kentucky schools;
2. There are distinguished scholars who wish to become teachers in Kentucky's public schools, but who did not pursue a teacher preparation program;
3. There are persons who should be recruited to teach in Kentucky's public schools as they have academic majors, strong verbal skills as shown by a verbal ability test, and deep knowledge of content, characteristics that empirical research identifies as important attributes of quality teachers;
4. There are persons who need to be recruited to teach in Kentucky schools to meet the diverse cultural and educational needs of students; and
5. There should be alternative procedures to the traditional teacher preparation programs that qualify persons as teachers.
(b) There are hereby established alternative certification program options as described in subsections (2) through (8) of this section.
(c) It is the intent of the General Assembly that the Educational Professional Standards Board inform scholars, persons with exceptional work experience, and persons with diverse backgrounds who have potential as teachers of these options and assist local boards of education in implementing these options and recruitment of individuals who can enhance the education system in Kentucky.
(d) The Education Professional Standards Board shall promulgate administrative regulations establishing standards and procedures for the alternative certification options described in this section.
(2) **Option 1:** Certification of a person with exceptional work experience. An individual who has exceptional work experience and has been offered employment in a local school district shall receive a one (1) year provisional teaching certificate with approval by the Education Professional Standards Board of a joint application by the individual and the employing school district under the following conditions:
(a) The application contains documentation of all education and work experience;
(b) The candidate has documented ten (10) years of exceptional work experience in the area in which certification is being sought;
(c) The candidate possesses:
1. a. A minimum of a bachelor's degree, with a cumulative grade point average of two and five-tenths (2.5) on a four (4) point scale or a grade point average of three (3.0) on a four (4) point scale on the last sixty (60) hours of credit completed, including undergraduate

and graduate coursework from a nationally or regionally accredited postsecondary institution; or
b. A graduate degree with a cumulative grade point average of two and five-tenths (2.5) on a four (4) point scale or a grade point average of three (3.0) on a four (4) point scale on the last sixty (60) hours of credit completed, including undergraduate and graduate coursework from a nationally or regionally accredited postsecondary institution; and
2. An academic major or a passing score on the academic content assessment designated by the Education Professional Standards Board; and
(d) The candidate shall participate in the teacher internship program under subsections (5), (6), (7), and (8) of KRS 161.030. After successful completion of the internship, the candidate shall receive a regular professional certificate and shall be subject to certificate renewal requirements the same as any other teacher with a regular professional certificate.
(3) **Option 2:** Certification through a local district training program. A local district or group of districts may seek approval for a training program. The state-approved local district training program is an alternative to the college teacher preparation program as a means of acquiring teacher certification for a teacher at any grade level. The training program may be offered for all teaching certificates approved by Education Professional Standards Board, including interdisciplinary early childhood education, except for specific certificates for teachers of exceptional children. To participate in a state-approved local district alternative training program, the candidate shall:
(a) Possess a bachelor's degree with a grade point average of two and five tenths (2.5) on a four (4) point scale or, upon approval by the Education Professional Standards Board, at least a grade point average of two (2) on a four (4) point scale if the candidate has exceptional life experience related to teaching and has completed the bachelor's degree at least five (5) years prior to submitting an application to the program.
(b) Pass written tests designated by the Education Professional Standards Board for content knowledge in the specific teaching field of the applicant with minimum scores in each test as set by the Education Professional Standards Board. To be eligible to take a subject field test, the applicant shall have completed a thirty (30) hour major in the academic content area or five (5) years of experience in the academic content area as approved by the Education Professional Standards Board.
(c) Have been offered employment in a school district which has a training program approved by the Education Professional Standards Board.
(d) Upon meeting the participation requirements as established in this subsection, the candidate shall be issued a one (1) year provisional certificate by the Education Professional Standards Board. The regular provisional certificate

shall be issued upon satisfactory completion of the program and the teacher testing internship program pursuant to KRS 161.030.
(e) The Education Professional Standards Board may reject the application of any candidate who is judged as not meeting academic requirements comparable to those for students enrolled in Kentucky teacher preparation programs.
(4) **Option 3**: Certification of a professional from a postsecondary institution: A candidate who possesses the following qualifications may receive alternative certification for teaching at any level:
(a) A master's degree or doctoral degree in the academic content area for which certification is sought;
(b) A minimum of five (5) years of full-time teaching experience, or its equivalent, in the academic content area for which certification is sought in a regionally or nationally accredited institution of higher education; and
(c) Successful completion of the teacher internship requirement imposed under KRS 161.030.
(5) **Option 4:** Certification of an adjunct instructor. A person who has expertise in areas such as art, music, foreign language, drama, science, and other specialty areas may be employed as an adjunct instructor in a part-time position by a local board of education under KRS 161.046. An individual certified as an adjunct instructor shall not be deemed "highly qualified" under the provisions of the federal No Child Left Behind Act of 2001, 20 U.S.C. secs. 6301 et seq.
(6) **Option 5**: Certification of a veteran of the Armed Forces. The Education Professional Standards Board shall issue a statement of eligibility, valid for five (5) years, to a veteran for teaching at the elementary, secondary, and secondary vocational education levels with the following qualifications:
(a) 1. Discharged or released from active duty under honorable conditions after six (6) or more years of continuous active duty immediately before the discharge or release; or
2. Completed a total of at least ten (10) years of active duty service, ten (10) years of service officially credited toward armed services retirement, or ten (10) years' combination of such service;
(b) At least a bachelor's degree in the content area or closely related area for which certification is sought, issued by a regionally or nationally accredited institution of higher education;
(c) A grade point average of two and five-tenths (2.5) on a four (4) point scale for a bachelor's degree or an advanced degree; and
(d) A passing score on the written exit assessment examination designated by the Education Professional Standards Board for content knowledge.
Upon an offer of employment by a school district, the eligible veteran shall receive a one (1) year provisional teaching certificate with approval by the Education Professional Standards Board of a joint application by the veteran and the employing school district. During this year, the veteran shall participate in the teacher internship program under subsections (5), (6), (7), and (8) of KRS 161.030.

Upon successful completion of the internship program, the veteran shall receive a regular professional certificate.

(7) **Option 6:** University alternative program. With approval of the Education Professional Standards Board, a university may provide an alternative program that enrolls students in a postbaccalaureate teacher preparation program concurrently with employment as a teacher in a local school district. A student in the alternative program shall be granted a temporary provisional certificate and shall be a candidate in the Kentucky teacher internship program, notwithstanding provisions of KRS 161.030. A student may not participate in the internship program until the student has successfully completed the assessments required by the board. The temporary provisional certificate shall be valid for a maximum of one (1) year, and may be renewed two (2) additional years, and shall be contingent upon the candidate's continued enrollment in the preparation program and compliance with all requirements established by the board. A professional certificate shall be issued upon the teacher candidate's successful completion of the program, the internship requirements, and all assessments required by the board.

(8) **Option 7:** Certification of a person in a field other than education to teach in elementary, middle, or secondary programs. This option shall not be limited to teaching in shortage areas.

(a) An individual certified under provisions of this subsection shall be issued a one (1) year temporary provisional teaching certificate, renewable for a maximum of two (2) additional years with approval of the Education Professional Standards Board provided that the candidate:

1. Possesses a bachelor's degree with a declared academic major in the area in which certification is sought and a cumulative grade point average of 3.0 on a 4.0 scale, or a professional or graduate degree in a field related to the area in which certification is sought;

2. Has a minimum score of five hundred (500) on the verbal section and a minimum score of four (4) on the analytical writing section of the Graduate Record Examination (GRE). In addition, teachers of mathematics and physical and biological sciences shall have a minimum score of four hundred fifty (450) on the quantitative section of the GRE. A candidate who has a professional degree shall be exempt from the requirements of this subparagraph; and

3. Passes written tests designated by the Education Professional Standards Board for content knowledge in the specific teaching field of the applicant with minimum scores in each test as set by the board.

(b) Prior to receiving the temporary provisional certificate or during the first year of the certificate, the teacher shall complete the following:

1. For elementary teaching, the individual shall successfully complete the equivalent of a two hundred forty (240) hour institute, based on six (6) hour days for eight (8) weeks. The providers and the content of the institute shall be approved by the Education Professional Standards Board. The content shall include research-based teaching strategies in

reading and math, research on child and adolescent growth, knowledge of individual differences, including teaching exceptional children, and methods of classroom management.
2. For middle and secondary teaching, the individual shall successfully complete the equivalent of a one hundred eighty (180) hour institute, based on six (6) hour days for six (6) weeks. The providers and the content of the institute shall be approved by the Education Professional Standards Board and shall include research-based teaching strategies, research on child and adolescent growth, knowledge of individual differences, including teaching exceptional children, and methods of classroom management.
(c) The candidate shall participate in the teacher internship program under subsections (5), (6), (7), and (8) of KRS 161.030. After successful completion of the internship program, the candidate shall receive a regular professional certificate.
(9) A public school teacher certified under subsections (2) to (8) of this section shall be placed on the local district salary schedule for the rank corresponding to the degree held by the teacher.
(10) Veterans who were discharged or released from active duty under honorable conditions after six (6) or more years of continuous active duty immediately before the discharge or release, and who have at least four (4) years of occupational experience in the area in which they seek certification as a vocational industrial education teacher, shall apply for certification under and meet the requirements of the administrative regulations promulgated by the Education Professional Standards Board.
(11) Subsections (1) to (3) of this section notwithstanding, a candidate who possesses the following qualifications may receive certification for teaching programs for exceptional students:
(a) An out-of-state license to teach exceptional students;
(b) A bachelor's or master's degree in the certification area or closely related area for which certification is sought; and
(c) Successful completion of the teacher internship requirement required under KRS 161.030.
(12) A teacher who is fully certified in Kentucky and who is seeking an additional certification is not required to repeat the Kentucky teacher internship program.
(13) Under KRS 161.030(5), a candidate for alternative certification may serve his or her internship in a nonpublic school.

161.028 Education Professional Standards Board -- Powers and duties regarding the preparation and certification of professional school personnel -- Membership.

(1) The Education Professional Standards Board is recognized to be a public body corporate and politic and an agency and instrumentality of the Commonwealth, in the performance of essential governmental functions. The Education Professional Standards Board has the authority and responsibility to:

(a) Establish standards and requirements for obtaining and maintaining a teaching certificate;

(b) Set standards for, approve, and evaluate college, university, and school district programs for the preparation of teachers and other professional school personnel. Program standards shall reflect national standards and shall address, at a minimum, the following:

1. The alignment of programs with the state's core content for assessment as defined in KRS 158.6457;
2. Research-based classroom practices, including effective classroom management techniques;
3. Emphasis on subject matter competency of teacher education students;
4. Methodologies to meet diverse educational needs of all students;
5. The consistency and quality of classroom and field experiences, including early practicums and student teaching experiences;
6. The amount of college-wide or university-wide involvement and support during the preparation as well as the induction of new teachers;
7. The diversity of faculty;
8. The effectiveness of partnerships with local school districts; and
9. The performance of graduates on various measures as determined by the board;

(c) Conduct an annual review of diversity in teacher preparation programs;

(d) Provide assistance to universities and colleges in addressing diversity, which may include researching successful strategies and disseminating the information, encouraging the development of nontraditional avenues of recruitment and providing incentives, waiving administrative regulations when needed, and other assistance as deemed necessary;

(e) Discontinue approval of programs that do not meet standards or whose graduates do not perform according to criteria set by the board;

(f) Issue, renew, revoke, suspend, or refuse to issue or renew; impose probationary or supervisory conditions upon; issue a written reprimand or admonishment; or any combination of actions regarding any certificate;

(g) Develop specific guidelines to follow upon receipt of an allegation of sexual misconduct by an employee certified by the Education Professional Standards Board. The guidelines shall include investigation, inquiry, and hearing

procedures which ensure the process does not revictimize the alleged victim or cause harm if an employee is falsely accused;

(h) Receive, along with investigators hired by the Education Professional Standards Board, training on the dynamics of sexual misconduct of professionals, including the nature of this abuse of authority, characteristics of the offender, the impact on the victim, the possibility and the impact of false accusations, investigative procedures in sex offense cases, and effective intervention with victims and offenders;

(i) Recommend to the Kentucky Board of Education the essential data elements relating to teacher preparation and certification, teacher supply and demand, teacher attrition, teacher diversity, and employment trends to be included in a state comprehensive data and information system and periodically report data to the Interim Joint Committee on Education;

(j) Submit reports to the Governor and the Legislative Research Commission and inform the public on the status of teaching in Kentucky;

(k) Devise a credentialing system that provides alternative routes to gaining certification and greater flexibility in staffing local schools while maintaining standards for teacher competence;

(l) Develop a professional code of ethics;

(m) Set the qualifications and salary for the positions of executive director and deputy executive director to the board, notwithstanding the provisions of KRS 64.640;

(n) Recruit, select, employ and evaluate the executive director to the board;

(o) Approve employment procedures for the employment of policy level staff, subject to the provisions of KRS 12.050;

(p) Approve the biennial budget request;

(q) Charge reasonable fees for the issuance, reissuance, and renewal of certificates that are established by administrative regulation. The proceeds shall be used to meet a portion of the costs of the issuance, reissuance, and renewal of certificates, and the costs associated with disciplinary action against a certificate holder under KRS 161.120;

(r) Waive a requirement that may be established in an administrative regulation promulgated by the board. A request for a waiver shall be submitted to the board, in writing, by an applicant for certification, a postsecondary institution, or a superintendent of a local school district, with appropriate justification for the waiver. The board may approve the request if the person or institution seeking the waiver has demonstrated extraordinary circumstances justifying the waiver. Any waiver granted under this subsection shall be subject to revocation if the person or institution falsifies information or subsequently fails to meet the intent of the waiver;

(s) Promote the development of one (1) or more innovative, nontraditional or alternative administrator or teacher preparation programs through public or private colleges or universities, private contractors, the Department of

Education, or the Kentucky Commonwealth Virtual University and waive administrative regulations if needed in order to implement the program;

(t) Grant approval, if appropriate, of a university's request for an alternative program that enrolls an administrator candidate in a postbaccalaureate administrator preparation program concurrently with employment as an assistant principal, principal, assistant superintendent, or superintendent in a local school district. An administrator candidate in the alternative program shall be granted a temporary provisional certificate and shall be a candidate in the Kentucky Principal Internship Program, notwithstanding provisions of KRS 161.030, or the Superintendent's Assessment process, notwithstanding provisions of KRS 156.111, as appropriate. The temporary certificate shall be valid for a maximum of two (2) years, and shall be contingent upon the candidate's continued enrollment in the preparation program and compliance with all requirements established by the board. A professional certificate shall be issued upon the candidate's successful completion of the program, internship requirements, and assessments as required by the board;

(u) Employ consultants as needed;

(v) Enter into contracts. Disbursements to professional educators who receive less than one thousand dollars ($1,000) in compensation per fiscal year from the board for serving on an assessment validation panel or as a test scorer or proctor shall not be subject to KRS 45A.690 to 45A.725;

(w) Sponsor studies, conduct research, conduct conferences, and publish information as appropriate; and

(x) Issue orders as necessary in any administrative action before the board.

(2) (a) The board shall be composed of seventeen (17) members. The commissioner of education and the president of the Council on Postsecondary Education, or their designees, shall serve as ex officio voting members. The Governor shall make the following fifteen (15) appointments:

1. Nine (9) members who shall be teachers representative of elementary, middle or junior high, secondary, special education, and secondary vocational classrooms;
2. Two (2) members who shall be school administrators, one (1) of whom shall be a school principal;
3. One (1) member representative of local boards of education; and
4. Three (3) members representative of postsecondary institutions, two (2) of whom shall be deans of colleges of education at public universities and one (1) of whom shall be the chief academic officer of an independent not-for-profit college or university.

(b) The members appointed by the Governor after June 21, 2001, shall be confirmed by the Senate and the House of Representatives under KRS 11.160. If the General Assembly is not in session at the time of the appointment, persons appointed shall serve prior to confirmation, but the Governor shall seek the consent of the General Assembly at the next regular session or at an

intervening extraordinary session if the matter is included in the call of the General Assembly.

(c) A vacancy on the board shall be filled in the same manner as the original appointment within sixty (60) days after it occurs. A member shall continue to serve until his successor is named. Any member who, through change of employment status or residence, or for other reasons, no longer meets the criteria for the position to which he was appointed shall no longer be eligible to serve in that position.

(d) Members of the board shall serve without compensation but shall be permitted to attend board meetings and perform other board business without loss of income or other benefits.

(e) A state agency or any political subdivision of the state, including a school district, required to hire a substitute for a member of the board who is absent from the member's place of employment while performing board business shall be reimbursed by the board for the actual amount of any costs incurred.

(f) A chairman shall be elected by and from the membership. A member shall be eligible to serve no more than three (3) one (1) year terms in succession as chairman. The executive director shall keep records of proceedings. Regular meetings shall be held at least semiannually on call of the chairman.

(g) To carry out the functions relating to its duties and responsibilities, the board is empowered to receive donations and grants of funds; to appoint consultants as needed; and to sponsor studies, conduct conferences, and publish information.

Effective: July 13, 2004

History: Amended 2004 Ky. Acts ch. 117, sec. 2, effective July 13, 2004. -- Amended 2002 Ky. Acts ch. 288, sec. 3, effective July 15, 2002. -- Amended 2001 Ky. Acts ch. 137, sec. 7, effective June 21, 2001. -- Amended 2000 Ky. Acts ch. 527, sec. 15, effective July 14, 2000. -- Amended 1998 Ky. Acts ch. 362, sec. 3, effective July 15, 1998. -- Amended 1997 (1st Extra. Sess.) Ky. Acts ch. 1, sec. 66, effective May 30, 1997. -- Amended 1996 Ky. Acts ch. 107, sec. 1, effective July 15, 1996; and ch. 343, sec. 4, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 265, sec. 1, effective July 15, 1994; and ch. 470, sec. 1, effective July 15, 1994. -- Created 1990 Ky. Acts ch. 476, Pt. II, sec. 56, effective July 13, 1990.

Evidence for (D)(1)(ii) Alternative Route Statistics

)Mnsd9J dmst bj x opledq sn !oqnf q l r! ` r !nosmmr! opf ` opmf ` kdqm shud bdqsbb` smmmqnt sdr enqsd` bgdqr ` mc odmbko` kr- J dmst bj x& 6 ` kdqm shud bdqsbb` smmnosmmr chsdq` knmf j dx ch dmr lmmr , lmbkt chmf sgd bqsdqh cdmnsdc lmsgd Q` bd sn sgd Sno ` ookb` smm+ Chsdqdmsoqnuhcdqr v hsghmsgd r` l d nosmmf dmdq kx g` ud r h hk qi ncdkr lmqledqdmbd sn sgnr d bqsdqh ' *See Appendix OO: Kentucky Alternative Certification Legislation for more detail* (

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Teachers **44,016**

	Teachers	Percent of population
Nosmm0 , Dwbdosmm kV nq Dwodqdmbd	50	/ -028
Nosmm1 , Knb` kChrsqbs Sq hmmf	020	/ -187
Nosmm2 , Bnkdf d E` bt ksx	37	/ -/ / /
Nosmm3 , @cit mbs Hmr sq bsnq	002	/ -146
Nosmm4 , Udsdq mnesgd @q dc Enqbdr	45	/ -016
Nosmm5 , T mudqr hsx A` r dc	2786	7-743
Nosmm6 ,T mudqr hsx Hmr sst sd	00	/ -/ 14
Sns` kMt l adqneSd` bgdqr v gn gdkc ` m@ksdqm shud Bdqsbb` sd	3206	8-7/ 6686054

	Teachers	Percent of population
New Teachers with Zero Experience	**2,695**	5-011662426

	Teachers	Percent of population
Nosmm0 , Dwbdosmm kV nq Dwodqdmbd	0	/ -/ 26
Nosmm1 , Knb` kChrsqbs Sq hmmf	1/	/ -631
Nosmm2 , Bnkdf d E` bt ksx	1	/ -/ 63
Nosmm3 , @cit mbs Hmr sq bsnq	4	/ -075
Nosmm4 , Udsdq mnesgd @q dc Enqbdr	3	/ -037
Nosmm5 , T mudqr hsx A` r dc	307	04-40/
Nosmm6 ,T mudqr hsx Hmr sst sd	/	/ -/ / /

C` s Rnt qbd91/ / 81/ 0/ L t mm Hmen Sd` bgdqBdqsbb` smmC` s

I na Et mbsmm Sns` kOnot k` smmenq1/ / 8,0/

Principal (Includes Assistants & Vocational) **2,167**

	Principal(s)	Percent of population
Nosmm0 , Dwbdosmm` kV nq Dwodqdmbd	/	
Nosmm1 , Knb` kChrsqbsSq` hmmf	/	
Nosmm2 , Bnkdf d E` bt ksx	/	
Nosmm3 , @cit mbsHmrsqt bsnq	/	
Nosmm4 , Udsdq` mnesgd @q dc Enqbdr	/	
Nosmm5 , Tmudqrhsx A` rdc	020	5-/ 34
Nosmm6 ,Tmudqrhsx Hmrsst sd	/	
Sns` kMt l adqneOqmbho` kr v gn gdkc ` m@sdqm` shud Bdqshb` sd-	020	5-/ 34112701

	Principals	Percent of population
New Principals with Zero Experience	**1**	/ -/ 35035636
Nosmm5 , Tmudqrhsx A` rdc	0	/ -/ 35035636

C` s` Rnt qbd91/ / 81/ 0/ L t mr Hmen Sd` bgdqBdqshb` smmC` s`

Pt drsmm2-

Bnkdfd	Oqnfq`l Bnl okdsdq	@sdqm`shud Qntsd Oqnfq`l
@ratqx Bnkdfd	40	Noshmm5
Adkk`q hmd Tmhudqrhsx	6/	Noshmm5
B`l oadkkruhkd Tmhudqrhsx	066	Noshmm5
D`rsdqmJdmstbjx Tmhudqrhsx	104	Noshmm5
Fdnqfdsnvm Bnkdfd	235	Noshmm5
Jdmstbjx Rs`sd Tmhudqrhsx	4	Noshmm5
Lnqdgd`c Rs`sd Tmhudqrhsx	221	Noshmm5
Ltqq`x Rs`sd Tmhudqrhsx	078	Noshmm5
Mnqsgdqm Jdmstbjx Tmhudqrhsx	161	Noshmm5
Mnqsgdqm Jdmstbjx Tmhudqrhsx	4	Noshmm6
Ro`kchmf Tmhudqrhsx	070	Noshmm5
Sgnl `r Lnqd Bnkdfd	11	Noshmm5
Tmhmm Bnkdfd	007	Noshmm5
Tmhudqrhsx neJdmstbjx	05	Noshmm5
Tmhudqrhsx neKnthruhkd	266	Noshmm5
Tmhudqrhsx nesgd Btl adqk`mcr	48	Noshmm5
Vdrsdqm Jdmstbjx Tmhudqrhsx	22/	Noshmm5

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STANDARD 1: THE TEACHER DEMONSTRATES APPLIED CONTENT KNOWLEDGE

The teacher demonstrates a current and sufficient academic knowledge of certified content areas to develop student knowledge and performance in those areas.

Initial-Level Performance	Advanced-Level Performance
1.1 Communicates concepts, processes, and knowledge.	
Accurately and effectively communicates concepts, processes and/or knowledge and uses vocabulary that is clear, correct and appropriate for students.	Accurately and effectively communicates an in-depth understanding of concepts, processes, and/or knowledge in ways that contribute to the learning of all students.
1.2 Connects content to life experiences of student.	
Initial-Level Performance	Advanced-Level Performance
Effectively connects most content, procedures, and activities with relevant life experiences of students.	Effectively connects content to students' life experiences including, when appropriate, prior learning in the content area or other content areas.
1.3 Demonstrates instructional strategies that are appropriate for content and contribute to student learning.	
Initial-Level Performance	Advanced-Level Performance
Uses instructional strategies that are clearly appropriate for the content and processes of the lesson and make a clear contribution to student learning.	Consistently uses instructional strategies that are appropriate for content and contribute to the learning of all students.
1.4 Guides students to understand content from various perspectives.	
Initial-Level Performance	Advanced-Level Performance
Provides opportunities and guidance for students to consider lesson content from different perspectives to extend their understanding.	Regularly guides students to understand content from appropriate diverse, multicultural, or global perspectives.
1.5 Identifies and addresses students' misconceptions of content.	
Initial-Level Performance	Advanced-Level Performance
Identifies misconceptions related to content and addresses them during planning and instruction.	Consistently anticipates misconceptions related to content and addresses them by using appropriate instructional practices.

STANDARD 2: THE TEACHER DESIGNS AND PLANS INSTRUCTION

The teacher designs/plans instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

2.1 Develops significant objectives aligned with standards.	
Initial-Level Performance	Advanced-Level Performance
States learning objectives that reflect key concepts of the discipline and are aligned with local or state standards.	Develops challenging and appropriate learning objectives that are aligned with local/state/national standards and are based on students' needs, interests and abilities.
2.2 Uses contextual data to design instruction relevant to students.	
Initial-Level Performance	Advanced-Level Performance
Plans and designs instruction based on contextual (i.e., student, community, and/or cultural) and pre-assessment data.	Plans and designs instruction that is based on significant contextual and pre-assessment data.
2.3 Plans assessments to guide instruction and measure learning objectives.	
Initial-Level Performance	Advanced-Level Performance
Prepares assessments that measure student performance on each objective and help guide teaching.	Develops well-designed assessments that align with learning objectives, guide instruction, and measure learning results.
2.4 Plans instructional strategies and activities that address learning objectives for all students.	
Initial-Level Performance	Advanced-Level Performance
Aligns instructional strategies and activities with learning objectives for all students.	Plans a learning sequence using instructional strategies and activities that build on students' prior knowledge and address learning objectives.
2.5 Plans instructional strategies and activities that facilitate multiple levels of learning.	
Initial-Level Performance	Advanced-Level Performance
Plans instructional strategies that include several levels of learning that require higher order thinking.	Plans a learning sequence using strategies and activities that foster the development of higher-order thinking.

STANDARD 3: THE TEACHER CREATES AND MAINTAINS LEARNING CLIMATE

The teacher creates a learning climate that supports the development of student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

3.1 Communicates high expectations.	
Initial-Level Performance	Advanced-Level Performance
Sets significant and challenging objectives for students and verbally/nonverbally communicates confidence in students' ability to achieve these objectives.	Consistently Sets significant and challenging behavioral and learning expectations for all students and communicates confidence in their ability to achieve those expectations.

3.2 Establishes a positive learning environment.	
Initial-Level Performance	Advanced-Level Performance
Establishes clear standards of conduct, shows awareness of student behavior, and responds in ways that are both appropriate and respectful of students.	Maintains a fair, respectful, and productive classroom environment conducive to learning.

3.3 Values and supports student diversity and addresses individual needs.	
Initial-Level Performance	Advanced-Level Performance
Uses a variety of strategies and methods to supports student diversity by addressing individual needs.	Consistently uses appropriate and responsive instructional strategies that address the needs of all students.

3.4 Fosters mutual respect between teacher and students and among students.	
Initial-Level Performance	Advanced-Level Performance
Treats all students with respect and concern and monitors student interactions to encourage students to treat each other with respect and concern.	Consistently treats all students with respect and concern and actively encourages students to treat each other with respect and concern.

3.5 Provides a safe environment for learning.	
Initial-Level Performance	Advanced-Level Performance
Creates a classroom environment that is both emotionally and physically safe for all students.	Maintains a classroom environment that is both emotionally and physically safe for all students.

STANDARD 4: THE TEACHER IMPLEMENTS AND MANAGES INSTRUCTION

The teacher introduces/implements/manages instruction that develops student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

4.1 Uses a variety of instructional strategies that align with learning objectives and actively engage students.	
Initial-Level Performance	Advanced-Level Performance
Uses a variety of instructional strategies that engage students throughout the lesson on tasks aligned with learning objectives.	Consistently provides a well-planned sequence of appropriate instructional strategies that actively engage students in meeting learning objectives.

4.2 Implements instruction based on diverse student needs and assessment data.	
Initial-Level Performance	Advanced-Level Performance
Implements instruction based on contextual information and assessment data.	Implements instruction based on contextual information and assessment data, adapting instruction to unanticipated circumstances.

4.3 Uses time effectively.	
Initial-Level Performance	Advanced-Level Performance
Establishes efficient procedures for performing non-instructional tasks, handling materials and supplies, managing transitions, and organizing and monitoring group work so that there is minimal loss of instructional time.	Makes thoughtful choices about the organization and implementation of both instructional and non-instructional tasks to maximize time for student learning.

4.4 Uses space and materials effectively.	
Initial-Level Performance	Advanced-Level Performance
Uses classroom space and materials effectively to facilitate student learning.	Makes optimal use of classroom space and uses a variety of instructional resources and technologies to enhance student learning.

4.5 Implements and manages instruction in ways that facilitate higher order thinking.	
Initial-Level Performance	Advanced-Level Performance
Instruction provides opportunity to promote higher-order thinking.	Consistently uses a variety of appropriate strategies to facilitate higher-order thinking.

STANDARD 5: THE TEACHER ASSESSES AND COMMUNICATES LEARNING RESULTS

The teacher assesses learning and communicates results to students and others with respect to student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

5.1 Uses pre-assessments.	
Initial-Level Performance	Advanced-Level Performance
Uses a variety of pre-assessments to establish baseline knowledge and skills for all students.	Consistently uses student baseline data from appropriate pre-assessments to promote the learning of all students.

5.2 Uses formative assessments.	
Initial-Level Performance	Advanced-Level Performance
Uses a variety of formative assessments to determine each student's progress and guide instruction.	Consistently uses appropriate formative assessments to determine student progress, guide instruction, and provide feedback to students.

5.3 Uses summative assessments.	
Initial-Level Performance	Advanced-Level Performance
Uses a variety of summative assessments to measure student achievement.	Consistently uses appropriate summative assessments aligned with the learning objectives to measure student achievement.

5.4 Describes, analyzes, and evaluates student performance data.	
Initial-Level Performance	Advanced-Level Performance
Describes, analyzes, and evaluates student performance data to determine progress of individuals and identify differences in progress among student groups.	Consistently describes, analyzes, and evaluates student performance data to determine student progress, identify differences among student groups, and inform instructional practice.

5.5 Communicates learning results to students and parents.	
Initial-Level Performance	Advanced-Level Performance
Communicates learning results to students and parents that provide a clear and timely understanding of learning progress relative to objectives.	Clearly communicates to students and parents in a timely manner the evidence of student performance and recommends future actions.

5.6 Allows opportunity for student self-assessment.	
Initial-Level Performance	Advanced-Level Performance
Promotes opportunities for students to engage in accurate self-assessment of learning.	Provides on-going opportunities for students to assess and reflect on their own performance in order to identify strengths and areas for future learning.

STANDARD 6: THE TEACHER DEMONSTRATES THE IMPLEMENTATION OF TECHNOLOGY

The teacher uses technology to support instruction; access and manipulate data; enhance professional growth and productivity; communicate and collaborate with colleagues, parents, and the community; and conduct research.

6.1 Uses available technology to design and plan instruction.	
Initial-Level Performance	Advanced-Level Performance
Uses technology to design and plan instruction.	Uses appropriate technology to design and plan instruction that supports and extends learning of all students.

6.2 Uses available technology to implement instruction that facilitates student learning.	
Initial-Level Performance	Advanced-Level Performance
Uses technology to implement instruction that facilitates student learning.	Designs and implements research-based, technology-infused instructional strategies to support learning of all students.

6.3 Integrates student use of available technology into instruction.	
Initial-Level Performance	Advanced-Level Performance
Integrates student use of technology into instruction to enhance learning outcomes and meet diverse student needs.	Provides varied and authentic opportunities for all students to use appropriate technology to further their learning.

6.4 Uses available technology to assess and communicate student learning.	
Initial-Level Performance	Advanced-Level Performance
Uses technology to assess and communicate student learning.	Uses technology to assess student learning, manage assessment data, and communicate results to appropriate stakeholders.

6.5 Demonstrates ethical and legal use of technology.	
Initial-Level Performance	Advanced-Level Performance
Ensures that personal use and student use of technology are ethical and legal.	Provides and maintains a safe, secure, and equitable classroom environment that consistently promotes discerning and ethical use of technology.

STANDARD 7: REFLECTS ON AND EVALUATES TEACHING AND LEARNING

The teacher reflects on and evaluates specific teaching/learning situations and/or programs.

7.1 Uses data to reflect on and evaluate student learning.	
Initial-Level Performance	Advanced-Level Performance
Reflects on and accurately evaluates student learning using appropriate data.	Uses formative and summative performance data to determine the learning needs of all students.

7.2 Uses data to reflect on and evaluate instructional practice.	
Initial-Level Performance	Advanced-Level Performance
Reflects on and accurately evaluates instructional practice using appropriate data.	Uses performance data to conduct an in-depth analysis and evaluation of instructional practices to inform future teaching.

7.3 Uses data to reflect on and identify areas for professional growth.	
Initial-Level Performance	Advanced-Level Performance
Identifies areas for professional growth using appropriate data.	Reflects on the evaluations of student learning and instructional practices to identify and develop plans for professional growth.

STANDARD 8: COLLABORATES WITH COLLEAGUES/PARENTS/OTHERS

The teacher collaborates with colleagues, parents, and other agencies to design, implement, and support learning programs that develop student abilities to use communication skills, apply core concepts, become self-sufficient individuals, become responsible team members, think and solve problems, and integrate knowledge.

8.1 Identifies students whose learning could be enhanced by collaboration.	
Initial-Level Performance	Advanced-Level Performance
Identifies one or more students whose learning could be enhanced by collaboration and provides an appropriate rationale.	Describes an on-going process for identifying situations in which student learning could be enhanced by collaboration.

8.2 Designs a plan to enhance student learning that includes all parties in the collaborative effort.	
Initial-Level Performance	Advanced-Level Performance
Designs a plan to enhance student learning that includes all parties in the collaborative effort.	Designs a plan that involves parents, colleagues, and others in a collaborative effort to enhance student learning.

8.3 Implements planned activities that enhance student learning and engage all parties.	
Initial-Level Performance	Advanced-Level Performance
Implements planned activities that enhance student learning and engage all parties.	Explains how the collaboration to enhance student learning has been implemented.

8.4 Analyzes data to evaluate the outcomes of collaborative efforts.	
Initial-Level Performance	Advanced-Level Performance
Analyzes student learning data to evaluate the outcomes of collaboration and identify next steps.	Uses appropriate student performance data to describe, analyze, and evaluate the impact of the collaborative activities on student learning and to identify next steps.

STANDARD 9: EVALUATES TEACHING AND IMPLEMENTS PROFESSIONAL DEVELOPMENT

The teacher evaluates his/her overall performance with respect to modeling and teaching Kentucky's learning goals, refines the skills and processes necessary, and implements a professional development plan.

9.1 Self assesses performance relative to Kentucky's Teacher Standards.	
Initial-Level Performance	Advanced-Level Performance
Identifies priority growth areas and strengths by thoroughly and accurately assessing current performance on all the Kentucky Teacher Standards.	Thoroughly and accurately assesses current performance related to the Kentucky Teacher Standards and any school/district professional development initiatives.

9.2 Identifies priorities for professional development based on data from self-assessment, student performance and feedback from colleagues.	
Initial-Level Performance	Advanced-Level Performance
Identifies priorities for professional development based on data from self-assessment, student performance and feedback from colleagues.	Reflects on data from multiple sources (i.e., self-assessment, student performance, feedback from colleagues, school/district initiatives) and identifies priority areas for growth.

9.3 Designs a professional growth plan that addresses identified priorities.	
Initial-Level Performance	Advanced-Level Performance
Designs a clear, logical professional growth plan that addresses all priority areas.	Designs a clear, logical professional growth plan that addresses all priority areas.

9.4 Shows evidence of professional growth and reflection on the identified priority areas and impact on instructional effectiveness and student learning.	
Initial-Level Performance	Advanced-Level Performance
Shows clear evidence of professional growth and reflection relative to the identified priority areas and impact on instructional effectiveness and student learning.	Shows clear evidence of the impact of professional growth activities on instructional effectiveness and student learning.

STANDARD 10: PROVIDES LEADERSHIP WITHIN SCHOOL/COMMUNITY/PROFESSION

The teacher provides professional leadership within the school, community, and education profession to improve student learning and well-being.

10.1 Identifies leadership opportunities that enhance student learning and/or professional environment of the school.	
Initial-Level Performance	Advanced-Level Performance
Identifies leadership opportunities in the school, community, or professional organizations and selects one with the potential for positive impact on learning or the professional environment and is realistic in terms of knowledge, skill, and time required.	Identifies leadership opportunities within the school, community, or professional organizations to advance learning, improve instructional practice, facilitate professional development of colleagues, or advocate positive policy change; and selects an opportunity to demonstrate initiative, planning, organization, and professional judgment.

10.2 Develops a plan for engaging in leadership activities.	
Initial-Level Performance	Advanced-Level Performance
Develops a leadership work plan that describes the purpose, scope, and participants involved and how the impact on student learning and/or the professional environment will be assessed.	Develops a leadership work plan that clearly describes the purpose, scope, participants involved, timeline of events/actions, and plan for assessing progress and impact.

10.3 Implements a plan for engaging in leadership activities.	
Initial-Level Performance	Advanced-Level Performance
Implements the approved leadership work plan that has a clear timeline of events/actions and a clear description of how impact will be assessed.	Effectively implements the leadership work plan.

10.4 Analyzes data to evaluate the results of planned and executed leadership efforts.	
Initial-Level Performance	Advanced-Level Performance
Analyzes student learning and/or other data appropriately to evaluate the results of planned and executed leadership efforts.	Uses data from the leadership effort to describe, analyze, and evaluate the impact on student learning.

Kentucky's State Plan

to ensure that all students are taught by highly qualified, competent, caring individuals and that poor and minority children are not taught at higher rates than other children by inexperienced, unqualified and out-of-field teachers

June 2006

Kentucky's Mission

For Teacher Quality

The Kentucky Department of Education (KDE) will assist districts and schools with securing the talents and skills of the highest quality professionals for every classroom, school, and district in Kentucky. The Division Educator quality and Diversity seeks to recruit, select, and retain exceptional, multi-dimensional individuals who have chosen education as their career. Traditional educational programs, scholarships, alternative certification routes, professional development, and early identification initiatives are tools used to accomplish this undertaking. The implementation of such systemic policies and programs will provide the Commonwealth with diverse, competent, caring educators, who are essential to ensure that children reach their maximum potential.

NCLB legislation emphasizes the importance of teacher quality as well and requires that *all* teachers be highly qualified by the 2005 -2006-school year. Kentucky's plan to achieve the goal of 100% of classes taught by highly qualified teachers focuses on immediate needs, as well as on providing stability for future needs. The plan is designed to increase student achievement by elevating teacher and principal quality through preparation, recruitment, hiring, and retention strategies, coupled with scientifically based high quality professional development interventions. Kentucky's plan is a partnership between The Kentucky Department of Education (KDE), Education Professional Standards Board (EPSB), The Council on Postsecondary Education (CPE), and other partners for excellence in education for all Kentucky's students.

Equitable Teacher Distribution: Kentucky's Good Faith Effort

NCLB is the first federal education law to require states to define a "highly qualified" teacher and take steps to address any maldistribution of teachers. Kentucky has a long history of focusing great attention on the needs of our low-income and minority students. The Kentucky Education Reform Act enacted in 1990 examined polices and practices to ensure that all students have access to a quality education. In addition, Kentucky has emphasized closing the achievement gap among disaggregated groups of students, with much focus on increasing the quality and diversity of the educator workforce.

Kentucky's Research Findings, & Enhanced Data Collection

Major findings from data analysis of Kentucky's Educator Workforce, Kentucky Educator Placement Service, Minority Educator Recruitment and Retention Report (MERR), Local Educator Assignment Data (LEAD) Highly Qualified Educator Data

Quantitative Analysis of Aforementioned Data:

- No significant differences were found at the district level with regard to the highly qualified status of Kentucky's teachers between high and low poverty schools and the percentage of minority students
- Contrary to conventional wisdom, the percentage of highly qualified teachers does not appear to be correlated with poverty or ethnicity, but instead geographic location of schools or districts has greater bearing on HQ status. In some cases, with regard to poverty and ethnicity the relationship is the OPPOSITE of what might be expected
- Current data is insufficient to determine disparities with regard to teacher experience and assignment to low-income schools, and/ or schools with significant percentages of minority students
- Primary areas of concern with regard to highly qualified status on a statewide level are math, science and all areas of special education
- All areas of certification except elementary certification are of high need for Kentucky's more remote regions and/or regions that must compete with states paying higher salaries (primarily Northern Kentucky)

Kentucky's Enhanced Data Collection to Address Research Findings

1. Continuously monitor, through data collection and analyses, that Kentucky's poor and minority students are not being taught at higher rates than other children by inexperienced, unqualified and out-of-field teachers

- Continue to monitor the number and percentage of Kentucky's emergency and probationary certificates and generate a watch list of districts/schools not making progress toward eliminating the need for these certificates, with comparative analysis based upon geographic location
- Continue to monitor the number and percentage of Kentucky's teachers teaching out-of-field and generate a watch list of districts/schools not making progress toward eliminating need for these certificates, with comparative analysis based upon geographic location
- Collect, report and monitor schools by the average number of years of teaching experience in all schools including comparative analysis to district and state data, with special focus on high-need schools (high need: Low-income schools, schools with significant percentages of minority students, and/or schools not making AYP)

- *Publicly Report Progress*: Kentucky's Annual State Report Card, District and school Report Card, Education Professional Standards Board Web-based Database, and Kentucky State-Level aligned Data Systems

2. Increase the percentage of Kentucky's highly qualified teachers to 100%

- Continue to monitor Kentucky's districts/schools for the percentage of highly qualified teachers
- Review District/School plans, when they fail to make AYP toward 100% of highly qualified teachers
- *Publicly Report Progress*: Kentucky's Annual State Report Card, District and School report cards, Education Professional Standards Board Web-based Database, and Kentucky State-Level aligned Data Systems

Kentucky's Critical Elements and Strategies

Critical Element I: Data and Reporting Systems

1. 1 Collect and publicly report data on the distribution of teacher talent including data on teacher turnover and projected teacher shortages
1. 2 Enhance the Kentucky Educator Placement Service a data system that matches district/ school teaching vacancies with prospective educators
1. 3 Enhance existing data systems and reporting methods to allows parents and other stakeholders to review educators' credentials, years of experience, and highly qualified status compared to district and state data
1. 4 Enhance existing data systems to publicly report data on teacher certificates/licenses held and ensure that all teachers are properly credentialed in the subjects they are assigned to teach
1. 5 Develop a data system that links teacher qualifications and experience to student achievement (value added data)
1. 6 Collect and publicly report data related to working conditions associated with high teacher turnover
1. 7 The Education Professional Standards Board (EPSB) has automated components of the certification process resulting in quicker submissions of certificates and educator licenses
1. 8 Kentucky is committed to comply with NCLB and is making every effort to meet the intent of the law. Though additional guidance is expected from the USDOE, communications from the EPSB have been sent to all districts to complete the HOUSSE process on any not new teacher currently in the system alerting districts to this possible elimination. Communication included that more guidance from the EPSB would be forthcoming once we had received additional information from the USDOE

Critical Element II: Teacher Preparation

2. 1 Enhance existing college scholarship, loans, and loan forgiveness programs to channel prospective teachers toward schools that have difficulty attracting sufficient numbers of qualified teachers
2. 2 Expand Kentucky's Transition to Teaching grant to more high need districts/schools
2. 3(a) Continue toward Kentucky's goal of establishing Future Educators of America chapters in every high school by 2007-2008, and every middle school by 2011-2012
2. 3(b) Expand Kentucky's Dual Credit program, which allows high school students to earn up to 6 hours of credit toward a degree in an approved teacher education program
2. 4 Expand high-quality alternative routes that increase the pool of candidates for high-need schools
2. 5 Expand the number of teacher preparation programs designed to meet the staffing shortages of high-need schools

Critical Element III: Out-of-Field Teaching

3. 1 The Education Professional Standards Board has accepted a recommendation to limit the number of years one may have a probationary certificate to three years, aligning its requirements with criteria for alternative certification programs and NCLB requirements. For those who demonstrate content mastery, the requirements for probationary certificates will be an avenue for a teacher to become highly qualified. The decision is still awaiting legislative approval. The board is also investigating limiting the issuance of an emergency certificate for a teacher to one year. EPSB will continue to monitor the number of emergency certificates issued to ensure that the alternative certification routes are being utilized.
3. 2 Enhance existing college scholarship, loans, and loan forgiveness programs to channel prospective teachers toward schools that have difficulty attracting sufficient numbers of qualified teachers
3. 3 Enhance the Minority Educator Recruitment and Retention scholarship program to increase the number of candidates in critical shortage areas
3. 4 Expand high quality alternative routes that increase the pool of candidates in critical shortage areas for high-need or hard to staff schools
3. 5 Expand the Kentucky traineeship program to include math and science in addition to special education certification
3. 6 Enhance the Kentucky Educator Placement Service, a data system that matches district/ school teaching vacancies with prospective educators, to increase the pool of highly qualified teachers for Kentucky's schools
3. 7 Expand programs, which recruit English speaking international teachers of hard-to-fill subjects and specializations
3. 8 Provide direct technical assistance to high-need school districts to increase their use of the web-based resources for recruitment and retention of high quality teachers
3. 9 Research available resources and additional funding opportunities (Teacher Incentive Fund) to utilize research findings from Kentucky's Differentiated Compensation Pilot program, a State level Title II Part A initiative

3. 10 Expand the use of The Kentucky Virtual High School (KVHS) , a distance learning model to increase students' access to highly qualified teachers
3. 11 Expand teacher mentor programs and mentor training; and enhance the Kentucky Teacher Internship Program (KTIP)
3. 12 Provide targeted professional development to ensure teachers are highly qualified, especially in subject shortage areas
3. 13 Kentucky Statutes & Regulations establish the Facilities Support Program; the School Planning Manual, which provides equalization of state resources; and the Facility Programming and Construction Criteria to ensure that all school laboratories (regardless of wealth or poverty of the district) are constructed or renovated with the same standards

Critical Element IV: Recruitment & Retention of Experienced Teachers

4. 1 Continue utilizing the Highly Skilled Educator program to serve districts/schools not progressing toward proficiency and/or not making AYP
4. 2(a) Disseminate information of successful strategies implemented by districts using Title II, Part A funds to compensate highly effective teachers, instrumental in student achievement initiatives
4 .2(b) Explore using state level activities funds to serve high need districts by building teacher Leadership and Evaluation capacity
4. 3 Research available resources and additional funding opportunities (Teacher Incentive Fund) to utilize research findings from Kentucky's differentiated Compensation Pilot program, a State level Title II, Part A initiative
4. 4 Increase targeted support to National Board Certification candidates who teach in high-need schools National Board Teacher Cert.
4. 5 Expand teacher mentor program and mentor training and enhance the Kentucky Teacher Internship Program (KTIP)
4. 7 Enhance Kentucky's programs that honor and celebrate highly effective teachers (Kentucky Teacher of the Year, Milken Educator Award, Kentucky Educator Talent Pool, and Kentucky Teacher Forum programs)

Critical Element V: Professional Development

5. 1 Target additional funding to expand teacher mentor program and mentor training and enhance the Kentucky Teacher Internship Program (KTIP)
5. 2 Continue utilizing the Highly Skilled Educator program to serve districts/ schools not progressing toward proficiency and/or not making AYP
5. 3 Continue to develop and implement high quality professional development initiatives that not only increase knowledge of core content and rigor, but also emphasize best practice for delivering content to a diverse student population
5. 4 Continue to enhance the Instructional Support Network (ISN), district cooperatives working to build capacity to provide professional development opportunities directly to their teachers. The network serves to keep district personnel informed of the key issues that will help them raise achievement and close achievement gaps.

5. 5 Expand the use of technology to support teachers' professional growth

Critical Element VI: Specialized Knowledge & Skills

6. 1 Continue to develop and disseminate professional development resources to teachers and continue to build capacity of training available through web-based programming
6. 2 Continue to include cultural competency and knowledge and skills related to the ability to work with diverse learners in professional development initiatives
6. 3 Continue to support Kentucky's programs to encourage outstanding minority students to become teachers and to advance on the career ladder (Minority Educator Recruitment and Retention Scholarship, Administrative Leadership Institute, Counselors for the New Millennium, and Minority Superintendent Internship Program)
6. 4 Ensure through existing accreditation that teacher preparation programs adhere to Kentucky's new teacher standards
6. 5 Ensure districts/schools implement Kentucky's professional development standards and emphasize Kentucky's experienced teacher standards
6. 6 Enhance the Kentucky Teacher Internship Program (KTIP) and the KTIP Pilot Program (two-year model)

Critical Element VII: Working Conditions

7. 1 Complete testing and implement a statewide release of a teacher retention survey to identify conditions that contribute to teacher attrition.
7. 2 Strengthen school leadership by expanding Kentucky's programs focused on improving instructional leadership capacity (SAELP, e-walk, and Gates)
7. 3 Continue to focus Kentucky's School Finance equitably to districts/schools
7. 4 Kentucky recently enacted a budget including action on teacher salaries. The new budget requires a 2% increase in FY 07 and $3000 in FY 08 for certified employees. Requires a 2% in FY 07 and 5% in FY 08 for classified employees. All salary increases are in addition to increases provided for changes in rank or additional experience Certified & Classified Staff Data
7. 5 Continue to develop partnerships to increase the professional development opportunities available for Kentucky's school leaders, and increase the pool of candidates

Critical Element VIII: Policy Coherence

8. 1 The Education Professional Standards Board has automated components of the certification process resulting in quicker submissions of certificates and educator licenses
8. 2 Review state testing policies & systems of rewards and sanctions to ensure, that they do not inadvertently drive teachers & principals away from schools that serve the lowest–achieving students

Kentucky's Plan for Teacher Quality, Diversity, & Equity

Meeting the Highly Qualified Teacher Challenge

Data Collection (Critical Element I): Kentucky has allocated resources and initiated a statewide alignment of all education related data systems in an effort to expand and improve existing data collection and reporting instruments. This will enable the Kentucky Department of Education and other partners to provide targeted assistance to districts experiencing difficulty employing highly qualified, highly effective educators, and to better assist low-performing high-need schools. The following enhancements pertain to teacher quality, measuring progress, equity, and public reporting:

Kentucky Educator Placement Service (KEPS) (Critical Element 1.2, 3.6) was developed by KDE to support the efforts of our school districts to recruit teachers, principals and administrators. The following are enhancements to KEPS:
Establish clear guidelines for district use of KEPS;
Develop an on-line training module for KEPS;
Provide districts the opportunity to promote the communities to potential high quality teachers;
Expand options for posting positions (descriptions);
Identify funding source for each position posted;
Identify educator employed for each position posted; and
Facilitate the alignment of KEPS, with EPSB databases.

Educator Quality and Diversity Report (Critical Element 1.6) is an annual report required of each district pursuant to administrative regulations of the Kentucky Board of Education. The report details the district's recruitment process and the activities used to increase the percentage of minority administrators, principals and teachers in the district. Pursuant to KRS 161.165, when a vacancy occurs in a local district, the superintendent shall conduct a search to locate minority administrators, principals and teachers to be considered for the position. The report is being revised to expand questions asked each time a position is filled to include, but not be limited to, the following criteria:
Highly Qualified (and/or Core Content Degree);
Multi-Lingual;
Dual Certification; and
Exceptional Work Experience, including years of teaching experience

Local Educator Assignment Data (LEAD) (Critical Element 1.4) is the primary means of collecting and reporting the highly qualified status of Kentucky's teachers. LEAD provides HQT data at the state, district, and school level, through assigned access rights. LEAD will be expanded to include years of teaching experience, preparing institutions of higher education, and alignment of EPSB, KDE and other partner databases. Administrative rights will be necessary to access these reports.

Highly Qualified Teacher Report (HQT) (Critical Element 1.3) is supplemental to the LEAD report and will be used for public reporting purposes. The report will include the highly qualified status of teachers, and years of teaching experience. Data for highly qualified teacher

reporting will be enhanced to include the percentage of classes taught by highly qualified teachers, with necessary disaggregated categories for teachers not highly qualified, at the district and school level. Currently, statewide summary and status data, as well as district submission data, is available via the web through the EPSB web site.

Public Reporting: (Critical Element 1.5) The KDE offices of Communication and Assessment in collaboration with Educator Quality and Diversity and EPSB will assume responsibility for the Annual State Report Card. In addition, the KDE web master will accept responsibility of ensuring the report is accessible to the public in multiple formats via the KDE home page. The KDE office of Assessment is currently amending school report cards to include data representing the percentage of highly qualified teachers and average years of teaching experience for the school compared to district and state data by grade level. Changes to the school report card will allow quick and easy monitoring of equitable distribution of highly qualified and experienced teachers. These amendments will be reflected in the next school report card cycle.

Preparation: (Critical Element 8.2) EPSB is charged with accrediting teacher certification programs through a partnership with NCATE. In addition to the work of EPSB, KDE has been actively involved with the statewide teacher personnel taskforce, under the guidance of the National Center for Special Education Personnel and Related Service Providers (Personnel Center) in an on-going effort to improve teacher preparation, recruitment and retention initiatives. The taskforce's preparation committee has focused its attention on the development of programs for paraprofessional/para-educators to participate in transition to teaching programs that research the redesign of criteria for accredited special education and general education programs.

Recruitment: Recruitment is included in the mission of KDE is securing the talents and skills of the highest quality professionals for every classroom, school, and district in Kentucky. The Division of Educator Quality and Diversity seeks to recruit, select, and retain exceptional, multi-dimensional individuals who have chosen education as their career. Traditional educational programs, scholarships, alternative certification routes, professional development, and early identification initiatives are tools used to accomplish this undertaking. The implementation of such systemic policies and programs will provide the Commonwealth with diverse, competent, caring educators who are essential to ensure that children reach their maximum potential.

(Critical Element 2.3a,b) Kentucky has initiated an early identification program entitled Future Educators of America (FEA). This initiative, officially noted by the state legislature in House Joint Resolution 188, has become a major focus of the Division of Educator Quality and Diversity, which established the goal of an FEA chapter in every high school by 2007-2008, and every middle school by 2011-2012. Future Educators of America (FEA) "Fulfill the Dream-Teach!" KDE, in collaboration with state universities, has initiated a dual credit program that allows high school students to earn up to 6 hours of credit toward a degree in an approved teacher education program.

(Critical Element 2.1, 3.2, 3.3, 3.5) Kentucky has initiated a number of scholarship programs and loan forgiveness programs to alleviate possible barriers to future educators (Minority Educator Recruitment and Retention Scholarship, Best in Class, and Kentucky Teacher

Scholarships). Scholarships and Loans Kentucky supports a Traineeship Program for Special Educators to address the need for special education teachers by allocating federal funds to assist certified regular education teachers in obtaining certification in an area of special education. The program is also designed to assist special education teachers in obtaining special education certification in an area not previously completed.

(Critical Element 2.2, 2.4, 3.4) In an effort to increase the number of highly qualified educators in Kentucky's schools and to attract nontraditional candidates to teacher education programs, Kentucky has increased its focus on alternative routes to certification for persons who have demonstrated exceptional work and/or educational experiences. Furthermore, a Transition to Teaching grant awarded by the United States Department of Education provides resources for KDE to partner with three universities and eight high-poverty, high-needs school districts to provide them with teachers meeting the highly qualified educator requirements.

(Critical Element 2.5, 3.8) In addition, a statewide teacher personnel taskforce was established with a primary focus of increasing the number of highly qualified special education teachers in the state. The taskforce is implementing a plan that includes a comprehensive personnel needs assessment, the identification of barriers to personnel development and the creation of strategies to overcome those barriers, and strategic planning to garner resources and carefully assess the state and local program resources to support those strategies. The plan also includes direct service to districts for recruitment and retention. The Watkins Group, a contract provider that uses a grass roots approach, provides training at the district level to members of school districts, institutions of higher education and community residents. Recruitment efforts are currently underway in several districts serving high poverty schools. Through its efforts, The Watkins Group trains participants to assist the community to recruit and increase the retention of educators. Additionally, a statewide public relations campaign targeting diverse communities is being initiated. This plan includes the distribution of the recruitment video "One Child at a Time", and brochures to community colleges, workforce centers, special education directors, high school counselors, university special education faculty, and other identified partners. Public Service Announcements are being aired on several television and radio stations throughout the state. The following are pending efforts:

Expand FEA;
Establish quality standards for FEA advisors and chapters;
Establish service-learning grants for FEA chapters;
Expand the Dual Credit program to additional institutions of higher education;
Establish FEA scholarships for critical shortage areas;
Expand the Transition to Teaching grant to additional high need districts;
Expand recruitment and retention services to additional districts; and
Expand the statewide public relations campaign.

Retention: Kentucky has implemented a number of strategies to address the retention of highly qualified teachers. A pilot program was initiated to research the development of differentiated compensation programs and to provide highly qualified teachers with additional compensation above the single salary schedule. Grants were provided to ten districts to implement plans including one or more of the following purposes:

Recruiting and retaining teachers in critical shortage areas;
Reducing the numbers of emergency certified teachers;
Providing incentives for teachers to serve in difficult assignments and hard-to-fill positions;
Providing voluntary career advancement opportunities; or
Rewarding teachers who increase their knowledge, skills and instructional leadership

(Critical Element 4.7) KDE awards and recognition programs recognize excellence in Kentucky teaching through monetary awards, national and statewide recognition, and the opportunity to consistently collaborate with exceptional educators in all areas and levels of the profession.

Kentucky's Awards and Recognition Programs include:

Kentucky Teacher of the Year Program
Milken Educator Award Program
Kentucky Educator Talent Pool
Kentucky Teacher Forum

(Critical Element 6.3) Kentucky uses its Title II, Part A funds to support a number of programs to encourage outstanding minority students to become teachers and to advance on the career ladder. These programs include the Minority Educator Recruitment and Retention Scholarship, Administrative Leadership Institute, Counselors for the New Millennium, and Minority Superintendent Internship Program.

(Critical Element 3.11, 7.1) In addition, the personnel taskforce, retention committee's work focuses on data collection, drafting and submitting policy/guideline recommendations, and the creation/delivery of professional development. Specifically, the committee is gathering data on mentoring, workforce diversity and retention issues from all special education certified staff in the Commonwealth. The committee will draft guidelines/recommendations for a differentiated mentoring induction program for special education teachers.

Professional Development (Critical Element 3.12, 5.3, 5.5, 6.1, 6.2, 6.5, 7.5): Professional Development is considered high quality when it meets the definition of professional development in 704 KAR 3:035 – Section 1(2) and Section 4(2) and all of the Kentucky Department of Education Professional Development Standards, which are consistent with the federal criteria in Section 9101 of No Child Left Behind (NCLB). Schools and districts will determine if the professional development for teachers, administrators and other school staff meets the following definition for high quality professional development:

704 KAR 3:035 – Section 1(1) "High-quality professional development" means those experiences that systematically, over a sustained period of time, enable educators to facilitate the learning of students by acquiring and applying knowledge, understanding, skills, and abilities that address the instructional improvement goals of the school district, the individual school, or the individual professional growth needs of the educator. Section 4(2) High-quality professional development experiences shall be related to teachers' instructional assignments and administrators' professional responsibilities. Experiences shall support the local school's

instructional improvement goals and be aligned with the school or district improvement plan or individual professional growth plans of teachers."

Professional development as part of Kentucky's plan for meeting the Highly Qualified requirements of NCLB is based on the premise that a teacher may be highly effective but not meet the requirements for highly qualified status. In turn, highly qualified status does not necessarily translate to highly effective teaching. Kentucky's goal is to have all classes taught by highly effective teachers. Professional development should encompass not only increased knowledge of core content and rigor but emphasize best practice for delivering content to a diverse student population.

KDE has implemented and/or partnered with several high quality professional development initiatives. The following is a list of initiatives by office designation:

Office of Leadership and School Improvement

(Critical Element 5.4) The Instructional Support Network (ISN) was developed in 2004 as a means of bringing together the "Chief Instructional Officer" in each of Kentucky's 176 school districts. Through weekly e-mail communication and several face-to-face professional experiences, this group is working to build their capacity to provide professional development opportunities directly to their teachers. The network serves to keep district personnel informed of the key issues that will help them raise achievement and close achievement gaps.

A by-product of the ISN has been the development of regional ISN networks through eight regional educational cooperatives. These eight cooperatives are independent, fee-based organizations that are the primary external deliverers of professional development to the school districts. 171 of 176 school districts are members of a cooperative.

(Critical Element 7.2) The KDE received a grant from the Wallace Foundation entitled State Action for Educational Leadership Projects. A central focus of the grant is the development of instructional leadership teams in Kentucky schools. One of the primary initiatives of instructional leadership teams is providing teacher led, job-embedded professional development experiences for teachers. The SAELP grant includes partnerships among other state agencies, universities, and local school districts.

(Critical Element 6.4) The EPSB has in policy the **Continuing Education Option** (CEO), which is an extensive one to four-year process of completing a job-embedded professional development initiative designed by the teacher and an assigned coach. The process is content specific and must meet all teacher **Standards** established by the EPSB. Successful completion of this portfolio process will result in an increased salary for the teacher through the EPSB Rank system.

KDE has implemented a Gates Foundation leadership grant that provides hand-held pocket computers for over 1500 school administrators across the state. These "Pocket PC's" are used for classroom "walk throughs" by school administrators. The information gathered is shared in the individual professional growth plans of their staff. Leadership and Evaluation

(Critical Element 4.1, 5.2) Finally, KDE has an extensive network of field-based staff that works primarily with low performing and high achievement gap schools to improve performance and to close achievement gaps. Over 50 people are assigned to various schools and school districts to assist with school improvement. Two of the primary charges given to these groups of highly qualified educators are to model effective instructional practice and to deliver high quality professional development.
Highly Skilled Educators Achievement Gap Coordinators

Office of Special Instructional Services

Collaboration - KDE, in partnership with the special education cooperatives, provides service to districts and schools through a statewide support system for the Collaborative Teaching Model, in an effort to increase (when appropriate) the number of children placed in the general education classroom. The Support Model includes a collaboration tool-kit, collaboration cadre, web support (collaboration site), five collaboration-training modules, and a standards-based identification of model schools and/or teams of teachers.
Instructional Technology - KDE, in partnership with the special education cooperatives, supports and implements the University of Kentucky's design of the Commonwealth Center for Instructional Technology and Learning (CCITL). CCITL is a web-based tool designed to assist Kentucky instructional providers in locating and implementing evidence-based strategies to enhance the educational experiences of students with learning challenges. CCITL provides an efficient web-based delivery system for a wide range of evidenced-based K – 12 instructional intervention, curricular and instructional strategies, and web-based advisors. The CCITL system consists of four primary components:
An **Advisor** component contains a secure discussion area in which instructional providers can consult with an experienced consultant about their unique circumstances;
A **Strategy Center** component provides information about evidence-based strategies related to curricular areas as well as non-curricular areas such as classroom management and study skills;
A **Library** component provides information about publications related to the strategies contained in the Strategy Center;
A **Learning Lab** component contains information about how to integrate instructional technology into the classroom. http://ccitl.uky.edu/

Instructional Discipline - The Kentucky Center for Instructional Discipline is supported through the KY SIGNAL State Improvement Grant to provide training and support to schools in the Commonwealth in order to learn the process of School-wide Positive Behavior Support. Leadership teams from each school use an improvement cycle, databased decision making to determine the pace of their schools' effort, and the next level of training needed to achieve their individual action plans. The goals are to create a culture and climate in each school that supports student success. http://www.kycid.org/

The Behavior Institute is a joint effort of KDE, Kentucky Council for Children with Behavior Disorders (KY-CCBD), and the Center for School Safety. The institute's focus is to promote research-based, positive, proactive practices and instructional strategies that will ultimately assist in removing behavior as a barrier to learning and in increasing overall student achievement. The

Behavior Homepage was created in 1996 to address the needs of Kentucky teachers, parents, and professionals in the field through the collaboration of KDE and the University of Kentucky. It provides access to information regarding effective practices, as well as links to on-going consultation and technical assistance concerning the full-range of behavior problems and challenges displayed by children and youth in community settings.

The Behavior Cadre, through the Special Education Cooperatives, meets quarterly to design professional development to meet the needs of local districts within their regions. The cadre consists of a behavior specialist from each regional special education cooperative. Data analysis is routinely conducted for professional development effectiveness and implementation to assist in meeting the needs of their local districts.

Office of Teaching and Learning

Arts and Humanities - KDE partners with the Kentucky Center for the Arts to provide six teacher academies where teachers work with teaching artists and are immersed in arts activities and instructional strategies. KET also partners with KDE to provide Arts and Humanities Toolkits for teachers attending the academies and training on the use of the toolkits. Follow-up for the academies incorporates teaching artists in working classrooms with teachers in mini-residencies. The Middle Grades Demonstration Project is a partnership with the Collaborative for Teaching and Learning, which provides on-going professional development and coaching to teachers in targeted middle schools. These experiences focus on content literacy and emphasize infusing the arts into the curriculum.

English as a Second Language (ESL) - Kentucky Limited English Proficiency (LEP) Academies are offered in collaboration with regional and national partners. These academies provide training throughout the school year in the Sheltered Instruction Observation Protocol (SIOP). SIOP enables teachers to use research-based specific strategies to teach content in ways comprehensible to LEP students while promoting their English language development. Graduate credit is available from Eastern Kentucky University for participants pursuing an ESL Endorsement. In addition, KDE, along with the regional collaborative partners and the Southeastern Equity Center, offers regional workshops and follow-up to district leaders with emergent LEP populations.

Foreign/World Language (Critical Element 3.7) - KDE provides ongoing professional development for Kentucky teachers on the implementation of LinguaFolio (reflective learning and self-assessment tool), and the piloting of the STAMP online, adaptive language proficiency assessment. Through a competitive grant awarded by US DOE - Office of English Language Acquisition -- KDE partners with Jefferson County Public Schools for the Foreign Language Assistance Program (FLAP). This grant provides initial training and follow-up for the creation of Standards-Based Units of Study and use of the LinguaFolio, as well as the development of international school partnerships. The program addresses improvement in world language/teachers' language and cultural competency by providing immersion experiences in the target cultures (France and Mexico) and improvement in instruction by focusing on pedagogy.
Frameworks History
LinguaFolio Kentucky!

(Critical Element 3.11) Through competitive grants awarded by the CPE, KDE partners with Western Kentucky University ("Improving Student World Language Performance: Using Assessment as the Guiding Force in Standards-Based Instruction"); Murray State University ("Spanish Immersion and Mentoring"); Northern Kentucky University ("Opening Doors to New Worlds: Certifying World Language Teachers in Kentucky"), and University of Kentucky ("Developing and Assessing Communicative Competence in the World Language Classroom"). Beginning in 2006, these initiatives will address improvement in world language teachers' instruction by focusing on instruction and assessment. Teachers will receive training in the summer, practice on students in language camps, and have follow-up during the school year.

KDE provides initial and ongoing professional development to visiting teachers from Spain through work with the Embassy of Spain's Ministry of Education. Finally, KDE provides professional development for school administrators and teachers in coordination with the Chinese Ministry of Education and the Office of Teaching Chinese as a Foreign Language by promoting the teaching of the Chinese language and culture, the establishment of Chinese programs and the hiring of volunteer teachers from China.

Other World Languages

Language Arts – Kentucky's Read to Achieve Act focuses on reading diagnostics and intensive reading interventions for struggling readers within the state primary program. KDE created a regularly updated technical assistance document in the form of "frequently asked questions," and provides on-going professional development experiences, as well as monthly communications informing district and school personnel of expectations for grant implementation.

Kentucky Reading First, a statewide professional development initiative, outlines a six-year design to reach all primary-12th grade educators and administrators throughout the state. The plan supports a statewide understanding and implementation of the scientifically based reading research. Professional development opportunities are delivered in a variety of ways (i.e., multiple-day institutes, online services, listservs, electronic updates, regional monthly meetings, book study groups, modeling and demonstration).

The Kentucky Reading Projects (Dec 14, 2005) are a collaborative effort between KDE, literacy faculty from Kentucky's eight state universities and the National Center for Family Literacy (NCFL). The project is a professional development initiative designed to provide yearlong graduate level reading courses for elementary teachers. Participants develop Literacy Action Plans that are implemented in their classrooms throughout the year.

KDE writing staff and the writing advisory committee designed and implemented Writing Cluster Leader Portfolio Scoring Training to all school-level writing cluster leaders. The University Writing Project, based on The National Writing Project model, is a collaborative effort between KDE and Kentucky's eight state universities. Projects offer four-week summer institutes, follow-up sessions, and visits by writing project directors to analyze implementation and provide support to participant classrooms. KDE writing staff members work with the University Writing Project State Network to design training sessions focused on incorporating appropriate literacy strategies to meet the needs of all learners.

Mathematics (Critical Element 3.11) – KDE will partner with the Center for Mathematics Achievement and the Collaborative Center for Literacy Development to create professional development for reading and mathematics coaches and mentors. The $4,000,000 annual program established by the 2005 General Assembly includes funds for the professional development and personnel costs for coaches and mentors that are offered through a competitive grant program to all school districts.

Kentucky's Mathematics and Science Partnerships (MSP) program develops and sustains a cadre of highly qualified *Teacher Mentors* from K-8 science and mathematics content areas. *Teacher Mentors* work with university and KDE staff to enhance their content knowledge through professional development, ongoing mentoring, and collaborative research projects. *Teacher Mentors* then mentor inexperienced teachers in their schools. KDE facilitates pedagogical, leadership and mentoring skills, and establishes a communication network for all partners. In addition, the MSP program develops and implements an alternative route to certification program leading to full certification and highly qualified status for mathematics and/or science teachers.

High School Mathematics Alliances are *professional learning communities* that involve all partners in the ongoing study of important conceptual and pedagogical issues facing high school mathematics teachers in the areas of algebra, geometry and integrated mathematics. Content and pedagogy are at the forefront, with alliances focusing on developing, implementing and revising *units of study* centered around important concepts of algebra and geometry, or integrated approaches to those areas, and *end of course assessments* for such high school courses as Algebra I, Geometry, Algebra II and Integrated Mathematics.

KDE will partner with the Center for Mathematics and the Committee for Mathematics Achievement to develop diagnostic and intervention programs for early mathematics through a $3.9 million annual program established by the 2005 General Assembly. The program includes funds for the professional development and personnel costs of diagnostic intervention specialists, and the costs of the diagnostic and intervention programs through a competitive grant program offered to all school districts.

KDE partners with a group of Kentucky teachers from five districts and postsecondary faculty to develop and pilot Kentucky High School Diagnostic Mathematics Assessments in Algebra I, Geometry, and Algebra II. The purposes of the assessments are to: (1) inform teachers at important intervals as to whether students are ready for the next level of mathematics, and whether they are preparing students for the next level and (2) inform students of how well they are learning the mathematics needed for the next level.

Science - KDE partners with EDVANTIA, the U.S. Department of Education Office of Elementary and Secondary Education under the title of the Appalachia Eisenhower Regional Consortium for Mathematics and Science Education, to create professional development for Kentucky mathematics and science teachers. KDE trains the PD cadre of teams of mathematics and science teachers from each of eight regions of the state to work with school teams to target achievement of population subgroups. Middle and High School Science Alliances are

professional learning communities that involve all partners in the ongoing study of important conceptual and pedagogical issues facing middle and high school science teachers in the content areas as well as in inquiry. Content and pedagogy are at the forefront, with alliances focusing on developing, implementing and revising units of study or science end-of-course assessments.

KDE partners with the Louisville Science Center to design and deliver inquiry-based professional development for science classroom teachers, administrators and higher education professors, the Kentucky Department of Aviation for the development of curriculum and instructional strategies in mathematics, science and social studies with aviation connections, and Kentucky's three Challenger Learning Centers to deliver professional development consistent with Kentucky's Teacher Professional Development Standards and student learning standards.

Cross Curricular - KDE has an Inquiry Design Team to create multifaceted professional development delivery for teachers that extends inquiry-learning strategies across content disciplines. The Kentucky Secondary Alliance was organized in 2005 to bring focus and technical assistance to schools engaged in secondary reform. KDE provides ongoing support to middle and high school teachers and administrators. These professional experiences focus on school-based plans centered around small learning communities including ninth grade academies, interdisciplinary instructional teams, embedding rigor and relevance in the curriculum, adolescent literacy, targeted assistance and interventions for students in need of acceleration, an enhanced senior year, and access and quality in credit-based transition opportunities, including Advanced Placement and dual credit.

KDE collaborates with the CPE in the statewide GEARUP initiative to provide a sustained program of professional development aimed at improving the academic success of students in middle school and high school. Areas of focus are increasing the capacity of leadership to create a college going culture, increasing the content and pedagogical knowledge of teachers in the areas of math, science and reading, and using assessment to drive improvement in instruction and programming.

Annual Teacher Academies provide teachers the opportunity to expand their content knowledge and improve pedagogy through partnerships with the higher education community. The academy experience of the past is being transformed into professional learning communities through the development of diagnostic and formative assessments, course descriptions and units of study. These will be multi-district partnerships with higher education involvement.

Early Childhood - KDE provides many teaching and learning opportunities for early childhood professionals. The Kentucky Preschool Program requires teachers to hold the Interdisciplinary Early Childhood Education (IECE) Birth to Primary certificate. The IECE certification covers the range of abilities birth through kindergarten, regular and special education.

The Kentucky Preschool Regional Training Centers (RTCs) serve the early childhood community by forming a comprehensive system of professional development, technical assistance and training based on scientific research. Participants are required to develop and implement integrated standards-based units of instruction that support literacy, language, and early math development in young children.

The Building a Strong Foundation for School Success series are materials and documents that have been designed for all teachers who work with children, birth through age five, in center-based settings. Within the series is the *Kentucky Early Childhood Standards* (KECS), which reflect the range of developmental abilities for young children. The *Early Childhood Self-Study Guide* helps programs evaluate their services in a way that supports and promotes the early childhood standards. In addition, the *Continuous Assessment Guide* provides recommended guidelines for teachers to develop and implement a continuous assessment system for young children.

Accountability: KDE in cooperation with districts and schools has taken appropriate steps toward meeting highly qualified requirements of NCLB. Initially, districts and schools made appropriate determinations of the highly qualified status of all their teachers, based upon teacher assignments. In some cases, teachers and/or students were reassigned based upon definitions for highly qualified teachers or classes. Current data indicates approximately 96% of Kentucky's classes are taught by highly qualified teachers (99% of elementary classes, 95% of middle and high school classes), with the majority of classes not taught by highly qualified teachers being special education classes. Recent clarifications defining classes and content delivery should increase these percentages. Over the past few years, Kentucky schools have made great strides toward achieving the goal of 100% of classes taught by highly qualified teachers. In some cases, gains were not measurable due to teacher attrition.

Upon completion of the highly qualified teacher report in the spring of 2006, districts and schools will amend their plans for meeting the highly qualified teacher challenge. Districts and schools will establish annual measurable goals, which KDE will evaluate annually to determine if districts and schools are making progress. In addition, information and data regarding barriers that districts and schools must overcome to meet their goals will be analyzed for possible intervention by KDE. These data will support actions taken by KDE toward districts and schools that do not meet their highly qualified teacher goals. The actions will be implemented by KDE when district and school efforts are not deemed sufficient:

Technical Assistance and Accountability plan – Kentucky will implement a change in policy that establishes priority of need with regard to use of Title II, Part A funds. In accordance with NCLB requirements and guidelines for local use of funds, Kentucky will establish as priority one, that 100% of classes be taught by highly qualified teachers, with priority two being that 100% of teachers and administrators participate in scientifically based high quality professional development interventions, and all other needs to follow accordingly. Districts and schools will utilize Title II, Part A funds for high quality professional development initiatives specific to teacher's need to become highly qualified and coordinated with school-wide improvement efforts and/or to implement recruitment and retention strategies of highly qualified teachers. The consequence for not meeting these priorities will be: All teachers not deemed highly qualified will be actively working toward that goal, or districts will utilize Title II funds in such a way as to attract highly qualified teachers. Professional development will be adequately funded and all teachers and administrators will become active participants in school improvement efforts. Districts and schools may continue to utilize funds for general class size reduction teachers once they have addressed the aforementioned priority needs and are making adequate yearly progress in these areas.

The Education Trust

FUNDING GAPS 2006

As Americans, we rightly take pride in the fact that the United States has led the world in extending free public education to *all* children, including those from racial and language minorities, those living in poverty, and those with disabilities. We extend this opportunity with the conviction that if given a fair shot at a good education these students, through hard work, can rise above the challenges they face and find a secure place at the heart of the American mainstream.

What many Americans don't fully understand, however, is that even as we've extended a free public education to all children, we've rigged the system against the success of some of our most vulnerable children. How do we do that? By taking the children who arrive at school with the greatest needs and giving them less in school. Our low-income and minority students, in particular, get less of what matters most; these students get the fewest experienced and well-educated teachers, the least rigorous curriculum, and the lowest quality facilities.[1]

At the core of these inequities is a set of school finance policy choices that systematically shortchange low-income and minority students and the schools and districts that serve them. In this unprecedented look at school funding across multiple levels—federal, state, and district—we show how funding choices at each of these levels tilt away from equity.

- The first analysis examines how *federal* education funds for low-income students are distributed *among states*. It finds that rich states are rewarded with richer federal aid packages, and that poor ones get less.
- The second set of analyses scrutinizes spending differences *among school districts within states* and finds that most states shortchange their highest poverty and highest minority school districts.
- The third analysis examines how school *districts* spend their money, and finds inequalities *within school districts*, with less money spent in schools serving the most disadvantaged students.

Taken together these analyses make clear how—despite our national commitment to fairness and educational opportunity for all—a series of separate school funding choices stack the deck against the students who need the greatest support from their schools.

Over the last several years, there's been a flurry of activity aimed at addressing the achievement gap that separates low-income students and students of color from their more affluent and White peers. Yet year after year test results show precious little progress. It's easy to understand why some are growing frustrated and even discouraged. But the truth is, despite the new attention to the gap, we so far have failed to address the fundamental inequities—such as the funding gaps highlighted in this report—that are buried deep in our education systems. And until these inequities are exposed and addressed by the adults who make the policy choices that affect children we will continue to undermine our professed goal of providing equal opportunities for all.

Funding is just the most easily measured among the myriad ways in which public education systematically puts students of color and low-income students—and the schools these students attend—at a disadvantage. Securing equity in funding would send a powerful signal that equity is more than just a rhetorical priority. Fairer finance systems are not a silver bullet, but they are a first step toward the harder work of substantive education improvement.

We offer this new report with the hope that the information provided herein will arm policymakers, parents, and educators with the facts they need to make new policy choices that will make real our aspiration to give every student a fair chance.

How the Federal Government Makes Rich States Richer

By Goodwin Liu

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Any serious effort by the federal government to improve equality of educational opportunity must confront a sobering and often neglected fact: Funding gaps *among* states are even larger than funding gaps *within* states. In 2003-04, the ten highest spending states spent an average of more than 50 percent more dollars per pupil than was spent by the lowest spending ten states. Low-spending states are clustered in the South, Southwest, and West, and serve a disproportionate share of the nation's poor children.

The purpose of Title I of the Elementary and Secondary Education Act is to level the educational playing field for poor children. Given this ambition, one would expect Title I to disproportionately benefit low-spending states, where low-income students are concentrated. But the reality is otherwise. Wealthier, higher-spending states receive a disproportionate share of Title I funds, thereby exacerbating the profound differences in education spending from state to state. Title I makes rich states richer and leaves poor states behind.

The problem lies in the Title I formulas. Under the three main formulas (basic, concentration, and targeted grants), each state's Title I allocation is largely a product of two factors. The first is the number and concentration of poor children in the school districts of each state. This factor benefits poorer states because they have disproportionate numbers of low-income children. But the second factor is the average per-pupil expenditure in the state. This state expenditure factor means that high-spending states get more Title I money per poor child than low-spending states. The net effect is that Title I does not reduce, but rather reinforces, inequality among states.

As Table 1 shows, interstate differences in Title I allocations are not small. Column A lists the number and percentage of the nation's poor children in each state in 2003, and column B lists each state's share of Title I funds in 2003. Together, columns A and B show that states do not receive Title I money in proportion to their shares of the nation's low-income children. Maryland, for example, had fewer poor children than Arkansas but received 51 percent more Title I aid per poor child. Massachusetts had fewer low-income children than Oklahoma but received more than twice as much Title I aid per poor child. Similarly, Minnesota had fewer poor children than New Mexico but received 27 percent more Title I aid per poor child.

Column C shows each state's Title I funding per poor child in rank order. The amounts per poor child at the top are as much as double the amounts at the bottom, with the variation essentially mirroring interstate variation in per-pupil spending. (Some of the highest amounts in column C reflect statutory minimum allocations for small states.) When these data are adjusted for geographic differences in educational costs, the degree of interstate inequality is slightly reduced but still quite substantial.

The state expenditure factor might be defensible if it served as a reward or incentive for higher state spending on education. But this is implausible for two reasons. First, Title I aid is too small to realistically motivate additional state or local spending; states typically do not spend an additional dollar just to capture a few extra pennies. Second, by linking Title I aid to state per-pupil spending, the state expenditure factor primarily rewards state fiscal capacity (i.e., taxable wealth per pupil, shown in Column A in Table 2), not educational effort (i.e., willingness to tax that wealth, shown in Column B in Table 2). Nonfederal education revenue is more highly correlated with state fiscal capacity than with state effort, and states with higher capacity tend to exert lower effort. Thus, tying federal aid to state per-pupil spending does not reward effort so much as it rewards wealth. Indeed, in the examples above, the wealthier states (Maryland, Massachusetts, and Minnesota) exert less effort than the poorer states (Arkansas, Oklahoma, and New Mexico) but have higher per-pupil spending and thus receive higher Title I aid per poor child.

Simply put, the state expenditure factor in the Title I formula should be eliminated. This reform would bring Title I into line with the aid formulas for special education, English language instruction, and child nutrition, all of which assign equal weight to eligible children regardless of the state where they reside. Title I should simply allocate aid in proportion to each state's share of poor children. Moreover, instead of the state expenditure factor, Title I should include a cost factor to adjust for geographic

Table 1: Children in Poverty and Title I Allocations, 2003-2004 *(with percentage of national total)*

	A		B		C
	Poor children		Title I allocation		Title I allocation per poor child
Wyoming	9,796	*0.1*	$28,964,809	*0.3*	$2,957
Vermont	9,667	*0.1*	27,005,035	*0.2*	2,794
North Dakota	11,245	*0.1*	30,329,411	*0.3*	2,697
Massachusetts	112,570	*1.3*	260,050,569	*2.3*	2,310
New Hampshire	13,140	*0.2*	29,733,465	*0.3*	2,263
Alaska	14,330	*0.2*	30,431,327	*0.3*	2,124
Maine	25,025	*0.3*	47,816,946	*0.4*	1,911
Delaware	16,038	*0.2*	30,637,587	*0.3*	1,910
Connecticut	55,987	*0.7*	106,557,518	*1.0*	1,903
New York	638,992	*7.6*	1,184,751,800	*10.7*	1,854
New Jersey	155,082	*1.9*	272,032,782	*2.4*	1,754
South Dakota	19,125	*0.2*	32,000,786	*0.3*	1,673
Michigan	251,533	*3.0*	420,799,581	*3.8*	1,673
Pennsylvania	274,088	*3.3*	438,337,029	*3.9*	1,599
Rhode Island	27,313	*0.3*	43,155,247	*0.4*	1,580
Wisconsin	96,223	*1.1*	151,746,825	*1.4*	1,577
Kansas	55,419	*0.7*	87,046,905	*0.8*	1,571
Montana	25,827	*0.3*	40,458,865	*0.4*	1,567
Ohio	258,749	*3.1*	399,821,239	*3.6*	1,545
Minnesota	76,892	*0.9*	117,728,364	*1.1*	1,531
Maryland	101,153	*1.2*	153,983,710	*1.4*	1,522
West Virginia	63,503	*0.8*	94,167,837	*0.8*	1,483
Nebraska	32,413	*0.4*	46,769,850	*0.4*	1,443
Illinois	333,173	*4.0*	478,793,210	*4.3*	1,437
Hawaii	26,720	*0.3*	36,094,503	*0.3*	1,351
Missouri	146,574	*1.7*	194,886,735	*1.8*	1,330
California	1,288,493	*15.4*	1,649,697,459	*14.8*	1,280
Iowa	49,808	*0.6*	62,955,699	*0.6*	1,264
Oregon	93,069	*1.1*	115,317,070	*1.0*	1,239
Louisiana	207,871	*2.5*	256,175,473	*2.3*	1,232
Virginia	149,256	*1.8*	182,110,558	*1.6*	1,220
New Mexico	85,331	*1.0*	103,273,759	*0.9*	1,210
Indiana	129,878	*1.6*	156,540,820	*1.4*	1,205
Kentucky	138,101	*1.6*	162,957,050	*1.5*	1,180
Georgia	292,431	*3.5*	343,346,663	*3.1*	1,174
South Carolina	138,465	*1.7*	157,877,214	*1.4*	1,140
Washington	138,049	*1.6*	157,166,797	*1.4*	1,138
Texas	902,369	*10.8*	1,018,467,898	*9.2*	1,129
Mississippi	139,374	*1.7*	157,215,840	*1.4*	1,128
Idaho	35,921	*0.4*	39,875,687	*0.4*	1,110
Oklahoma	117,122	*1.4*	128,454,510	*1.2*	1,097
Tennessee	171,970	*2.1*	185,694,729	*1.7*	1,080
Colorado	96,512	*1.2*	104,115,332	*0.9*	1,079
Alabama	165,578	*2.0*	177,362,455	*1.6*	1,071
North Carolina	248,492	*3.0*	261,980,283	*2.4*	1,054
Florida	512,261	*6.1*	523,834,879	*4.7*	1,023
Arkansas	105,100	*1.3*	106,001,974	*1.0*	1,009
Utah	49,259	*0.6*	45,809,427	*0.4*	930
Nevada	59,296	*0.7*	53,216,311	*0.5*	897
Arizona	213,295	*2.5*	187,860,284	*1.7*	881

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates, 2003 (children ages 5 to 17 in poverty); U.S. Department of Education Budget Tables, ESEA Title I Grants to Local Educational Agencies by State, 2003.

differences in educational costs. This approach would lessen interstate inequality because poor children are disproportionately concentrated in low-spending states and because equal federal dollars per eligible child provide a bigger boost, proportionally speaking, to low-spending states than to high-spending states.

Although eliminating the state expenditure factor in Title I would be a positive step, its effect on interstate inequality would be modest. A more serious effort to narrow interstate inequality requires three main policy components. First, the federal role in school finance must be substantially increased; the federal government cannot buy much equality when it spends only nine cents of every education dollar. Second, because interstate differences in education funding primarily reflect differences in fiscal capacity, federal aid should compensate for differences across states in their ability to support education. Medicaid provides an example of federal aid distributed in inverse proportion to state fiscal capacity. Third, in aiding states with low education spending, federal policy should distinguish between low fiscal capacity and low effort. Where low spending is due to low effort, the primary federal role should be to spur states toward greater effort. Congress could require low-effort states to gradually increase their effort up to a minimum threshold as a condition of receiving significantly expanded federal aid.

These reforms would not be cheap, and they would require robust political will. But the problem of interstate inequality is both glaring and longstanding. If we are serious about wanting to ensure that every child in America meets high standards, then we must develop a federal school finance policy equal to the task.

Table 2 State Fiscal Capacity and Educational Effort by State, 2003-2004 *(with percent of national average)*

	A		B		C	
	Total taxable resources (per pupil)		**Educational effort**		**Nonfederal revenue (per pupil)**	
Alabama	$178,064	*89*	3.27	*93*	$5,819	*83*
Alaska	159,139	*80*	3.66	*104*	5,822	*83*
Arizona	160,354	*81*	3.12	*89*	5,003	*72*
Arkansas	167,832	*84*	3.53	*100*	5,929	*85*
California	168,055	*84*	3.42	*97*	5,743	*82*
Colorado	230,315	*116*	2.96	*84*	6,818	*98*
Connecticut	253,996	*128*	3.44	*98*	8,737	*125*
Delaware	362,954	*182*	2.24	*64*	8,130	*116*
Florida	209,398	*105*	2.96	*84*	6,199	*89*
Georgia	195,964	*98*	3.80	*108*	7,453	*107*
Hawaii	225,548	*113*	3.82	*109*	8,627	*123*
Idaho	157,727	*79*	3.57	*101*	5,626	*80*
Illinois	209,172	*105*	3.35	*95*	7,010	*100*
Indiana	208,503	*105*	3.96	*113*	8,264	*118*
Iowa	224,688	*113*	3.40	*97*	7,645	*109*
Kansas	212,974	*107*	3.79	*108*	8,075	*116*
Kentucky	187,524	*94*	3.28	*93*	6,147	*88*
Louisiana	182,526	*92*	3.23	*92*	5,890	*84*
Maine	187,498	*94*	4.27	*121*	8,013	*115*
Maryland	252,749	*127*	3.22	*91*	8,140	*116*
Massachusetts	234,883	*118*	3.39	*96*	7,966	*114*
Michigan	181,531	*91*	4.24	*120*	7,688	*110*
Minnesota	234,525	*118*	3.48	*99*	8,152	*117*
Mississippi	148,437	*75*	3.62	*103*	5,380	*77*
Missouri	206,812	*104*	3.30	*94*	6,823	*98*
Montana	178,136	*90*	3.65	*104*	6,505	*93*
Nebraska	232,972	*117*	3.42	*97*	7,968	*114*
Nevada	226,288	*114*	2.81	*80*	6,362	*91*
New Hampshire	232,031	*117*	3.39	*96*	7,875	*113*
New Jersey	234,549	*118*	4.34	*123*	10,186	*146*
New Mexico	157,280	*79*	3.79	*108*	5,962	*85*
New York	226,166	*114*	4.08	*116*	9,216	*132*
North Carolina	213,979	*108*	2.90	*82*	6,201	*89*
North Dakota	229,595	*115*	3.15	*89*	7,223	*103*
Ohio	201,149	*101*	3.92	*111*	7,890	*113*
Oklahoma	163,416	*82*	3.50	*100*	5,725	*82*
Oregon	202,845	*102*	3.43	*98*	6,966	*100*
Pennsylvania	216,454	*109*	3.75	*106*	8,113	*116*
Rhode Island	207,837	*104*	3.62	*103*	7,534	*108*
South Carolina	177,184	*89*	3.81	*108*	6,746	*96*
South Dakota	241,334	*121*	2.72	*77*	6,557	*94*
Tennessee	206,282	*104*	2.61	*74*	5,388	*77*
Texas	170,616	*86*	3.68	*105*	6,282	*90*
Utah	146,631	*74*	3.31	*94*	4,857	*69*
Vermont	203,727	*102*	4.63	*131*	9,425	*135*
Virginia	248,386	*125*	2.95	*84*	7,340	*105*
Washington	206,431	*104*	3.07	*87*	6,343	*91*
West Virginia	166,089	*83*	4.27	*121*	7,086	*101*
Wisconsin	217,554	*109*	3.91	*111*	8,514	*122*
Wyoming	263,292	*132*	3.49	*99*	9,191	*131*

Note: "Total taxable resources" (column A) is a measure of state fiscal capacity developed by the U.S. Department of Treasury; 2003 figures are available at http://www.treas.gov/offices/economic-policy/resources/estimates.shtml. Nonfederal revenue data (column C) are from U.S. Census Bureau, Public Elementary-Secondary Education Finances: 2003-04 (table 1). The data in columns A and C are cost-adjusted dollars per weighted pupil. The cost adjustment applies the state-level Geographic Cost of Education Index in Jay G. Chambers, Geographic Variations in Public Schools' Costs (NCES Working Paper No. 98-04, 1998) (table III-3). Pupil weights are 1.9 for students with disabilities, 1.6 for students in poverty, and 1.2 for English-language learners. Enrollment data used to derive weighted pupil counts are from NCES, Digest of Education Statistics 2005 (table 33 (fall 2003 enrollment) and table 52 (children ages 6 to 21 served under the Individuals with Disabilities Education Act, Part B, 2003-04)); U.S. Census Bureau, Small Area Income and Poverty Estimates, 2003 (children ages 5 to 17 in poverty); and U.S. Department of Education, National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs, ELL Demographics by State, 2003-04. Dividing column C by column A yields the "Educational effort" figures in Column B. Across the states, nonfederal revenue is more strongly correlated with fiscal capacity (.62) than with effort (.45). Further, capacity and effort are negatively correlated (–.39). With some exceptions, states with higher capacity tend to make less effort yet raise more revenue than states with lower capacity.

How States Shortchange the Districts That Need the Most Help

By Ross Wiener and Eli Pristoop
Education Trust

States bear primary responsibility for public education.[2] As education has become more important to being an active citizen and earning a livelihood, states have increasingly exercised their authority to set rules for who can teach, what students are expected to learn in school, and how student learning is measured. Just as important, states determine how–and how equitably–education is funded.

The analyses on the pages that follow examine how well the states are living up to their obligation to fund public education equitably. There are encouraging examples of states that have stepped up to their responsibilities, but on the whole these data reveal serious problems with most state funding systems.

What This Analysis Does—and What it Does Not Do

This analysis focuses on state and local revenues. Federal revenues (which made up 8.9 percent of public school revenues in 2004) are not included, in order to isolate the specific effect of *state* policies on the educational opportunities provided to low-income children and children of color. Federal education funds are specifically meant to supplement, not supplant, state and local revenues. So it is appropriate to examine whether state policies equitably support public education in high-poverty and high-minority districts.[3] When states fail to equitably fund public education, federal funds are forced to make up for shortfalls, instead of providing the additional opportunities Congress intended.

Second, the analysis does not examine whether funding in any particular state is *adequate*. Rather, taking current spending as it is, this analysis asks whether the districts with the highest concentrations of low-income students and students of color are getting their fair share of state money.

Third, this report examines school district revenues, not practices or policies in terms of how the money is spent. At the Education Trust, we are acutely aware that how money is spent matters immensely in whether education is improved. We spend most of our time and energy trying to improve practice and policy so that existing resources in public education are used effectively. But we also know that many necessary improvements in the education of low-income and minority students will cost money.

Fourth, we have applied a consistent methodology to examining funding equity in 49 states (the exception is Hawaii, which operates a single, statewide school district). This methodology, which is described in the text and explained in detail in the technical appendix, allows for cross-state comparisons and provides good information on how funding is distributed between high- and low-poverty and high- and low-minority districts. But it is not ideally suited to analyzing a few unique state contexts. For example, the Clark County school district, home to Las Vegas, serves approximately 70 percent of Nevada's public school students, so it is not possible to divide Nevada's districts into comparable quartiles.

We do not mean to imply that we have described the full range of school funding inequities. States that do not necessarily show large funding disparities in this analysis might show inequities if looked at through a different lens. We encourage researchers and advocates to use this data as a starting point for additional analysis.

How We Did the Analysis

This study analyzes annual financial data from each of the nation's approximately 14,000 public school districts, gathered by the U.S. Census Bureau and the U.S. Department of Education. The calculations are based on the total amount of state and local revenues each district received for the 2003-2004 school year, the latest year for which such financial data are available.[4]

To calculate funding gaps for each state, we compare average state and local revenues per student in the highest-poverty school districts–those in the top 25 percent statewide in terms of the percent of students living below the federal poverty line–to per-student revenues in the lowest poverty school districts.[5] These quartiles are built so each contains approximately the same total number of students. This procedure also is used to establish comparable quartiles for analyzing funding in high- and low-minority school districts.

The analysis accounts for the fact that school districts vary in how much they need to spend depending on the different prices they have to pay for goods and services and the different kinds of students they have. Accordingly, we adjust for the local cost of providing education. In 2006, the National Center for Education Statistics released a new formula for adjusting for cost differences across school districts across the entire United States, and we applied that formula in these analyses.[6] Using this new formula allows for the most fair comparisons across districts, but it makes the data in this report not perfectly comparable to previous Education Trust *Funding Gap* reports.

Similarly, we adjust our calculation of school district revenues based on the number of special education students enrolled, recognizing that districts with disproportionately more students with disabilities have higher costs and, thus, effectively less money to spend. The formula we used for this adjustment was developed by the American Institutes of Research and is widely used in school funding analyses.[7]

Most States are Unfair to Their High-Poverty and High-Minority Districts

In 26 of the 49 states studied, the highest poverty school districts receive fewer resources than the lowest poverty districts.[8] As can be seen in Table 3, across the country, state and local funds provide $825 per student less in the highest poverty districts than in the most affluent districts.[9] Four states–Illinois, New Hampshire, New York, and Pennsylvania–shortchange their highest poverty districts by more than $1,000 per student per year. These states, and others that allow funding gaps to persist, are compounding the disadvantages that low-income students face outside of school and undercutting public education's ability to act as an engine of social mobility.

In 28 states, high-minority districts receive less state and local money for each child than low-minority districts (Table 4). Across the country, $908 less per student is spent on students in the districts educating the most students of color, as compared to the districts educating the fewest students of color.[10]

Equal Dollars Are Not Good Enough

The absolute dollar numbers in Table 3 actually understate the inequity suffered by high-poverty districts. To educate children growing up in poverty to common, meaningful standards costs more. Children from low-income families need more instructional time and especially well trained teachers. To provide another way of looking at state funding gaps, we also calculate the gaps with a 40 percent adjustment for educating students growing up in poverty.[11] We use this 40 percent adjustment because it is included in the federal Title I formula to determine whether state funding policies are fair to low-income students. Title I funding to states that do not meet this standard is reduced.[12] Studies that have attempted to quantify the additional costs of educating students growing up in poverty have often produced higher adjustments. Maryland, for example, determined that it would require virtually double the foundation funding to educate low-income students up to its state standards, and phased in a funding formula to meet that goal beginning in 2002.[13] Others, such as Professor Liu, use a 60 percent adjustment.

Applying the 40 percent adjustment, the number of states that underfund school districts serving large numbers of poor children grows to 34, and the national gap goes from $825 to $1,307. Underneath this national gap lie huge differences among the states. Six states have per-student funding gaps that exceed $1,000 between high- and low-poverty districts; once the 40 percent adjustment is applied, Michigan and Montana join the four states that have funding gaps in excess of $1,000 (Illinois, New Hampshire, New York, and Pennsylvania).

A similar analysis based on districts serving students of color finds the same pattern: After the 40 percent adjustment for low-income students is made, school districts serving the largest concentrations of students of color receive $1,213 less per child than school districts serving the fewest children of color every year. (No adjustment is made on the basis of the percent minority enrollment.) Thirty states have funding gaps between their highest and lowest minority districts, and twelve have funding gaps that exceed $1,000 per child (Colorado, Illinois, Kansas, Montana, Nebraska, New Hampshire, New York, North Dakota, South Dakota, Texas, Wisconsin, and Wyoming).

How to Read Tables 3 and 4

Tables 3 and 4 illustrate the gap in funding between highest and lowest poverty districts (Table 3) and highest and lowest minority districts (Table 4). When highest poverty and highest minority districts receive less per pupil, the gaps are shown with negative numbers. So, for example, the highest poverty districts in Alabama receive an average of $323 less per student than the lowest poverty districts, and the highest minority districts receive an average of $241 per student less than the lowest minority districts. In states where the highest poverty districts receive more money per pupil, the number is positive. So, for example, the highest poverty districts in Minnesota receive $1,349 per student more than the lowest poverty districts.

Table 3: Poverty Funding Gaps by State, 2004

State	Gap Between Revenues per Student in the Highest - and Lowest - Poverty Districts (no adjustment for low-income students)	Gap Between Revenues per Student in the Highest - and Lowest - Poverty Districts (40% adjustment for low-income students)
Alabama	-$323	-$656
Alaska	2,474	2,054
Arizona	-225	-736
Arkansas	-158	-500
California	218	-259
Colorado	-70	-440
Connecticut	666	59
Delaware	-207	-371
Florida	-272	-461
Georgia	156	-292
Hawaii	*	*
Idaho	-55	-257
Illinois	-1,924	-2,355
Indiana	518	93
Iowa	82	-176
Kansas	-549	-885
Kentucky	852	448
Louisiana	-200	-481
Maine	-137	-543
Maryland	-123	-432
Massachusetts	1,299	694
Michigan	-573	-1,072
Minnesota	1,349	950
Mississippi	207	-191
Missouri	190	-271
Montana	-789	-1,148
Nebraska	515	210
Nevada	-249	-297
New Hampshire	-1,084	-1,297
New Jersey	1,824	1,069
New Mexico	1,106	679
New York	-2,319	-2,927
North Carolina	-344	-543
North Dakota	271	17
Ohio	683	113
Oklahoma	133	-213
Oregon	579	302
Pennsylvania	-1,001	-1,511
Rhode Island	311	-394
South Carolina	414	127
South Dakota	-147	-438
Tennessee	591	330
Texas	-249	-757
USA	**-825**	**-1,307**
Utah	860	663
Vermont	-403	-894
Virginia	-114	-436
Washington	196	-110
West Virginia	-22	-345
Wisconsin	-351	-742
Wyoming	-303	-539

Table 4: Minority Funding Gaps by State, 2004

State	Gap Between Revenues per Student in the Highest - and Lowest - Minority Districts (no adjustment for low-income students)	Gap Between Revenues per Student in the Highest - and Lowest - Minority Districts (40% adjustment for low-income students)
Alabama	-$241	-$437
Alaska	4,955	4,435
Arizona	-230	-680
Arkansas	445	253
California	-160	-499
Colorado	-799	-1,032
Connecticut	-74	-602
Delaware	408	353
Florida	17	-106
Georgia	566	271
Hawaii	*	*
Idaho	-836	-849
Illinois	-1,223	-1,524
Indiana	1,345	1,096
Iowa	-327	-414
Kansas	-1,514	-1,630
Kentucky	150	274
Louisiana	355	111
Maine	-817	-874
Maryland	-302	-454
Massachusetts	1,663	1,139
Michigan	68	-251
Minnesota	898	623
Mississippi	413	26
Missouri	795	662
Montana	-1,787	-1,838
Nebraska	-1,280	-1,374
Nevada	-470	-496
New Hampshire	-2,371	-2,392
New Jersey	1,730	1,087
New Mexico	246	18
New York	-2,239	-2,636
North Carolina	-211	-296
North Dakota	-1,259	-1,290
Ohio	1,285	942
Oklahoma	-133	-383
Oregon	222	127
Pennsylvania	-454	-709
Rhode Island	-21	-639
South Carolina	392	206
South Dakota	-962	-1,140
Tennessee	275	202
Texas	-792	-1,167
USA	**-908**	**-1,213**
Utah	-202	-311
Vermont	-800	-613
Virginia	418	239
Washington	-87	-225
West Virginia	244	290
Wisconsin	-1,043	-1,270
Wyoming	-1,020	-1,041

Note: All dollar amounts in this chart have been adjusted to account for regional cost differences and the additional cost of educating students with Individualized Education Programs. This has the effect of reducing the effective level of funding in high-cost districts and districts with large numbers of students with disabilities. In addition, the third column in this table contains gap numbers that have been adjusted to account for the additional cost of educating low-income students (40% adjustment). For a more detailed explanation of the methodology used in this report, see the Technical Appendix.

Source: Education Trust calculations based on data from U.S. Census Bureau and U.S. Department of Education data for the 2003-2004 school year.

Some states demonstrate that equitably funding education is possible. Kentucky and Massachusetts, for example, have targeted more money to high-poverty districts and coupled the monetary resources with meaningful accountability and technical assistance–and real progress has been accomplished.[14] But equitable funding is not a panacea. Washington, for example, does not distribute its money in a particularly unfair way in comparison to other states, but that does not make up for the fact that it simply spends less on education than other states with similar wealth. There are, of course, examples where increased education funding has not translated into commensurate improvements in teaching and learning. We have to confront those issues seriously, but ignoring or condoning funding gaps only makes it harder to tackle the substantive problems.

Per-Student Funding Gaps Add Up

For example, when you consider the per-student funding gap for low-income students (without 40-percent adjustment for low-income students) **in…**	**Between two typical classrooms of 25 students, that translates into a difference of….**	**Between two typical elementary schools of 400 students, that translates into a difference of….**	**Between two typical high schools of 1,500 students, that translates into a difference of….**
New York	$57,975	$927,600	$3,478,500
Illinois	$48,100	$769,600	$2,886,000
Michigan	$14,325	$229,200	$859,500
North Carolina	$8,600	$137,600	$516,000
Delaware	$5,175	$82,800	$310,500

Table 5: Percent of Elementary-Secondary Public School System Revenue from Local Sources by State: 2003-2004

State Name	Percent of System Revenue from Local Sources
Alabama	32.8
Alaska	25.7
Arizona	43.3
Arkansas	15.4
California	34.1
Colorado	49.6
Connecticut	59.7
Delaware	27.9
Florida	45.6
Georgia	46.7
Idaho	31.6
Illinois	56
Indiana	44
Iowa	45.5
Kansas	40.8
Kentucky	30.4
Louisiana	38.2
Maine	50.4
Maryland	55.9
Massachusetts	53.6
Michigan	30
Minnesota	22.6
Mississippi	30.3
Missouri	47.9
Montana	40.4
Nebraska	58.2
Nevada	32.4
New Hampshire	48.6
New Jersey	53.3
New Mexico	13.1
New York	48.9
North Carolina	32.5
North Dakota	46.7
Ohio	49.2
Oklahoma	36.1
Oregon	38.2
Pennsylvania	56.1
Rhode Island	52.3
South Carolina	43.6
South Dakota	50.3
Tennessee	45.6
Texas	52.7
Utah	34.7
Vermont	23.9
Virginia	54.3
Washington	29.7
West Virginia	28.7
Wisconsin	41.7
Wyoming	38
USA	**43.9**

Source: "Public Education Finances 2004". US Census Bureau. March 2006. Page 5. Table 5.

States Can Close Funding Gaps

Education reform poses many complicated issues, where additional innovation and research is still needed. Making education funding more fair, however, is not one of these issues. States need to take a greater share of education funding and target more money to the districts with the biggest challenges.

First, states should reduce reliance on local property taxes. As shown in Table 5, states vary dramatically in the extent to which local taxes fund schools–from a low of 13 percent in New Mexico to a high of 60 percent in Connecticut. Because wealth and property value are so unequally distributed, using local taxes as the primary resource for schools inherently gives wealthier communities an advantage in providing better educational opportunities. It is antithetical to states' professed commitments to close achievement gaps to rely on local communities to fund education. This tradition reinforces privilege, exacerbates inequality, and is anachronistic at a time when we expect all students within a state to meet consistent, meaningful standards.

Once states assume more responsibility for education funding, they should target funds to help educate low-income children. In Massachusetts, for example, local taxes account for a majority of public schools' revenue, but state funding is highly targeted, which allows the state to do more to address funding equity than some other states. Wisconsin, in contrast, actually allocates a majority of all public education revenue at the state level, but still maintains funding gaps that disadvantage both high-poverty and high-minority districts.

It is unfair that children's educational horizons are limited by their neighborhoods' demographics. As state education systems grow into their responsibilities in a standards-based world, they need to ensure that budgets reflect fairness and that resources are targeted to districts with the most need. Aligning state education funding policies with goals would mark necessary, but not sufficient, progress toward equality of educational opportunity.

How Districts Shortchange Low-income and Minority Students

By Marguerite Roza

Research Assistant Professor in the Center on Reinventing Public Education at the Daniel J. Evans School of Public Affairs at the University of Washington.

It is well known that some school districts have more money to spend than others with consequent ill effects on poor and minority students. Analyses such as the ones contained in this report and well-publicized court cases have long documented the inequities between wealthier and poorer school districts.

Less well known is that, almost universally, school districts themselves magnify those initial inequities by directing more non-targeted money to schools and students with less need. Even school districts that claim to be spending more on high-poverty and high-minority schools can in fact spend considerably less, leading to predictable and devastating results for low-income and minority students.

To understand how these inequities develop within districts, it is necessary to understand the way school budgets are built. Typically, district budget documents report how money is spent by category and program rather than by school. As a result, even superintendents and school board members often do not know whether they spend more money on one school than another or whether they spend more or less on low-income and minority students. Layered onto those opaque accounting practices are long-established policies and practices—particularly regarding personnel assignments—that virtually guarantee that low-income and minority children have access to fewer resources than their more advantaged peers.[15]

No large-scale national databases or analyses can be used to see these problems. However, in the last five years I and others have carefully analyzed the spending patterns of dozens of districts in more than 20 states. In some cases the districts only allowed us to examine their finances with the understanding that we would not name them. However, we can say that in many ways they typify large and medium-sized districts throughout the country. Two major patterns emerged in almost every district studied and can be presumed to be replicated in most large and medium-sized school districts.

1) Less money is spent on salaries in high-poverty schools than on salaries in low-poverty schools within the same district.
2) Districts assign a larger share of unrestricted funds to low-poverty schools.

Let us examine each of these inequitable patterns.

1) Less money is spent on salaries in high-poverty schools than on salaries in low-poverty schools within the same district.

Evidence abounds that in many school districts the most experienced and highly paid teachers congregate in the district's more affluent schools. At the same time, the least qualified, lowest paid teachers tend to serve in the schools with the highest numbers of low-income and minority students. A typical pattern is that a new teacher will start his or her career at a high-poverty school and, as he or she gains experience and moves up the pay scale, will transfer to a more affluent school. District transfer policies, sometimes codified in teacher union contracts, help facilitate this migration pattern. Additionally, after teaching in high-poverty schools, some newer teachers leave the profession, also contributing to the teacher turnover in the schools.

Although there are no guarantees that teacher experience is an indicator of teacher quality, researchers generally agree that teacher effectiveness increases during the first five to seven years of teaching. Educationally, the migration pattern of teachers means that students who attend high-minority and high-poverty schools have a lower chance of encountering a teacher at the peak of his or her effectiveness than students who attend more affluent schools with fewer students of color.

Financially, such teacher migration patterns mean that considerably less salary money is spent on high-poverty and high-minority schools. This disparity is often hidden by the fact that most district budgets report the distribution of staff *positions* at individual schools and not the distribution of teacher *costs* or teacher quality. Typically a district will allocate one teacher to a set number of students across all schools or types of schools (for example, all elementary schools will have a 1:18 ratio or all high schools will have a 1:22 ratio). The district will then report salaries at a particular school as the number of positions multiplied by the average salary paid by the district. By reporting salaries in this way (known as salary averaging), school districts disguise the actual salaries paid at individual schools.

When actual salaries are examined, the differences between high-poverty schools and low-poverty schools are significant and pervasive, as shown in Table 6.

Table 6: Gap between average teacher salaries in top and bottom poverty quartiles, by school district (2003-2004)

District	Salary Gap
Austin*	$3,837
Dallas*	$2,494
Denver*	$3,633
Fort Worth*	$2,222
Houston*	$1,880
Los Angeles**	$1,413
Sacramento**	$4,846
San Diego**	$4,187
San Francisco**	$1,286
San Jose Unified**	$4,008

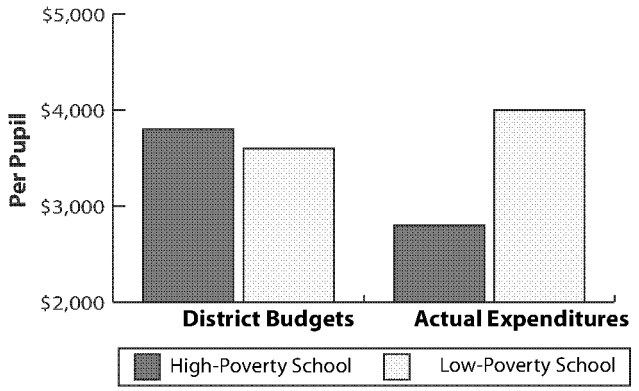
Sources: *Center for Reinventing Public Education Analyses, 2005
**Education Trust, Hidden Funding Gap, 2005, available at http://www.hiddengap.org/

In each city cited here, the district effectively spends less on teaching in schools with high concentrations of low-income students. And these are not the most extreme examples. A 2002 analysis of Baltimore City showed that teachers at one high-poverty school were paid an average of almost $20,000 less than those at another school in the same district.[16]

Salary differences translate into big effects on school spending. For a school with 600 students and 25 teachers, a $4,000 average salary gap creates a difference of $100,000 per school. For a school with 1,700 students and 100 teachers, that is a difference of $400,000 per school.

Members of the general public often believe that high-poverty and high-minority schools receive more money than other schools because they know that there are special programs targeted to high-poverty schools. In some cases, however, targeted funds don't even make up for the salary differences.

Figure 1: Salary Averaging Diverts Resources Budgeted for High-Poverty Schools to Low-Poverty Schools*



Source: Roza, Marguerite and Paul Hill. "How Within-District Spending Inequities Help Some Schools to Fail," Brooking Papers on Education Policy (2004).

2) Districts further exacerbate inequality by assigning a larger share of unrestricted funds to low-poverty schools.

Each school in a district is supposed to receive an equal share of unrestricted funds, in addition to whatever categorical allocations are intended for the special needs of the students it has (such as for special education services or English-language instruction). Even after the salary differences between high- and low-poverty schools are accounted for, low-poverty schools still get more than their share of unrestricted dollars. In fact, salary differences only explain between 20 and 80 percent of the differences between spending at high- and low-poverty schools.

This somewhat unexpected finding first emerged in various analyses some two years ago,[17] and other recent analyses confirm it. For example, data from the Public Policy Institute of California documented that low-poverty elementary schools tend to have larger teacher/pupil ratios and higher non-teacher expenditures than higher poverty schools.[18]

Table 7: Unrestricted spending per pupil in elementary schools across sampled California Districts

Category	Low Poverty	High Poverty
Unrestricted Teacher Expenditures	$2570	$1973
Teachers per 1000 students	44.9	41.5
Average teacher salary	$57,242	$47,545
Unrestricted Other Expenditures	$1839	$1648
Total Unrestricted	**$4409**	**$3621**

Source: Rose, et. al (2006)

Interviews with district leaders have helped make sense of how and why this happens in their districts. Sometimes the placement of more expensive magnet or alternative programs drives up the costs in schools with fewer low-income students. In Chicago, for instance, selective enrollment schools (those with admission requirements) spend some 15 percent more than the district average per pupil.[19] In one district, the more affluent communities have smaller schools where per-pupil costs are higher. More often, the patterns are created in response to pressures to equalize services across all schools. Where earmarked categorical funds such as federal Title I money pay for such extra services as full-day kindergarten or reading specialists in high-need schools, more flexible state and local money is often used to fund the same services in the low-need schools.

The result is that general or unrestricted funds are skewed toward schools that do not qualify for targeted programs. Even when states restrict certain funds to provide extras for low-income students, school districts use unrestricted funds to provide similar services to more affluent students.

While the patterns somewhat vary by district, it is clear that most districts distribute the state and local funds they control inequitably. Again, this is masked by the way budgets are reported, showing expenditures coded by activity, function, and program, but not by school or student.

Emerging research indicates that there may be yet another way local districts shortchange low-income and minority students by inequitably distributing categorical funds targeted to specific kinds of students, such as money targeted to English-language learners. The way this seems to work is that districts put equally funded programs into schools regardless of how many students need them. For example, a district might allocate $100,000 to each school with English-language learners, even though one school might have 200 students with limited English proficiency and another—often a more affluent school—might have only 20. This results in a per-pupil cost of $500 in the first school and $5,000 in the second. The research into this practice is still in the early stages[20] and deserves further scrutiny.

The important point here is that school budgets are tangled webs, and it takes considerable amounts of analytic energy to unravel them in order to understand exactly how money is spent and on which students. When examined closely, however, it is clear that the typical school budget document is used to conceal very inequitable spending patterns.

To change these patterns, school boards, superintendents, and members of the general public should demand that budget documents be much more accurate and transparent so that all involved know exactly how resources are being distributed among different schools within the same school district. Accuracy demands that school budgets reflect actual teacher salaries, not district averages. Relying on average teacher salaries obscures the fact that less teacher salary money is allocated to the highest poverty and highest minority schools, where novice teachers and those with the least credentials are concentrated. One hopeful sign is that California, Texas, and Colorado have recently changed their school accounting practices to make it easier for school districts to report actual salaries by school level.

Collecting and disseminating truthful information about individual school budgets will help in acknowledging the problems, but it will take deliberate policies to change the underlying inequities. An increasing number of districts, including some of those that have allowed me and my colleagues to study them, are adopting student-based

allocation policies known as weighted student funding.[21] Others are changing the way teachers are compensated in order to change the way teacher talent and experience are distributed. If public school systems are serious about closing achievement gaps, they must begin to allocate more resources to the students with the greatest need. The previous sections of this report illustrate the important role of federal and state policies, but we cannot achieve real funding equity until we design school budgets that better respond to student needs.

Conclusion and Recommendations

The fundamental promise of standards-based reform is that inputs vary so that outcomes can be held constant. While there are many intangibles on the input side of the education equation, we can at least measure whether money is being appropriately targeted to provide extra support to the students and schools who start out behind. By this score, we have yet to deliver on the promise of standards-based reform.

For standards and accountability to represent more than a hollow exhortation to "do better," education funds must be directed to the places where they are most needed. Changing how education funds are distributed presents political challenges, but isolated progress at every level of government demonstrates that these issues can be overcome. Education is too important to our identity as Americans – and who we aspire to be – to allow current funding inequities to persist.

Below are recommendations for each level of government.

Federal Government

- **Invest more in education.** Despite a 40 percent increase in Title I funding within three years of enacting *No Child Left Behind* (NCLB), the federal government still only provided 8.9 percent of public education funds in 2004. There is only so much equity that can be secured with 9 cents of every education dollar.
- **Target federal funds to high-poverty states.** Title I currently rewards states that spend more on education without regard to differences in state capacity, which compounds the disadvantage of living in a low-wealth state. Federal policy should distinguish among states based on their effort in education funding, and help to address differences in capacity.
- **Use federal funds more aggressively to force states and districts to disburse their own funds equitably.** State and local policy have to be aligned with the national goal of closing achievement gaps, or the relatively small amount of federal funds will represent mere drops in a leaky bucket. Congress could start by updating the "comparability" provisions in Title I, which allow states to ignore inequities in state/local funding in Title I schools.

State Governments

- **Take more responsibility for education funding.** As the constitutional guarantors of educational opportunity, states should ensure that public schools are funded adequately regardless of community wealth. Because the traditional role of local property taxes in funding local school districts inherently puts low-wealth and low property value communities at a disadvantage, states should rely more on statewide sources of revenue.
- **Target more funding to high-poverty districts.** Disbursing education dollars at the state level creates the opportunity for more equitable funding, but does not make equity inevitable. States need to assess the relative challenges across school districts and ensure that funding equitably addresses these challenges.
- **Set funding equity standards for school districts.** States have devolved authority for funding individual schools to school districts, but this cannot allow states to abdicate responsibility for ensuring equitable educational opportunities within districts.

Local School Districts

- **Publish transparent budget and allocation figures.** While the destination of federal and state funds is easily traceable at the school-district level, school district budgets remain opaque and expenditures are often not even tracked at the school level. The lack of transparency shields local spending patterns from scrutiny and provides cover for pervasive and indefensible inequality among schools within the very same school districts.
- **Examine contract and budgeting provisions that perpetuate inequality.** Most school districts have negotiated away their ability to use differential pay to attract and retain the best teachers in the hardest-to-staff schools. Along with salary-averaging budgeting practices, this helps concentrate the most highly paid teachers in the schools with the fewest low-income students and students of color.
- **Implement weighted student funding.** To make good on the promise of educating just about all students to a common standard, we have to identify students' needs and then allocate funds proportionate to those needs. School budgets currently are oriented to funding programs and staff allocations, without adequate differentiation based on student needs.

Pitched debates have been joined over whether it is possible for public education to educate all students to meaningful levels of academic proficiency. The truth is that we cannot know how much more is possible until we adjust our systems toward this goal. It would be a shame if the debates over what's possible in public education were resolved without addressing patent unfairness in education funding.

Appendix

Table 8: Percent Distribution of Elementary-Secondary Public School System Revenue by Source and State:, 2003-2004

State	Federal	State	Local
Alabama	11.7	55.5	32.8
Alaska	19.4	54.9	25.7
Arizona	11.8	44.9	43.3
Arkansas	12.5	72.1	15.4
California	11.4	54.5	34.1
Colorado	6.7	43.7	49.6
Connecticut	5	35.3	59.7
Delaware	8.1	64	27.9
District of Columbia	15.4	.	84.6
Florida	10.1	44.4	45.6
Georgia	8.5	44.8	46.7
Hawaii	11.1	86.6	2.4
Idaho	10.2	58.2	31.6
Illinois	8.6	35.5	56
Indiana	6.4	49.6	44
Iowa	8.3	46.2	45.5
Kansas	7.8	51.4	40.8
Kentucky	11.8	57.8	30.4
Louisiana	13.8	48	38.2
Maine	8.9	40.7	50.4
Maryland	6.4	37.7	55.9
Massachusetts	6.5	39.8	53.6
Michigan	7.9	62	30
Minnesota	6	71.4	22.6
Mississippi	14.9	54.9	30.3
Missouri	7.9	44.2	47.9
Montana	15.2	44.4	40.4
Nebraska	9	32.8	58.2
Nevada	7.2	60.4	32.4
New Hampshire	5.6	45.8	48.6
New Jersey	4.3	42.4	53.3
New Mexico	17.2	69.7	13.1
New York	7.5	43.6	48.9
North Carolina	9.7	57.9	32.5
North Dakota	15.2	38.1	46.7
Ohio	6.9	43.9	49.2
Oklahoma	12.8	51.1	36.1
Oregon	9.1	52.7	38.2
Pennsylvania	8	35.9	56.1
Rhode Island	7.2	40.5	52.3
South Carolina	10.4	46	43.6
South Dakota	15.6	34.2	50.3
Tennessee	11	43.4	45.6
Texas	10.5	36.8	52.7
Utah	10	55.3	34.7
Vermont	8	68	23.9
Virginia	7	38.7	54.3
Washington	8.5	61.8	29.7
West Virginia	11.3	60	28.7
Wisconsin	6.1	52.2	41.7
Wyoming	9.9	52.1	38
USA	**8.9**	**47.1**	**43.9**

Notes: Some data appear under local sources for Hawaii's state-operated school system for consistency with data presented for all other school systems.

Source: Public Education Finances 2004. US Census Bureau. March 2006. Table 5.

Endnotes

1 For disparities in access to teacher quality, see Peske, H., and Haycock, K. T*eaching Inequality: How Poor and Minority Students Are Shortchanged on Teacher Quality*; Education Trust, 2006. For disparities in access to challenging curriculum, see Barth, Patte, *A New Core Curriculum for All*, The Education Trust, 2003. Both reports are available under reports and publications at www.edtrust.org. The specific urls are (Peske and Haycock): http://www2.edtrust.org/NR/rdonlyres/010DBD9F-CED8-4D2B-9E0D-91B446746ED3/0/TQReportJune2006.pdf; and (Barth): http://www2.edtrust.org/NR/rdonlyres/26923A64-4266-444B-99ED-2A6D5F14061F/0/k16_winter2003.pdf. For an examination of disparity in facilities and capital improvements, see Filardo, Mary, et. al, *Growth and Disparities: A Decade of U.S. Public School Construction*, Building Educational Success Together (BEST), 2006, available at http://www.edfacilities.org/pubs/GrowthandDisparity.pdf.

2 Almost every state's constitution creates an affirmative obligation to provide public education. See discussion in, for example, Thro, William E., "The Role of Language of the State Education Clauses in School Finance Litigation," *West's Education Law Reporter*, vol. 2 no. 2,1993.

3 Non-supplantation language is common in federal education statutes; for an example, see Section 1120(A)(b)(1) of the No Child Left Behind Act, which says, "A State educational agency or local educational agency shall use Federal funds received under this part only to supplement the funds that would, in the absence of such Federal funds, be made available from non-Federal sources for the education of pupils participating in programs assisted under this part, and not to supplant such funds."

4 Local revenues include local property taxes used for school facilities, construction bonds, etc. For a more detailed explanation of the data sources and methodology used to generate the numbers used in the report, see the Technical Appendix, available as a separate document on The Education Trust web site, www.edtrust.org.

5 The poverty rate in this analysis is defined as the percent of people ages 5 to 17 living in each school district with a household income below the federal poverty line, as estimated by the U.S. Census Bureau. In 2003, the poverty line for a family of four with two children was $18,660. http://www.census.gov/hhes/poverty/threshld/thresh03.html. It should be noted that this is a more restrictive definition of poverty than eligibility for the federal free or reduced-price lunch programs, which include students with income at or below 130 percent and 185 percent of the poverty line, respectively (Federal Register, Vol. 68, No. 49, Notices). Federal Title I funds are distributed to states and local districts on the basis of poverty. Districts often then use the free and reduced-price lunch programs to distribute Title I money to schools.

6 Taylor, L.L., and Fowler, W.J., Jr. *A Comparable Wage Approach to Geographic Cost Adjustment* (NCES 2006-321), U.S. Department of Education. Washington, DC: National Center for Education Statistics, 2006.

7 Chambers, Jay et al, *What Are We Spending on Special Education Services in the United States, 1999-2000?* American Institutes for Research, Center for Special Education Finance, 2002. For more information see the Technical Appendix, available at www.edtrust.org.

8 Hawaii is excluded from inter-district funding analyses, as is the District of Columbia because each operates a single, state-wide school district.

9 This national figure is not the same as the average of each state's funding gap. Rather, it is the difference between the aggregate cost-adjusted per-student funding level in the districts among all states with the highest proportion of low-income students compared to the per-student funding in the districts with the lowest proportion of low-income students across all the states.

10 Race and poverty are often highly correlated, which is why many of the states with the largest poverty gaps also have similar gaps for minority students. However, this isn't always the case. High-poverty school districts in Washington state, for example, receive slightly more in state/local funding ($196 per-student), but high-minority districts get $87 less per-student than low-minority districts. In some states, the minority funding gap is much bigger – up to three times bigger – than the poverty funding gap.

11 This means, for example, that if a state provides districts with $10,000 per non-low-income student, equity demands that the state provide at least $14,000 per low-income student.

12 One of the criteria for states to receive Title I "Incentive Grants" under No Child Left Behind is whether states have distributed money "evenly." The definition of evenly includes a 40 percent differential for low-income children. *No Child Left Behind Act*, Section 1125(A), Education Finance Incentive Grant Program. Other studies also have used this 40 percent adjustment. See for example, *Inequalities in Public School District Revenues*, U.S. Department of Education, National Center for Education Statistics, 1998; *School Finance: Per Pupil Differences between Selected Inner City and Suburban Schools Varied by Metropolitan Area*, U.S. General Accounting Office, 2002.

13 Hunter, Molly A., Maryland Enacts Modern, Standards-Based Education Finance System: Reforms Based on "Adequacy" Cost Study, National Access Network. See http://www.schoolfunding.info/resource_center/MDbrief.php3.

14 For an analysis of Kentucky's progress, see *Gaining Ground: Hard Work and High Expectations for Kentucky's Schools*, The Prichard Committee for Academic Excellence, 1999. http://www.prichardcommittee.org/pubs/gground.pdf. For an analysis of Massachusetts's progress, see "Staying the Course," *Education Week*, January 5, 2006 at http://www.edweek.org/rc/articles/2004/10/15/qc-archive.html.

15 Together with Kevin Carey, I plan to quantify how inequities from different levels of government add up for individual schools and their students in a forthcoming study.

16 Roza, Marguerite, and Hill, Paul, *How Within-District Spending Inequities Help Some Schools to Fail*, Chapter from the 2004 Brookings Institute Papers on Education Policy (2004). http://www.crpe.org/pubs/pdf/InequitiesRozaHillchapter.pdf

17 Roza, Guin, and Davis (forthcoming). *What is the sum of the parts?*, Center on Reinventing Public Education.

18 Rose, Heather et al., *School Resources and Academic Standards in California: Lessons from the Schoolhouse*, Public Policy Institute of California, 2006. http://www.ppic.org/content/pubs/report/R_106HRR.pdf

19 John Myers, "Some more equal than others." *Catalyst-Chicago,* 2005.

20 Roza, Guin, and Davis (forthcoming).

21 For a discussion of weighted student funding, including several case studies of districts that are implementing this policy, see Fund the Child: Tackling Inequity and Antiquity in School Finance, the Fordham Foundation, June, 2006, available online at: http://www.edexcellence.net/fundthechild/FundtheChild062706.pdf.

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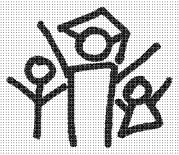
Data Analysis by Eli Pristoop

About the Education Trust



The Education Trust, Inc. was created to promote high academic achievement for all students, at all levels – pre-kindergarten through college. While we know that all schools and colleges could better serve their students, our work focuses on the schools and colleges most often left behind in plans to improve education: those serving African-American, Latino, Native American and low-income students.

The Education Trust works side-by-side with policymakers, parents, education professionals, community and business leaders—in cities and towns across the country—who are trying to transform their schools and colleges into institutions that genuinely serve all students. We also bring lessons learned in local communities back to Washington to help inform national policy debates.

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Poverty & Minority Level Determination Procedures:

1. Upon request for the poverty level data, the Division of Educator Quality & Diversity staff will request the current F&R lunch data from the Office of District Support Services.
2. The data will be sorted based on the percent F & R lunch and minority student population data.
3. The total number of schools will be divided by 4 to determine the quartiles. The lowest percentages quartile will be low poverty and low minority, the two middle quartiles will be mid poverty and minority, and the highest percentages quartile will be high poverty and minority.
4. At the low-midpoint the cutoff for low poverty and minority will be determined based on the F&R lunch percentage so that where the majority of the schools with that percentage are sorted so shall all the schools with that percentage. The same procedure shall determine the cutoff for the mid-high point. If there is no majority, the schools will be placed in the higher poverty level.
5. The poverty and minority levels will be approved by the DEQD Director and the OLSI Associate Commissioner.
6. Once approved the poverty and minority level data will be sent to the appropriate entity.

Using Teacher Compensation to Support Differentiated Teacher Roles and Responsibilities

Executive Summary

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Introduction

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Rt bg cdudknol dmsr ` qd adbnl hmf l nqd bnl l nm` bqnr r sgd bnt msqx hmqdr onmr d sn ` f qnv hmf bnmr dmr t r sg` ssd` bgdqo` x r xr sdl r mddc sn ad bg` mf dc+` bbnqchmf sn mì shmmì k` bbnt msr- Sgd bg` kkdmf d kkdr hmehmchmf ` adssdqv ` x sn bnl odmr` sd dct b` snqr +` r hst ` shmmqdekdbsdc hmsgd bnl l dmsr ne` onkbxl ` j dqhmCdmudq+r hsd ne` odqenq ` mbd,a` r dc o` x ok` m+sn *Education Week*9ÏV dÒqd hmsg` sodqmc nesh d ` esdqsgd nkc o` q` chfl g` r f nmd ` mc adenqd sgd mdv o` q` chfl g` r ehmì kkx dunkudc-Ð

Hmn` mdeenqs sn qd` bg bnmr dmr t r nmqdbnl l dmc` shmmr sn h oqnud J dmst bj xÒ sd` bgdq bnl odmr` shmmr xr sdl +` f qnt o qdoqdr dmshmf u` qhmt r dct b` shmmhmsdqdr sr adf ` ml ddshmf hm l ` mt ` qx 1/ / 6 sn chr bt r r nosh mmr ` mc ` ksdqmì shudr-

Sgnr d o` qshbho` shmf hmsgd f qnt o+v ghbg v ` r bnmudmdc ax sgd Odhbg` qc Bnl l hssdd enq@b` cdl hb Dwbdkkdmbd+hmbkt cdc qdoqdr dms` shudr nesgd9

- Dct b` shmmOqnedr r hmmì kRs` mc` qcr An` qc
- J dmst bj x @r nbhì shmmneRbgnnkRt odqhmsdmcdmsr
- J dmst bj x Bg` l adqneBnl l dqbd
- J dmst bj x Cdo` qsl dmsneDct b` shmm
- J dmst bj x Dct b` shmm@r nbhì shmm
- J dmst bj x Dct b` shmmB` ahmds
- J dmst bj x RbgnnkAn` qcr @r nbhì shmm

Sgd f qnt o v ` r ` r r hrsdc hmksr v nq ax Cq+ @msgnmx L hk` mnv r j h+` qdr d` qbgdqv hsg sgd Bnmr nqsh l enqOnkbx Qdr d` qbg hmDct b` shmm` ssgd Tmhudqhsx neV hr bnmr hm,L ` chr nm` mc sgd ` t sgnqnesghr qdonqs-

■ ■ ■

Sgd f qnt o adkdudr sg` sJ dmst bj xÒ bnl odmr` shmmr xr sdl r gnt kc ad bg` mf dc sn r t oonqs hmsh` shudr sn h oqnud sd` bgdqpt ` ksx ax qdbnf mhyhmf cheedqdmsh` sdc sd` bgdqqnkdr ` mc qdr onmr hahkshdr- Sgd f qnt oÒ chr bt r r hmmr enbt r dc nmv ` xr sn adssdqt r d sd` bgdqbnl odmr` shmm sn dmg` mbd ` mc r t oonqs sghr l nudl dms snv ` qc cheedqdmsh` shmm+ Sgd oqnonr` koqdr dmsdc gdqd hr ansg ` uhr hmmenqr t oonqshmf cheedqdmsh` sdc qnkdr ` mc qdr onmr hahkshdr ` mc ` r dsnebnmbqdsd oqnonr` kr sg` sv d adkdud v nt kc qd` khyd sgd uhr hmm+

V d qdbnf mhyd sg` ssgd r odbhebo oqnonr` kr v hkmddc sn ad v hrcdkx chr bt r r dc ax sgd l ` mx r s` j dgnkcdqr hmsgd dct b` shmmr xr sdl ` mc l ` x mddc sn ad l nchedc enqqd` r nmr nebnr s+` ahksx sn ad h okdl dmsdc+` mc ` bbdos` ahksx- Hmo` qshbt k` q+hsh r h oncqs` mssg` sdct b` snqr sgdl r dkudr ad hmunkudc hmok` mmhmf sghr oqnf q` l ` sansg sgd r s` sd ` mc chr sqhbskdudkr- Sgd r odbhebo oqnonr` kr ` qd ` l hwst qd ner s` sd,kdudk hmhsh` shudr ` mc hmmnu` shmmr sg` sv nt kc mddc et qsgdqcdudknol dms` mc h okdl dms` shmm` ssgd chr sqhbskdudk+ V ghkd v d g` ud enbt r dc nmbnl odmr` shmmhmsh` shudr+v d ` kr n qd` khyd sg` sv nq hmf bnmr chshmmr hmnt qr bgnnkr ` mc chr sqhbsr ` qd h oncqs` mshm` ssq` bshmf +qds` hmhmf + ` mc l nshu` shmf pt ` ksx sd` bgdqr- V d ` ccqdr r sghr k` sdqhmsgd oqnonr` k+

Sgd oqnonr` kenbt rdr nment qrdsr nechedqdmsh` sdc sd` bgdqqnkdr ` mc qdr onmrhahkshdr sg` ssgd f qnt o adkhdudr rgnt kc ad rt oonqsdc ax bg` mf dr hmsgd dct b` snqbnl odmr` shnmrxrsdl 9

0- Rbgnnk,kdudksd` bgdqkd` cdqr rt bg ` r mdv sd` bgdql dmsnqr+hmrsqt bshnm` kbn` bgdr+` mc rt aidbskd` c sd` bgdqr

1- Ghfig,pt ` kbsx sd` bgdqr v nqj hmf v hsg ghfig,mddc rbgnnkr ` mc rst cdmsr

2- Ghfigkx pt ` kehdc sd` bgdqr hmrgnqs` f d rt aidbsr

3- Sd` bgdqr v hsg ghfig kdudkr nehmrsqt bshnm` kdwodqshrd

Rodbhehb oqnonr` kr ` qdl ` cd sn ` ccqdrr d` bg ` qd` - @f ` hm+sgd rodbhehbr ` qd ` onhmsnecdo` qst qd enqet qsgdqchrbt rrhnmax ` kksgd rs` j dgnkcdqr hmJ dmst bj x Ò dct b` shnmrxrsdl - Sgd f qnt o qdbnf mhydr sgd mddc sn hmunkud dct b` snqr hmcdrhfimhmf sgd cds` hkr ` mc hi okdl dmshmf sgd oqnbdct qdr ne` mx bnl odmr` shnmhmmnu` shnmr ` mc sgd mddc sn a` k` mbd sgd qnkdr nesgd rs` sd ` mc knb` kchrsqhbsr -

H+n` cchshnmsn sgd rodbhehb oqnonr` kr+sgd f qnt o dmcnqrdr rhwa` rhb f t hchmf oqhmbhokdr enqsgd cdrhfimne` mx sd` bgdqo` x hmmnu` shnm+

0- **Sustainability**- Sgd rs` sd l t rsad ` akd sn l ` hms` hmhsr ehm` mbh` k` mc sdbgmhb` krt oonqsenq sd` bgdqbnl odmr` shnmhmmnu` shnmr nudqsgd knmf qt m+ Mnsnmkx cn t mrt rs` hmdc oqnf q` l r v ` rsd l nmdx ` mc deenqs+at shi okdl dmshmf +` mc sgdmchrbnmshmt hmf +hmmnu` shnmr qdct bdr sgd bqdchahkbsx neet st qd o` x bg` mf d oqnonr` kr -

1- **Input and buy-in from those affected**- Sd` bgdqr ` mc ` cl hmhrsq` snqr mddc sn ad hmunkudc hm sgd cdrhfimnehmmnu` shnmr - Mnsnmkx ` qd bg` mf dr l ` cd v hsg sgdhqhmot skhjdkx sn ad ` bbdosdc l nqd qd` chkx+sgnrd hmunkudc g` ud hi onqs` mshmrhfigsr sn needq` ant sgnv rodbhehb oqnonr` kr ` qd khjdkx sn v nqj -

2- **Balancing local flexibility and statewide uniformity**- Sgd f qnt o g` c l ` mx chrbt rrhnmr ` ant srs` sd ` mc chrsqhbsqnkdr hmcdrhfimhmf ` mc hi okdl dmshmf bnl odmr` shnmhmmnu` shnmr - V d ` f qddc sg` sv ghhd sgd rs` sd mddcr sn rdssgd a` rhb eq` l dv nqj ` mc oqnuhcd qdrnt qbdr sg` sv nt kc ad bnrskx enqchrsqhbsr sn ct okhb` sd 'd-f -+sd` bgdq` rrdrrl dmsl ncdkr+rst cdmssdrshmf (+sgdqd rgnt kc ad knb` knoshnmr sn ` bbnl okhrg sgd rs` sdÒ f n` kr enqbnl odmr` shnmhmmnu` shnm+ @kr n+ chrsqhbsr rgnt kc mnsg` ud sn chrbnmshmt d rt bbdrret kknb` khmhsh` shudr -

3- **Teacher compensation initiatives to support differentiated roles and responsibilities should not be implemented and funded at the expense of maintaining a competitive base salary for teachers.**

4- **Teacher compensation changes need to be systematically evaluated**- Mnsnmkx hr du` kt ` shnmhi onqs` mssn dmrt qd sg` ssgd ` cchshnm` kqdrnt qbdr J dmst bj x hmudrsr qdrt kshm dct b` shnm` khi oqnudl dmsr+hsv hkk` krn gdko sn hi oqnud oqnf q` l cdrhfim` mc nodq` shnm+ Du` kt ` shnm rgnt kc enbt r ansg nmsgd pt ` kbsx nehi okdl dms` shnm` mc nmv gdsgdqoqnf q` l r ` qd ` bst ` kkx ` ccqdrrhmf sgd oqnakdl r sgdx v dqd cdrhfimdc sn ` ccqdrr -

5- **Administrator compensation should also be examined and modernized**+rhmbd cheedqdmsh`shnmnesd`bgdqqnkdr`mc qdronmrhahkshdr`krn`eedbsr`cl hmhrsq`snqqnkdr-Hn`cchshnm+ o`x hmmnu`shnmr enqsd`bgdqr`qd kjidkx sn ad adssdq`bbdosdc`mc hi okdl dmsdc herbgnnk `cl hmhrsq`snqr`qd hmbkt cdc hmsgd bg`mfd-

Focus 1: School-level Teacher Leaders

Sgdqd hr f qnv hmf qdbnf mhshnm`qnt mc sgd bnt msqx sg`sdmg`mbhmf sd`bgdqr Òhmrsqt bshnm`kb`o`bhsx qdpt hqdr knmf,sdq +ina,dl adccdc+nm,rhsd oqnedrrhnm`kcdudknol dms-Sd`bgdqkd`cdqr`qd nesdm j dx ok`xdqr hmsghr sxod neoqnedrrhnm`kcdudknol dms+et mbshnmhmf hm`u`qhdsx neqnkdr rt bg`r mdv sd`bgdql dmsnqr+oddqqduhdv dqr+hmrsqt bshnm`kbn`bgdr+nm,rhsd oqnedrrhnm`kcdudknol dms è bhkhs`snqr+`mc l`sg nqrbhdmbd kd`c sd`bgdqr-Sgd t rd nesd`bgdqkd`cdqr rgnt kc`krn ad bnmrhcdqdc hmsgd Cdo`qsl dmsneDct b`shnmÒ hmsdqudmshnmok`mr enqrbgnnkr hmmddc ne `rrhrs`mbd-Sn rt oonqssgd t rd nept`kkehdc`mc l nshu`sdc sd`bgdqkd`cdqr hmJ dmst bj x rbgnnkr+ sgd rs`sd rgnt kc cdehmd`rdsnesd`bgdqkd`cdqqnkdr`mc oqnuhcd ehm`mbh`krt oonqsenqchrsqhbsr bgnnrhmf sn hi okdl dmssgdrd qnkdr-

Nt qrodbhehb oqnonr`ksn`ssq`bs`mc qds`hmghfig pt`kkhsx sd`bgdqkd`cdqr hmd`bg rbgnnkv nt kc hmbkt cd sgd enkknv hmf oqnuhrhnmr9

0-Cdehmhshnmne`rs`mc`qc rdsnesd`bgdqkd`cdqqnkdr cdudknodc ax`bnl l hssdd sg`shmbkt cdr qdoqdrdms`shudr nesgd Dct b`shnmB`ahmds+sgd Dct b`shnmOqnedrrhnm`kRs`mc`qcr An`qc+sgd J dmst bj x Cdo`qsl dmsneDct b`shnm+`mc`eedbsdc dct b`shnmbnmrshst dmbhdr-Sgd bnl l hssdd v nt kc cdudkno`ina cdrbqhoshnmenqd`bg kd`cdqqnkd`mc v nt kc v nqj v hsg sgd Rs`mc`qcr An`qc sn hcdmshex sgd pt`kkehb`shnmr enqd`bg-Enqdw`l okd+nmkx sgnrd v hsg Sd`bgdqKd`cdq dmcnqrdl dmsr l hfigsad dkhfihakd sn ad rdkdbsdc enqsd`bgdqkd`cdqqnkdr-A`rdc nmsgd pt`kkehb`shnmr cdudknodc+sgd bnl l hssdd v nt kc drs`akhrg`l ncdkrdkdbshnmoqnbdrr enqsd`bgdq kd`cdqqnkdr sn ad t rdc ax chrsqhbsr-

1-Rs`sd et mchmf enqr`k`qx`cc,nmr`mc`knmf dqv nqj xd`qenqsd`bgdqr ehkkhmf drs`akhrgdc sd`bgdqkd`cdqqnkdr-Sgd`cc,nm`l nt msr rgnt kc ad hmsgd #1+4//,#2+4//q`mfd+`mc sgdqd bnt kc ad sv n kdudkr sn qdbnf mhyd cheedqdmsqdronmrhahkshdr nqsgd bnl okdwhsx nechedqdmskd`cdq qnkdr-Kd`cdqr v nt kc`krn ad et mcdc sn v nqj`knmf dqxd`q'`l hmhi t l neehud c`xr`mc` l`whi t l ne0/c`xr+cdodmchmf nmsgd qnkd(-Sgdrd`cchshnm`kc`xr v nt kc ad t rdc sn bqd`sd oqnedrrhnm`kcdudknol dmsnoonqst mhshdr enqnsgdqsd`bgdqr+bt qqhbt kt l cdudknol dms+ oqnedrrhnm`kcdudknol dmsnesgd kd`cdqr sgdl rdkudr+`mc.nq`m`kxyhmf rst cdms`rrdrrl dms qdrt ksr+cdodmchmf nmsgd kd`cdqqnkd-

2- Chrsqbsekdwalhksx hmr dkdbshmf sgd sd` bgdqkd` cdqqnkd sg` sv nt kc ` cc sgd l nr su` kt d sn d` bg rbgnnk- Et mchmf enqsgd ` cc,nm` mc sgd dwsq` c` xr v nt kc ad oqnuhcdc hmoqnonqshmmsn sgd mt l adqnesd` bgdqr hmsgd chrsqbs'd-f -+nmd kd` cdqodq2/ sd` bgdqr (+` mc chrsqbsr bnt kc cdbhcd gnv sn ` oonqshmmkd` cdqr sn rbgnnkr ` mc et mbshmmr - Chrsqbsr v nt kc g` ud sn ` f qpd+gnv dudq+sn oqnuhcd sgd dpt hu` kdmsne` skd` rsnmd gnt qodqc` x neqpkd` rd sh d sn odqenq kd` cdq` bshuhsdr - Sgd l ` wh t l qpkd` rd sh d v nt kc ad nmd,g` kec` x+sn dmr t qp sd` bgdqkd` cdqr chc mnsknrd snt bg v hsg sgd bk` rr qnnl - Qdkd` rd sh d v nt kc ad et mcdc ax sgd chrsqbs+sn rgnv sgd chrsqbsÒ bnl l hsl dmssn t rhmf sd` bgdqkd` cdqr -

3- Sgd rs` sd v nt kc drs` akrg odqenq ` mbd bqsdqh` enqsd` bgdqkd` cdqr +nq` ooqnud chrsqbs, cdrhf mdc bqsdqh` - Chrsqbsr v nt kc ad qpdpt hqdc sn du` kt ` sd kd` cdqodqenq ` mbd ` mmt ` kkx - Kd` cdqr mnsl ddshmf odqenq ` mbd dwodbs` shmmr v nt kc knrd sgd ` cc,nm+ Nsgdqv hrd+sgd ` cc,nmv nt kc ad o` hc ` r knmf ` r ` sd` bgdqehkdc sgd qnkd-

Focus 2: High Quality Teachers Working with High Need Schools and Students

Bnmr hrsdmsv hsg bt qpdmsqdr d` dpg hcdmsekhmf sd` bgdqr ` r sgd l nr sh onqs` msr bgnnk,kdudk hmekt dmbd nmr st cdmskd` qmhmf +v d adkkdud sg` sJ dmst bj x mddcr sn cn l nqd sn dmbnt q` f d sgd l nr sr j hkkdc sd` bgdqr sn v nq` hmsgd r bgnnkr ` mc v hsg sgd r st cdmsr sg` smddc sgdl l nr shmnqcdq sn enr sdqdpt hsx ` mc bknrd f ` or hmr st cdms` bghdudl dms- Sghr hmbkt cdr knv ,` bghduhmf +ghf g, onudqsx r bgnnkr ` r v dkk` r r st cdmsr v gn g` ud sgd l nr sckeebt ksx kd` qmhmf hmghf gdq,odqenq hmf + adssdq,neer bgnnkr - Ghf g,mddc r bgnnkr g` ud r t ars` msh` koqnonqshmmr ner st cdmsr kj dkx sn ad ` sqhrj ne` b` cdl hb è hkt qd- Mnsnmkx ` qd sgdr d r bgnnkr l nr shmmddc nef nnc sd` bgdqr +at ssgd r bgnnkr ` qd l nqd nesdmodqbdhudc ` r g` uhmf l nqd cheebt ksv nq` hmf bnmchshmmr ` mc sgd r st cdmsr ` qd odqbdhudc ` r adhmf l nqd cheebt kssn sd` bg+l ` j hmf hsg` qcdqsn ` ssq` bssgd adr ssd` bgdqr -

Qdr d` dpg ` mc sgd kh hsdc dwodqdmbd v hsg oqnf q` l r enq` ssq` bshmf sd` bgdqr sn r t bg r bgnnkr ` mc r st cdmsr r t f f dr ssg` sansg ehm` mbh` khmbdmshudr ` mc hh oqnudl dmsr hmv nq` hmf ` mc kd` qmhmf bnmchshmmr ` qd mddcdc enqr t bbdr r - Sgdqdenqd+sgd f qnt o oqnonr dr sg` sJ dmst bj x cdudknno ` mc et mc ` oqnf q` l neo` x hmbdmshudr enqsd` bgdqr v hkkmf sn v nq` v hsg ghf g,mddc r st cdmsr ` mc r bgnnkr sg` shmbkt cdr ` qdpt hqdl dms sg` sr t bg r bgnnkr hh oqnud sd` bghmf ` mc kd` qmhmf bnmchshmmr ` mc bnt okd sgd hmbdmshud v hsg ` rxr sdl ` shb r sq` sdf x sn hh oqnud r st cdms` bghdudl dms-

Sgdqd l ` qd l ` mx v ` xr sn cdehmd ` ghf g,mddc r bgnnk- Sgd f qnt o qdbnl l dmcr cdehmmf ghf g mddc hmsdq r neghf g r st cdmsonudqsx ` mc knv ` b` cdl hb ` bghdudl dms- Ent qr bdm` qhnr sg` sr gnv gnv ghf g mddc l hf gsad cdehmdc ` qd cdr bqadc hmsgd @bodmchw-

Sn l ` hms` hmsgd a` k` mbd adsv ddmknb` kekdwalhksx ` mc r s` sd t mhenq hsx+sgd f qnt o oqnonr dr sg` s chrsqbsr cdrhf mr odbhehb hmbdmshudr sg` s+sn qdbdhud r s` sd et mchmf +l t r sl ddsa` rhb cdrhf mbqsdqh` rdsax sgd r s` sd- Chrsqbsr v hsg r bgnnkr l ddshmf sgd cdehmshmmneghf g mddc v nt kc ` ookx enq et mchmf +` mc sgd Cdo` qd l dmsneDct b` shmmv nt kc du` kt ` sd ` mc ` ooqnud chrsqbsoqnonr` kr a` r dc nmgnv v dkksgd oqnonr` kr l dssgd ent qbqsdqh` cdr bqadc adknv -

Sgd ekqr sbqsdqhnmv nt kc ad sgd chrsqbsÒ bnl l hsl dmssn ` r r dr r hmf ` mc hh oqnuhmf sd` bgdq v nq` hmf bnmchshmmr - Sgd oqdonmcdq` mbd neqdr d` dpg r t f f dr sr sg` sehm` mbh` khmbdmshudr ` knmd v hkk mns` ssq` bs ` mc qds` hmdmnt f g ghf g pt ` kksx sd` bgdqr sn r t ars` msh` kkx hh oqnud ` bghdudl dms hmghf g, mddc r bgnnkr - Sgt r ` r t bbdr r et koqnf q` l l t r sdmr t qp sg` sonnqv nq` hmf bnmchshmmr ` qd mns neer dsshmf sgd ` ssq` bshmmnesgd o` x hmbdmshud - V nq` hmf bnmchshmmr sg` s` qd hh onqs` mssn sd` bgdqr hmbkt cd oqhmbhb` kkd` cdqr ghb+` cdpt ` bx nel ` sdqh` kr ` mc qdr nt qbdr +ok` mmhmf sh d+mmm,sd` bghmf

ct shdr+`mc hmekt dmbd nudqr bgnnkonkhbhdr- Rbgnnkr v nt kc g`ud sn bnl l hssn `m`rrdrrl dmsne v nqj hmf bnmchshnmr `mc `ok`msn h oqnud cdekbhdmbhdr-

Sgd rdbnmc bqsdqhnmv nt kc ad v hkkmf mdrr sn bnt okd sgd o`x hmbdmshud v hsg nsgdqrsq`sdf hdr sn h oqnud odqenq `mbd- kshr h onqs`mssn qdbnf mhyd sg`s`ssq`bshmf pt`kksx sd`bgdqr `knmd v hkkmns st qm`qnt mc rsqt f f kkmf rbgnnkr- Pt`kksx kd`cdqr+`cdpt`sd bt qqhbt kt l l `sdqh`kr `mc qdrnt qbdr+ `mc `ooqnoqh`sd rs`eecdudknol dms`qd`krn mddcdc- Chrsqhbsr v nt kc `krn g`ud sn rgnv gnv sgd hmbdmshud eksr hmsn `bngdqdmsoqnf q`l neh oqnudl dmsenqsgd ghfig,mddc rbgnnkr- V gdqd `ooqnoqh`sd+chrsqhbsr v nt kc g`ud sn ad v hkkmf sn t mcdqs`j d `rbgnk`rshb`t chs`mc `bsnmsgd qdrt ksr-

Sgd sghqc bqsdqhnmv nt kc ad pt`kksx neoqnf q`l cdrhfim- Sgd ghrsnqx nesd`bgdqbnl odmr`shnm hmshh shudr rt f f drsr sg`s`onnqkx cdrhfimdc oqnf q`l hr l nqd khj dkx sn dmf dmcdqsd`bgdqr Ò rj doshbhrl sg`msn h oqnud dct b`shnm`kdpt hsx- Chrsqhbsr v nt kc g`ud sn rgnv sg`ssgdhqoqnonrdc hmbdmshud oqnf q`l hmbkt cdc9

- rodbhekb+naidbshud bqsdqh`cdekmhmf v ghbg rbgnnkr v nt kc ad dkhfhakd- Sgdrd bnt kc hmbkt cd sgd r`l d è bsnqr chrbt rrdc `anud enqrs`sd et mchmf-

- rodbhekb bqsdqh`enqcdsdq hmhmf v ghbg sd`bgdqr v nt kc ad dkhfhakd enqsgd hmbdmshudr- Sgdrd rgnt kc hmbkt cd rdkdbshnmbqsdqh`sg`sv nt kc `rrt qd sg`sghfig,pt`kksx sd`bgdqr `qd adhmf `ssq`bsdc `mc qds`hmdc-

- l d`mhmf et khmbdmshud `l nt msr- @mx ehm`mbh`khmbdmshudr oqnonrdc rgnt kc ad k`qf d dmnt f g sn oqnuhcd `skd`rs` 0/ odqbdmshmbqd`rd hm` sd`bgdqÒr`k`qx-

- hmot seqnl sgnrd `eedbsdc hmsgd cdrhfimoqnbdrr-

- oqnedrrhnm`kcdudknol dms`h dc `sh oqnuhmf hmrsqt bshnm+

Sgd ent qsg bqsdqhnmv nt kc ad sgd chrsqhbsr Òv hkkmf mdrr sn du`kt `sd sgd rt bbdrr nesgd hmbdmshud oqnf q`l - V ghkd rdudq`kchrsqhbsr `mc rs`sdr g`ud adf t moqnf q`l r nehmbdmshudr enqsd`bghmf hm ghfig,mddc rbgnnkr+sgdqd hr bt qqdmskx kksskd duhcdmbd nesgdhqrt bbdrr- @rxrsdl `shb du`kt `shnmne sgd oqnf q`l hr drrdmsh`ksn dmrt qd sg`ssgd oqnf q`l hr g`uhmf sgd hmsdmcdc deedbs- Chrsqhbsr l t rs sgdqdenqd bnl l hssn v nqj hmf v hsg qdrd`qbgdqr sn `rrdrr oqnf q`l h o`bsl d`rt qdr+hmbkt chmf sd`bgdqqd`bshnmr+bg`mf dr hmu`b`mbx `mc st qmnudqq`sdr+h oqnudl dmsr hmhmchb`snqr ne sd`bgdqpt`kksx+`mc h o`bsr nmrst cdms`bghdudl dms-

Sgd `anud bqsdqh`v nt kc ad et qsgdqrodbhekdc ax sgd Cdo`qsl dmsneDct b`shnm+v ghbg v nt kc `krn rdst o `oqnbdrr enqchrsqhbsr sn qdpt drset mchmf t mcdqsghr oqnf q`l - Chrsqhbsr v nt kc cdudkno oqnonr`kr hcdmshexhmf sgd ghfig mddc rbgnnkr enqv ghbg hmbdmshudr v nt kc ad oqnuhcdc `mc rt al hs et mchmf qdpt drsr-

B`qd l t rsad s`j dmhmcdrhfimhmf sghr oqnf q`l enq`ssq`bshmf sgd l nrsrj hkdc sd`bgdqr sn sgd ghfigdrsmddc rst cdmsr `mc rbgnnkr mnssn rsqt bst qd `chrhmbdmshud enqghfig odqenq `mbd- @mx ehm`mbh`khmbdmshudr `mc deenqsr sn h oqnud v nqj hmf `mc kd`qmhmf bnmchshnmr rgnt kc bnmshmt d v gdmsgdrd rbgnnkr `mc rst cdmsr qd`bg sgdhqkd`qmhmf f n`kr- @s`l hmh t l +hmbdmshudr rgnt kc bnmshmt d enq`mt l adqnexd`qr `esdqf n`kr `qd qd`bgdc+ansg sn oqnuhcd bnmshmt hmf h odst r enq h oqnudl dms`mc sn `rrt qd rs`ahksx neh oqnudl dms-

Focus 3: Highly Qualified Teachers in Subject Shortage Areas

Kbjd l nr s r s` sd r+J dmst bj x g` r dwodqdmbdc odqmchb r gnqs` f dr nept ` kdkdc sd` bgdqr hmr nl d
` qd` r+hmbkt chmf r bhdmbd+sdbgmnknf x+l ` sgdl ` shbr+` mc r odbh` kdct b` shmm+@bsgnt f g J dmst bj x
g` r cnmd qdk` shudkx v dkkhmdmr t qmf sg` sl nr s r t aidbs r ` qd s` t f gs ax hgh f gkx pt ` kdkdc Cbsd` bgdqr
'` r qdpt hqdc ax sgd Edcdq` kMn Bghkc KdesAdghmc ` bs(+hshr kbjdkx sg` s c hr s qhbs r g` ud ` chdkbt kssh d
ehmchmf pt ` kdkdc sd` bgdqr hmr nl d r t aidbs` qd` r ` mc ` qd enqbdc sn qdkx nmsd` bgdqr v hsg kdr r
r t aidbs,l ` ssdqdwodqhrd sg` mhr cdr hq` akd- Sn h oqnud sgd r gnqs,sdq r t ookx nesd` bgdqr sn sgd r d
r t aidbs` qd` r+hmbdmshudr r gnt kc ad t r dc sn dmbnt q` f d f nnc sd` bgdqr v gn ` qd mns bdqshdkdc hm
sgd r gnqs` f d ` qd` r sn adbnl d bdqshdkdc ` mc sn h oqnud sgd bnmsdmsj mnv kdcf d ` mc r t aidbs,
r odbhdkb odc` f nf x nesgnr d v gnr d r j hkr mddc t oc` shmf -

Hmsgd r gnqs sdq +sgd r s` sd r gnt kc bnmbdmsq` sd nmoqnuhchmf hmbdmshudr sg` s v nt kc ansg gdko
hmbqd` r d qdsdmshmm` mc h oqnud sgd r t ookx nesd` bgdqr hmr gnqs` f d ` qd` r- Sghr v hkkdkqr sqdpt hqd
sg` s sgd Cdo` qsl dmsneDct b` shmmhcdmshex r gnqs` f d ` qd` r- Nmbd ` kdrs ner gnqs` f d ` qd` r hr
hcdmshdkdc+sv n j hmcr nehmbdmshudr r gnt kc ad et mcdc-

0- Qdh at qr dl dmsenqsgd bnr s nebnt qr dv nq nqnsgdqsq` hmhmf mddcdc sn ` bghdud bdqshdkb` shmmhm
` r gnqs` f d ` qd` -

1- @r ` k` qx r t ookdl dmsenqsd` bgdqr v gn ` qd et kkx r s` sd bdqshdkdc ` mc v gn ` qd ` r r hf mdc sn sd` bg
hm` r gnqs` f d ` qd` +bnmchshmm` knmsgdhqo` qshbho` shmmhm` ooqnudc r t l l dqoqnedr r hmm` k
cdudknol dmsoqnf q` l r- Sgdr d oqnf q` l r v nt kc ad ` h dc ` sh oqnuhmf bnmsdmsj mnv kdcf d ` mc
odc` f nf hb` kbnmsdmsj mnv kdcf d- Sd` bgdqr v nt kc ` kr n ad o` hc sgdhqc` hkx q` sd enqsgd c` xr ne
o` qshbho` shmm+ Sd` bgdqr v gn o` qshbho` sd nmd r t l l dqv nt kc qdbdhud #0+¥ / / sgd mdwsr bgnnkxd` q+
Sd` bgdqr v gn o` qshbho` sd hmsv n bnmr dbt shud r t l l dqoqnf q` l r v nt kc qdbdhud #1+¥ / / enqsgd
r bgnnkxd` q` esdqo` qshbho` shmf hmsgd r dbnmc oqnf q` l - Sd` bgdqr v nt kc qdbdhud sgd #1+¥ / /
` l nt ms` r knmf ` r sgdx o` qshbho` sd hmd` bg bnmr dbt shud xd` q` mc ` r knmf ` r sgdx ` qd ` r r hf mdc
sn sd` bg hm` mhcdmshdkdc r gnqs` f d ` qd` - 'Sn qdbdhud sgd et kk#1+¥ / / +sd` bgdqr v nt kc g` ud g` c sn
g` ud o` qshbho` sdc hmsgd oqnedr r hmm` kcdudknol dmsoqnf q` l ct qmf ansg nesgd odmqsv n xd` q-(

Hmsgd knmf sdq +dmk` qf hmf sgd r t ookx nept ` kdkdc sd` bgdqr hmr nl d ` qd` r+r t bg ` r r bhdmbd+
sdbgmnknf x+` mc l ` sg+v hkkqdpt hqd l ` inqbg` mf dr hmbnl odmr ` shmm+v nq j hmf bnmchshmm r+` mc
sd` bgdqoqdo` q` shmm+ Rhmbd hmbdmshudr ` knmd v hkkmnsadmf odnokd v hsg r bhdmbd+sdbgmnknf x+` mc
l ` sg j mnv kdcf d hmsn sgd sd` bghmf enqbd+sgd r s` sd r gnt kc ` kr n dw` l hmd a` qdqdqr sn dmsqx ne
pt ` kdkdc bnkdf d r st cdmsr hmsn sd` bghmf ` mc cdudkno sq` mr hshmmoqnf q` l r sn dmbnt q` f d odnokd
v hsg sgd r d r j hkr sn l nud hmsn sd` bghmf -

Focus 4: Teachers with High Levels of Instructional Expertise

Sn qdr onmc sn qhr hmf mi shmmi k` mc r s` sd dwodbs` shmmr enqr st cdms` bghdudl dms+sd` bgdqr mddc sn bnmshmt d sn cdudkno sgdhqhmr sqt bshmmi krj hkr- Sgd oqnedr r hmmi kcdudknol dms sg` shr kjd dkx sn g` ud sgd l nr shi o` bs nmhmr sqt bshmmi kdwodqshr d hr bngdqdms+r t r s` hmdc+kmj dc v hsg sd` bgdqr Òc` hkx oq` bshbd+` mc fnbt r dc nmbnqd oqnakdl r nesd` bghmf ` mc kd` qmhmf . T mennqst mi sdkx+oqnedr r hmmi k cdudknol dms hr nesdmt mennbt r dc ` mc+t mcdqsgd bt qqdms r ` k` qx r bgdct kd+sd` bgdqr ` qd qdv ` qcdc enq` bbt l t k` shmf t mqdk` sdc ` mc l ` qf hmi kkx qdkdu` ms bnkkdf d bqdchsr q` sgdqsg` mennqat hkchmf ` r nkkc ancx nedwodqshr d- V ghkd sgd bt qqdms r ` k` qx r bgdct kd ` ssdl osr sn oqnuhcd hmbdmshudr enqr j hkk cdudknol dms hmsgd enq nea` r d o` x hmbqd` r dr 'k` md bg` mf dr ( enq` ss` hmhmf cdf qdr ` mc bnkkdf d bqdchsr +sgdqd hr mn qdr d` qbg sg` s r t oonqsr sgd mnshmmsg` s r hi okx ohkmf t o l nqd cdf qdr ` mc bqdchsr hi oqnudr hmr sqt bshmmi kdwodqshr d nqr st cdms` bghdudl dms- Sn dmbnt q` f d sgd cdudknol dms nehmr sqt bshmmi kdwodqshr d ` mc r t oonqs sgd cdudknol dms nesd` bgdqkd` cdqr +v d oqnonr d ekqr s` qdr sqt bst qhmf nesgd Ïk` mdr Ðnesgd sq` chshmmi kr ` k` qx r bgdct kd+` mc+r dbnmc+sn dmbnt q` f d ` ksdqmi shud v ` xr sn at hkc ` mc cdl nmr sq` sd hmr sqt bshmmi kdwodqshr d 'enqdw` l okd+t r hmf sgd M` shmmi kAn` qc enqOqnedr r hmmi kSd` bghmf Rs` mc` qcr S` j d Nmd oqnbdr r (- Sgdr d oqnonr ` kc ` qd ` hi dc mns nmkx ` shmbqd` r hmf sgd hmbdmshud enq` kksd` bgdqr sn cdudkno dwodqshr d+at s` kcn sn qdbnf mhyd sgd kjd dkqgnnc sg` ssd` bgdqr v gn g` ud ` cchshmmi kkdudkr nehmr sqt bshmmi kdwodqshr d v hkk adbnl d hmenq ` koq` bshbd kd` cdqr hmsgdhqnv mr bgnnkr +r dquhmf ` r qdr nt qbdr enqnsgdqr hmsgdhq r t aidbs` qd` nqf q` cd kdudkv gn v ` mssn hi oqnud sgdhqnv mdwodqshr d-

Qduhmr hmf Bqsdqhi enqK` md L nudl dms

- Sgd t r d net mhudqr hsx bqdchsr enqk` md l nudl dms v nt kc ad kh hsdc sn sgnr d qdkdu` mssn ` sd` bgdqr Òbt qqdms` qd` 'r (nedl oknxl dms-

- At hkchmf nmsgd l ncdknesgd DORAÒ Bnmshmt hmf Dct b` shmmNoshmm'BDN ( sn hmbqd` r d sgd mt l adqnenoshmmr enqghf g pt ` kksx+bngdqdms oqnf q` l r neoqnedr r hmmi kcdudknol dms sg` s v nt kc bnt mssnv ` qc l nudl dms adsv ddmk` mdr - Enqdw` l okd+` cu` mbdc BDN,kjd noshmmr r gnt kc ad cdudknodc ` qnt mc r odbhkb anchdr nedwodqshr d+r t bg ` r sgd bnmsdms odc` f nf x qdkdu` mssn ` r odbhkb r t aidbs+bnmsdms j mnv kdcf d hmr bhdmbd nqsdbgmnknf x+nqmdv sd` bgdql dmsnqmf - ÏQdeqdr gdqÐudqr hmmr nesgdr d noshmmr bnt kc ` kcn ad cdudknodc sn oqnuhcd enbt r dc oqnf q` l r enqsd` bgdqr sn t r d sn gdko l ` hms` hmdwodqshr d ` mc j ddo t o v hsg bt qqdms cdudknol dms r hmbnmsdms` mc odc` f nf x-

- Chr sqhbsr v nt kc ad qdpt hqdc sn hi okdl dms` ent q` k` md r sqt bst qd sn qdbnf mhyd hmbqd` r hmf kdudkr nedwodqshr d r odbhkb` kkx qdk` sdc sn hmr sqt bshmm+ Sgd k` mdr adxnmc sgd a` bgdknqÒ kdudkv nt kc ad a` r dc nmbnl okdshmf bngdqdms oqnf q` l r neoqnedr r hmmi kcdudknol dms q` sgdqsg` mr hi okx sgd mt l adqnebqdchsr - Bnl okdshmmnesgdr d oqnf q` l r v nt kc qdok` bd sgd ` bbt l t k` shmmnet mqdk` sdc bnkkdf d bqdchsr ` r sgd a` r hr enql nudl dms adsv ddmk` mdr - Sgt r k` mdr v nt kc mn knmf dqad cdehmdc hmsdq r ne+enqdw` l okd+` a` bgdknqÒ cdf qdd okt r 04 bqdchsr nq` l ` r sdqÒ cdf qdd okt r 2/ bqdchsr - Q` sgdq+sgdx v nt kc ad cdehmdc ` r ` a` bgdknqÒ okt r bnl okdshmmner odbhkb oqnf q` l r ` mc ` l ` r sdqÒ okt r bnl okdshmmne r odbhkb oqnf q` l r ` ooqnudc ax sgd DORA-

- Chr sqhbsr v nt kc oqnuhcd+` mc sgd r s` sd et mc+` r t ar s` mshi ko` x hmbqd` r d enqd` bg nesgd ent qa` r hb k` md bg` mf dr +hmsgd q` mf d ne6,0/ odqbdms nq#3+¥ / / ,#4+¥ / / -

- Sgd q` mj ` mc o` x kdudkr v nt kc mns bg` mf d enqbt qqdms sd` bgdqr +v gnr d r s` st r v nt kc ad Ïf q` mcè sgdqdcÐhmt mcdqsghr r xr sdl -

Sgd f n` knesgdr d bg` mf dr hr sn hl oqnud sgd deedbshudmdr r nesgd bt qpdmsr` k` qx r sqt bst qd hm dmbnt q` f hmf sd` bgdqr sn bgnnr d oqnedr r hmm` kcdudknol dms` bshuhsdr sg` s` bst ` kkx cdudkno qdkdu` mso qnedr r hmm` kdwodqhr d-

Other Methods of Building and Demonstrating Expertise

Adb` t r d sd` bgdqr at hkc dwodqhr d hmnsgdqv ` xr adr hcdr enq ` koqnedr r hmm` kcdudknol dms+hs l ` j dr r dmr d sn qdv ` qc sgd nt sbnl dr nesgd oqnbdr r ` r rgnv max sgd pt ` kksx nehmr sqt bshmmsgd sd` bgdqoqnuhcdr- Nmd v ` x sn cn sghr v nt kc ad sn qdv ` qc sd` bgdqr enqt mcdqf nhmf odqmcHb odqenq ` mbd ` r r dr r l dms r- Sgdr d ` r r dr r l dms r sxohb` kkx t r d ` bnl ahm` shmmnebk` r r qnnl uhcdnr+kkud nar dqu` shmm r+` mc ` qhe` bsr sg` scnbt l dms pt ` kksx sd` bghmf ` r cdehmdc ax sgd r s` sd nq chr sqhbs` r hsnbbt qr hmsgd sd` bgdqÒ ` bst ` kbk` r r qnnl -

Sgd f qnt o bnmr hcdqdc cdudknohmf ` r s` sdv hcd odqenq ` mbd ` r r dr r l dms r xr sdl enq J dmst bj x sd` bgdqr at sbnmbkt cdc sg` ssghr v nt kc qdpt hqd ` k` qf d bnl l hsl dms nesh d ` mc qdr nt qbdr- hmr sd` c+sgd f qnt o cdbhcdc sn qdbnl l dmc sg` ssgd S` j d Nmd oqnbdr r nesgd M` shmm` kAn` qc enq Oqnedr r hmm` kSd` bghmf Rs` mc` qcr ad t r dc ` r sgd a` r hr enq ` r r dr r hmf ` mc qdv ` qchmf hmr sqt bshmm` kdwodqhr d- Sgd S` j d Nmd oqnbdr r hmunkudr sd` bgdqr oqdo` qhmf ` mc r t al hsshmf ` uhcdn onqenkm hkt r sq` shmf sgdhqodqenq ` mbd- Sd` bgdqr r t al hs onqenkmr qdkdu` mss n nmd nesgd an` qcÒ 13 ` qd` r nebdqhebb` shmm+ Sgd ` cu` ms` f d net r hmf sghr oqnbdr r hr sg` ssgd M` shmm` kAn` qc g` r ` kqd` cx cdudknodc sgd l dsgncr ` mc hmeq` r sqt bst qd sn ` cl hmhr sdqsgd ` r r dr r l dms ` mc r bnqd sgd duhcdmbd nesd` bgdqbk` r r qnnl odqenq ` mbd- G` uhmf sgd r s` sd o` x sgd ` ookkb` shmmbnr sn q mdf nsh` shmf ` r odbh` k` ookkb` shmmq` sd v hsg sgd M` shmm` kAn` qc r gnt kc ` kcn ad ot qr t dc-

Nt qoqnonr` ksn t r d S` j d Nmd ` r sgd a` r hr enqqdv ` qchmf hmr sqt bshmm` kdwodqhr d v nt kc9

` ( qdkx nmsd` bgdqr unkt ms` qhkx ` ookxhmf sn sgd M` shmm` kAn` qc enq ` r r dr r l dms ` mc oqdo` qhmf sgd ` ooqnodh` sd onqenkm: a(oqnuhcd ` r` k` qx ` cc,nmne3,5 odqpdmsenqent qxd` qr ` esdqsgd ` r r dr r l dms sn sd` bgdqr v gnr d onqenkm qdbdhudc ` r bnqd ne2 nq3 eqnl sgd an` qc: b(` kknv nmkx sd` bgdqr v hsg sv n nql nqd xd` qr ned wodqdmbd ` mc v gn ` qd mmsnm` bnqpdbshud ` bshmmok` msn ad dkfi hakd enq sgd r` k` qx ` cc,nm+ '@ksgnt f g sgd M` shmm` kAn` qc ` kknv r sd` bgdqr v hsg kdr r dwodqdmbd sn o` qhbho` sd hm S` j d Nmd+v d qdbnl l dmc sg` sekqr sxd` qsd` bgdqr mmsad dmbnt q` f dc sn cn r n hm nqcdqsg` ssgdx l ` x enbt r sgdhq` ssdmshmmnmdwhr shmf hmct bshmm` bshuhsdr-(

@mmsgdq` cu` ms` f d sn t r hmf sgd S` j d Nmd oqnf q` l hr sg` ssd` bgdqr b` mt r d sgdhqr bnqdr eqnl sg` s` r r dr r l dms enqk` sdq` r r dr r l dms enqe kkM` shmm` kAn` qc bdqhebb` shmm+ Sghr oqnonr` ksgt r dmbnt q` f dr sd` bgdqr sn o` qhbho` sd hm sgd M` shmm` kAn` qc bdqhebb` shmm oqnbdr r-

Sgd f qnt o ` kcn chr bt r r dc t r hmf u` kt d,` ccdc l d` r t qdr nesgd ` bghdudl dms nehmr chuhct ` k sd` bgdqr Ors t cdms r ` r ` a` r hr enq cheedqdmsh` shmf sd` bgdqo` x- V d bnmbkt cdc sg` ssgd bt qpdms kdudk neu` kt d,` ccdc sdbgmmknf x hr mmsxdsr t eebhdmskx cdudknodc sn ` kknv qdkh` akd cheedqdmsh` shmm enq sgd l ` inqhsx nesd` bgdqr-

V ghkd bt qpdms` ooqn` bgdr b` mcheedqdmsh` sd sgd udqx adr s eqnl sgd onnqdr s odqenq dqr+qdkh` akd chr shmbshmm r ` l nmf sd` bgdqr hmadsv ddm` qd g` qc sn l ` j d- Et qsgdq+J dmst bj xÒ ` r r dr r l dms r xr sdl v nt kc g` ud sn ad l nchekdc ` mc dwo` mcdc sn l nqd r t aidbsr ` mc f q` cdr hmnqcdq sn t r d u` kt d,` ccdc sn cheedqdmsh` sd o` x enq l nqd sg` m` l hmmqhsx nesd` bgdqr+r hmbd l ` mx sd` bg hm f q` cdr ` mc r t aidbsr sg` s` qd mmssdr sdc- Gnv dudq+v d cn adkkdud sg` su` kt d,` ccdc l dsgncr ` qd

v nqsgx nebnmshmt dc r st cx `mc cdudknol dms+`mc v d qdbnl l dmc sg`ssgd Cdo`qsl dms ne Dct b`shmm+sgd Dct b`shmm Oqnedr r hmm`kRs`mc`qcr An`qc+`mc t mhudq hsx qdr d`qbgdq bnnodq`sd hmbnmshmt dc r st cx negnv u`kt d,`ccdc bnt kc ad t r dc hmJ dmst bj x-

Additional Issues

Hhnnt qcdkadq`shmm `ant sbnl odmr`shmmbg`mf dr sg`sv nt kc r t oonqs cheedqdmsh`sdc sd`bgdqqnkdr `mc qdr onmr hahkshdr +v d ent mc sg`ssgqdd aqn`cdqhr r t dr `kcn r t qè bdc9sd`bgdqv nqj hmf bnmchshmm r +` r s`sdv hcd sd`bgdqdu`kt `shmml ncdk+`mc sgd nudq`kk`ssq`bshudmdr r nesd`bghmf `r ` b`qddqenqJ dmst bj xÒ xnt mf odnokd- A`r dc nmnt qchr bt r r hmm r +v d `qdl `j hmf qdbnl l dmc`shmm r hmsgdr d `qd`r +v ghbg `kcn v hkkr t oonqs sgd oqdbdchmf qdbnl l dmc`shmm r -

Teacher Working Conditions

Sgd f qnt o qdbnf mhydr sg`sv nqj hmf bnmchshmm r +`r v dkk`r o`x+`qd hi onqs`mshmdmbnt q`f hmf sd`bgdqkd`cdq+`ssq`bshmf ghfg pt `ksx sd`bgdq sn ghfg,mddc r bgnnk+`mc r t oonqshmf sgd cdudknol dms nehmr sqt bshmm`kdwodqshr d- Rdudq`kqdbdms r st chdr r t f f dr ssg`sv nqj hmf bnmchshmm r `qd hi onqs`mssn `ssq`bshmf `mc qds`hmhmf mdv `mc dwodqdmbdc sd`bgdq- @ nmf sgd v nqj hmf bnmchshmm r hcdmshkdc ax qdr d`qbgdq `r hi onqs`mshmqds`hmhmf mdv sd`bgdq `qd oqmbho`kr t oonqs+ r st cdms chr bhokmd+`mc sd`bgdq hmekt dmbd nmr bgnnk,kdudkcdbhr hmml `j hmf - Sgd f qnt o qdbnl l dmcr sg`s` mt l adqne`bshmm r ad s`j dms n `ccqdr r sd`bgdqv nqj hmf bnmchshmm r -

Ehqr s+sgd r s`sd r gnt kc dr s`akmrg `l dbg`mhrl sg`shmbkt cdr dct b`snqhmot ssn dw`l hmd sd`bgdq v nqj hmf bnmchshmm r - @bnmshmt hmf r t qudx nesd`bgdq Ò odqbdoshmm r nev nqj hmf bnmchshmm r bnt kc ad r t ookdl dmsdc v hsg odqmchb`kkx adqmf hmf snf dsgdqr nl d nesgd r s`sdÒ adr ssd`bgdq 'd-f -+ M`shmm`kAn`qc Bdqshkdc sd`bgdq+r s`sd `mc chr sqhbs sd`bgdq nesgd xd`q+sd`bgdq qdbdhuhmf sgd hmr sqt bshmm`kodqenq `mbd hmbdmshudr cdr bqhadc `anud(sn gdko cdehmd v g`sv nqj hmf bnmchshmm r `qd l nr shi onqs`mssn qds`hmsgd adr ssd`bgdq - Sgd r s`sd bnt kc `kcn qdf t k qkx sq`bj sd`bgdq st qmnudq+dr odbh`kkx nesd`bgdq hmsgdhqd`qkx xd`q+ax chr sqhbs`mc r bgnnk- Sgdr d r sdor bnt kc ad t r dc sn hcdmshex r bgnnk nqchr sqhbsr sg`s`qd odqbdhudc sn g`ud f nnc v nqj hmf bnmchshmm r `mc v ghbg `qd `ssq`bshmf `mc qds`hmhmf sd`bgdq - Sgd qd`r nmr sgdr d r bgnnk nqchr sqhbsr r t bbddc bnt kc ad r st chdc `mc `l ncdkcdudknodc enqnsgdqchr sqhbsr -

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Attracting and Retaining More of the "Best and Brightest" of Kentucky's Young People to Teaching

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How a Teach For America Presence Could Enhance Kentucky's Race to the Top Application

Executive Summary

We see an exciting opportunity for collaboration between Teach For America and the State of Kentucky as part of Kentucky's Race To The Top (RTTT) application. We believe investing in Teach For America better positions Kentucky as a RTTT candidate because of our proven track record of achieving results and the alignment between our organization's work and the RTTT competition's goals. Not only does expanding Teach For America help Kentucky develop the human capital — highly effective teachers and school leaders — necessary to provide all students with an excellent education, which is one of the RTTT program's four priorities, but the way we utilize rapid turn-around assessments and data to drive classroom instruction and the role that our teachers and alumni play in helping to turn around failing schools helps Kentucky to address two additional key RTTT criteria.

Therefore, we respectfully request $3.2 million drawn down over the state fiscal years 2011, 2012, 2013 and 2014 and a commitment of $1.25 million for each year thereafter. The funds will go towards impacting nearly 20,000 low-income students in the first four years and over 7,500 low-income students annually thereafter by:

- Opening a site in Eastern KY with 30 incoming corps members per year beginning in the academic year 2011-2012
- Opening a site in Louisville with 30 incoming corps members per year beginning in the academic year 2013-2014

We also request amendments to the alternative certification route Option 7 that will allow Teach For America to bring top-notch candidates to Kentucky. These changes include:

- Allowing a passing score on the state certification exam in the subject area to be taught to serve as a sufficient bar for demonstrating content knowledge (not requiring an academic major as an additional measure).
- Exempting candidates who have completed an Institute prior to teaching from the requirement to take and score a minimum on the Graduate Record Exam (GRE)
- Clarifying, or amending in statute, that an approved institute program be based on the total hours completed not the number of days or weeks

What is Teach For America?

Teach For America recruits outstanding recent college graduates from all backgrounds and career interests to commit to teach for two years in urban and rural public schools. We provide the training and ongoing support necessary to ensure their success as teachers in low-income communities. Our teachers, also called corps members, go above and beyond traditional expectations to lead their students to significant academic achievement, despite the challenges of poverty and the limited capacity of the school system. During their two-year commitments, Teach For America corps members see firsthand that educational inequity is solvable and gain a grounded understanding of how to solve it. Beyond these two years, Teach For America equips alumni to bring strong leadership to all levels of the school system and every professional sector, addressing the extra challenges facing children growing

up in low-income communities, building the capacity of schools and districts, and changing the prevailing ideology through their examples and advocacy.

This past year, more than 35,000 people applied for approximately 4,100 spots in our 2009 corps. Of those accepted, the average GPA was 3.6; the average SAT score was 1344 and 89% held significant leadership positions on their college campuses. In addition, as a measure of socio-economic diversity, 25% of those accepted were Pell Grant recipients. At present, some 7,300 corps members are working to close the achievement gap in 35 sites across the country, impacting more than 600,000 students. We have over 17,000 alumni, two-thirds of whom remain employed or studying in the field of education, including more than 400 school leaders, approximately a dozen district superintendents, and the founders of several award winning charter school networks.

Why Partner with Teach For America?
A Teach For America partnership will help Kentucky address several important criteria in the RTTT award by showing the state's commitment to effective teaching, school turnarounds, and other criteria.

Selection Criteria	Points Available	Description of Selection Criteria	Teach For America Connection
Improving teacher and principal effectiveness based on performance	58	States are rewarded for measuring student growth, evaluating teacher effectiveness and using that evaluation to drive key decisions.	The most rigorous research shows that Teach For America corps members are as or more effective than other teachers.[1]
Turning around the lowest achieving schools	40	States are rewarded for implementing one of four turnaround models.	Teach For America has played a key role in turnaround efforts across the country.
Ensuring equitable distribution of effective teachers and principals	25 total 15 for high-poverty schools	States are rewarded for ensuring students in high-poverty or high-minority schools have equal access to effective teachers.	Teach For America operates in many of the neediest communities in the United States Approximately 80 percent of the students we serve receive free and reduced price lunch.
Providing high-quality pathways for aspiring teachers and principals	21	States are rewarded for having alternative pathways to certification that are selective and are operated by organizations other than institutions of higher education.	Teach For America is a model example of the type of pathway described in the application.

[1] http://teachforamerica.org/about/research.htm

Providing effective support to teachers and principals	20	States are rewarded for implementing data-informed professional development and continuously improving its effectiveness.	Teach For America's professional development and induction framework could provide a statewide model.[2]
Using data to improve instruction	18	States are rewarded for designing and implementing systems that provide teachers with data to help improve their instruction.	Teach For America's teacher training and support system is rooted in student achievement data and designed to improve student academic performance.
Emphasis on science, technology, engineering, and mathematics (STEM)	15	The application includes a competitive priority (extra points) for states with a high-quality plan to offer a rigorous course of study in STEM fields and prepare more students for advanced study or careers in these fields.	Effective teachers are essential to any effort to improve our competitiveness. An Urban Institute study showed very strong math and science results for Teach For America's high school teachers. More than 25 percent of the Teach For America corps this year consists of math and science teachers.
Improving the effectiveness of teacher and principal preparation programs	14	States are rewarded for expanding teacher preparation programs that are successful at producing effective teachers and principals.	Research shows that Teach For America corps members have a more positive effect on student performance than traditionally-trained teachers.[3] Teach For America is also a major provider of school leaders.

[2] http://www.teachforamerica.org/assets/documents/091609_Education.Week_Growth.Plan.pdf
[3] http://www.nytimes.com/2008/12/12/opinion/12fri2.html?_r=2&ref=opinion

Funding Proposal
Given our estimated size and the relative capacity for local fundraising in Kentucky, state funding will be necessary for us to launch and then sustain our partnership.

Kentucky Expansion	2011	2012	2013	2014	Total
Total Incoming Corps	30	60	60	60	
Teaching Corps (1st & 2nd Year)*	30	60	90	120	180
Students Impacted**	1,920	3,840	5,760	7,680	19,200
Total Budget	**$895,000**	**$1,220,000**	**$2,440,000**	**$2,895,000**	**$7,450,000**
Local Funding	$510,000	$700,000	$1,395,000	$1,650,000	$4,255,000
State Funding	$385,000	$520,000	$1,045,000	$1,245,000	$3,195,000
Total Projected Revenue	**$895,000**	**$1,220,000**	**$2,440,000**	**$2,895,000**	**$7,450,000**

* We assume 90% retention of first-year corps members into the second year, but budget for 100%.
** We assume 64 students per corps member, based on our national average.

The funding plan above is based on our growth plan to open a site in Eastern Kentucky beginning the academic year 2011-2012 and another site in Louisville beginning the academic year 2013-2014. Each region will take 30 incoming corps members a year, meaning that by 2014 we will have 120 corps members teaching in Kentucky impacting over 7,500 low-income students each year. Based on the scale we are attempting to achieve and the potential for local fundraising, we respectfully ask for $3.2m drawn down over the fiscal years 2011, 2012, 2013, 2014 and a commitment of $1.25 million for each year thereafter to bring Teach For America to Kentucky and sustain our scale.

Though state funding will help to support our work in Kentucky, growth and sustainability will depend on securing the requisite local support, as well as practical matters related to our operations: securing placements with partner districts, matching private support, recruitment, and organizational capacity.

Certification Proposal
Kentucky's alternative certification Option 7 has three barriers built into its structure that limit Teach For America's ability to bring top-notch talent to schools.

1) Kentucky presently requires *two* methods for demonstrating content knowledge mastery: passage of a state-approved content area exam and a major in the area where certification is sought. Teach For America recruits garner content knowledge through a wide range of coursework, regardless of their major or minor, and, in many states, Teach For America corps members of any academic background are permitted to take and pass content area examinations to demonstrate their content knowledge, without an additional requirement of a major. This approach best

"I taught middle school math for 8 years in the District of Columbia, coming in through Teach For America. I love teaching math and my students made dramatic gains on our state test. And in 2005 I was named the National Teacher of the Year. But, because I didn't major in math, I'm not employable 'as is' in many states. I'd be more than happy to take a test to demonstrate my math knowledge, but most states don't allow this."

- Jason Kamras is the 2005 National Teacher of the Year. He joined Teach For America where he was placed as a Math teacher at John Philip Sousa Middle School in Washington, DC. He graduated from Princeton University with a degree in public policy.

enables Teach For America to meet needs in schools and districts, particularly in high-needs subject areas such as math. **We ask that Kentucky allow a passing score on the state certification exam in the subject area to be taught to serve as a sufficient bar for demonstrating content knowledge (not requiring an academic major as an additional measure).**

2) Kentucky currently requires candidates to take the GRE. **We recommend exempting candidates *who have completed an Institute prior to teaching* from this requirement.** Unlike Option 7, Teach For America includes a pre-service institute, meaning that our corps members complete training before the school year, instead of during their first year. This gives our corps members a decided advantage on the first day of school, but also means that a requirement to take the GRE over the summer (during their pre-service training period) would be a significant barrier to completing our rigorous program.

3) **We recommend clarifying, or amending in statute, that an approved institute program be based on the total hours completed, not the number of days or weeks.** While the Teach For America institute is five weeks, we estimate that candidates log 270-280 hours of training – surpassing the 240 hour requirement set forth in Option 7.

Given our rigorous selection and training program, we are confident that these three changes will not sacrifice teacher quality or student achievement:

- Studies of other Teach For America regions demonstrate that teacher quality and student achievement are not diminished under such policies.
- Internal Teach For America data indicates that among corps members, non-majors have as great an impact on student achievement as those with a major in the subject they teach.[4]
- External research supports allowing candidates to demonstrate content knowledge through a test. ETS validity studies have shown that the Praxis II is an accurate measure of subject matter knowledge.[5]

Please see the attached documents for further evidence of our corps member and alumni impact across the nation.

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[4] In math, 64 percent of non-majors showed significant and solid gains with their students compared to 51 percent of those with a major. Similarly, in English, 67 percent of non-majors showed significant and solid gains with students, as compared to 68 percent of majors. Teach For America measures student achievement using one of three methods: growth, mastery of content or gap reduction. Corps members are grouped into four categories: significant gains, solid gains, limited gains or undetermined (meaning sufficient evidence was not available to make a determination). Our measurement system is an internal management tool used to drive continuous improvement within Teach For America, specifically as it relates to corps member performance.

[5] Educational Testing Service. (2005). *Validity for Licensing Tests: A Brief Introduction*. Princeton, N.J. http://www.ets.org/Media/Tests/PRAXIS/pdf/validity.pdf.

COUNCIL AWARDS $1.1 MILLION TO IMPROVE TEACHER QUALITY

Press Release Date: Thursday, November 12, 2009

Contact Information: Sue Patrick
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(b)(6)
Sue.Patrick@ky.gov

The Council on Postsecondary Education recently awarded more than $1.1 million in federal grant funding to provide professional development for P-12 teachers and administrators.

The Improving Educator Quality grant, now in its eighth year, focuses on increasing the academic achievement of all students through research-based training initiatives that ensure K-12 teachers and administrators are highly qualified.

The eight approved programs will serve more than 300 teachers in 50 Kentucky school districts over 18 months beginning in January.

"We are delighted with the quality of these proposals and their strategic focus on increasing college readiness of students in our priority areas of math, science and reading," said Robert King, Council president. "This is particularly important in light of the new SB 1 requirements."

One of the significant elements of SB 1 is to align high school exit standards to entry standards for postsecondary education. The legislation also revises the assessment and accountability system for P-12 education in Kentucky.

To be eligible for funding, a partnership must include a postsecondary institution's school of arts and sciences and its teacher preparation program, as well as a high-need local school district.

The projects include:

- Increasing College Readiness Through Assessment Led Instruction in Middle and High School Classrooms (**Morehead State University**): $150,000;
- The Math and Science Partnership: Increasing Math and Science Instruction and Achievement in Middle School Classrooms—Year 2 (**Morehead State University**): $140,000;
- West Kentucky Mathematics Partnership II—Year 2 (**Murray State University**): $140,000;

- Certifying World Language Teachers for Kentucky (**Northern Kentucky University**): $145,000;
- Literacy + Numeracy=Exponential Learning (**University of Kentucky**): $150,000;
- Number Properties and Operations: A Key to Student Success on EPAS—Year 2 (University of Kentucky): $139,000;
- Science Literacy for Middle School Teachers—Year 2 (**University of Kentucky**): $140,000; and
- Learning Capacity Advancement in Middle School Science and Mathematics—Year 2 (**Western Kentucky University**): $140,000.

For more info, visit http://www.cpe.ky.gov/policies/academicinit/TeacherQuality/IEQ.htm.

(*Note to Editors: Descriptions of the funded projects at right, along with contact information.)*

KEPP Report Card History

In May of 2001, the EPSB approved the development and publication of a statewide report card for Kentucky's educator preparation programs (KEPP report card). The KEPP report card was to address the necessary program qualities as identified by the 2000 General Assembly in Senate Bill 77, by the EPSB via the state accreditation process, and by the federal government in the Title II reporting requirements. The KEPP report card's intention was to provide stakeholders a snapshot of the quality of teacher preparation programs throughout the Commonwealth in any given year. The quality of the programs is to be demonstrated via indicators deemed important by the federal government, the Governor, the General Assembly, the Kentucky Board of Education, higher education, teachers and administrators, parents, the EPSB, and the public-at-large.

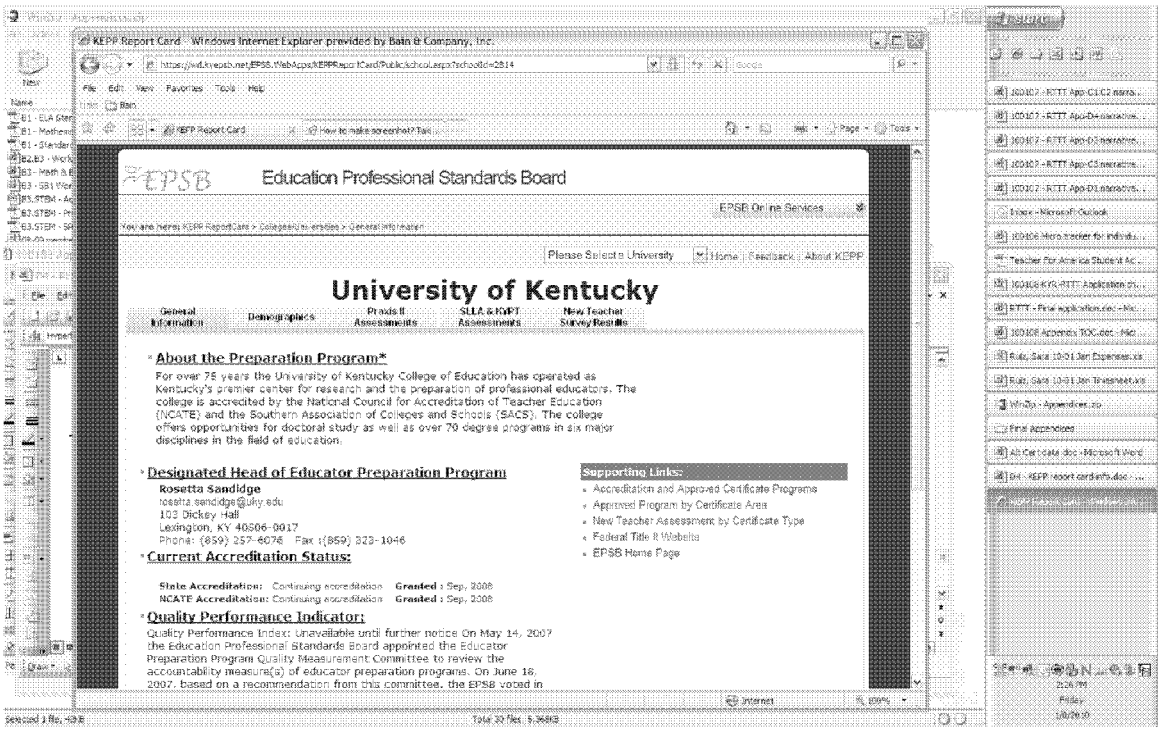
The KEPP report card includes the following quality indicators:

- General program information, including contact information
- Current accreditation status and the next scheduled accreditation visit
- Educator preparation faculty demographic data and program enrollment data
- Quality Performance Index (QPI)* - established in 2003
- Praxis II Assessments
- KTIP Pass Rates
- New Teacher Survey results

KEPP SAMPLE

The KEPP report card is an online reporting tool for all preparation programs. The following Website provides the link for current information of the University of Kentucky

https://wd.kyepsb.net/EPSB.WebApps/KEPPReportCard/Public/school.aspx?schoolId=2814



Quality Performance Index (QPI), Effective Educator Preparation Index (EEPI), Effective Principal Preparation Index (EPPI)

Overview

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***Quality Performance Index**
An institution's QPI includes three performance measures
(based on a 4 point scale):
Performance Measure Performance Weights
Praxis II annual summary pass rate 3
3-year average of KTIP pass rates 1
Overall mean of New Teacher
Survey 1
4.00 - 3.50 Excellent Performance
3.49 - 3.00 Satisfactory Performance
2.99 - 2.75 At Risk of Low Performance
< 2.75 Low Performance

The QPI was suspended by the EPSB at its June 2007 Board meeting. The Educator Preparation Program Quality Measurement Committee recommended that the Quality Performance Index (QPI) requirement as defined in 16 KAR 5:010 (Section 14 1c, Section 14 2b, and Section 25 18 a-e) be waived indefinitely as a component of the Kentucky Educator Preparation Program (KEPP) Report Card. The committee agrees that there were major concerns associated with each of the three components of the QPI

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as an effective measure of preparation program quality. EPSB staff were assigned to address the issues of the QPI to ensure effective measurement.

As part of the redesign, the value added component of student achievement will be added to the QPI. Based on studies conducted by Dr. George Noell of Louisiana State University and Dr. Jeanne Burns of the Louisiana Board of Regents, adding a value added component to teacher preparation program effectiveness based on student achievement results has a positive impact on preparation. " On October 25, 2007, Dr. Noell reported to the Board of Regents that he had acquired stable results when implementing a method to assess the effectiveness of teacher preparation programs based upon the achievement of students taught by new teachers during 2004-05 and 2005-06. He reported that teacher preparation *effect estimates* had been calculated for three post-redesign programs that had a sufficient number of new teachers that met the criteria to be included in the study. All three post-redesign programs performed at levels comparable to new teachers, comparable to experienced teachers, or to a greater extent than experienced teachers.

Proposed Use of Funds for Redesigned Indices

The Quality Performance Index (QPI) would be redesigned as the Effective Educator Preparation Index (EEPI) and the Effective Principal Preparation Index (EPPI) to permit the use of a single numerical indicator of program quality in relationship to the state average of other teacher preparation programs in Kentucky. An algorithm will be developed that will result in a single index score for each preparation unit as well as each program within the unit.

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1. RTTT funds will assist in collecting and reporting aggregate data on each standard and all initial-level performance indicators that will be part of the redesigned Indices for each preparation program.
    a. University staff, legislators, policy makers, and public at large will use data to inform the programs of areas of concern.
    b. Local districts will use data to inform professional growth for new staff.
    c. Prospective teachers will view data provided in the QPI to determine the effectiveness of the university/college in preparing teachers for the classroom.
2. In addition to aggregate data collected through the internship program, the following elements will also be included:
    a. A value-added component based on K-12 student learning
    b. Outcome of New Teacher Survey (NTS) (new teachers and their supervisors)
        i. RTTT funds will be used to create a data system that submits secure, electronic perception surveys based upon how the participants felt their institution prepared them for the classroom
        ii. NTS is based upon the Kentucky Teacher Standards Initial-Level Performances as well as NCATE specific questions related to diversity.
    c. Summary pass rates on Praxis test scores

i. EPSB currently collects assessment data from the Education Testing Services. Under the grant, EPSB will expand the system, which currently collects the cumulative score, to collect the additional sub scores for elementary teachers. This will require EPSB to redesign the ETL application and the assessment tables within the certification database to capture the additional data elements.

d. Percent of teachers who pass the Praxis the first time they take it
e. Average scores on Praxis tests
f. Average GPA of teacher candidates
g. Production of STEM, special education, and world language teachers
h. Retention rates of teachers who complete the program
i. Average ACT scores (broken down by sub scores) of those admitted to the program

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(b)(6) (b)(6)

Professional Learning:
Scaling Up Highly Effective Teaching and Learning in the Commonwealth

Understanding and Implementing the New Standards and Balanced Assessment within the Context of Research-based Characteristics of Highly Effective Classrooms

An ongoing statewide system of support for the learning of all teachers and administrators will be created that enables them to break down standards into clear targets in order to design high quality formative and summative assessments and to plan/select rigorous and congruent learning experiences. *This system will consist of a set of Leadership Networks that will utilize Kentucky's Characteristics of Highly Effective Teaching and Learning to frame and focus their work.*

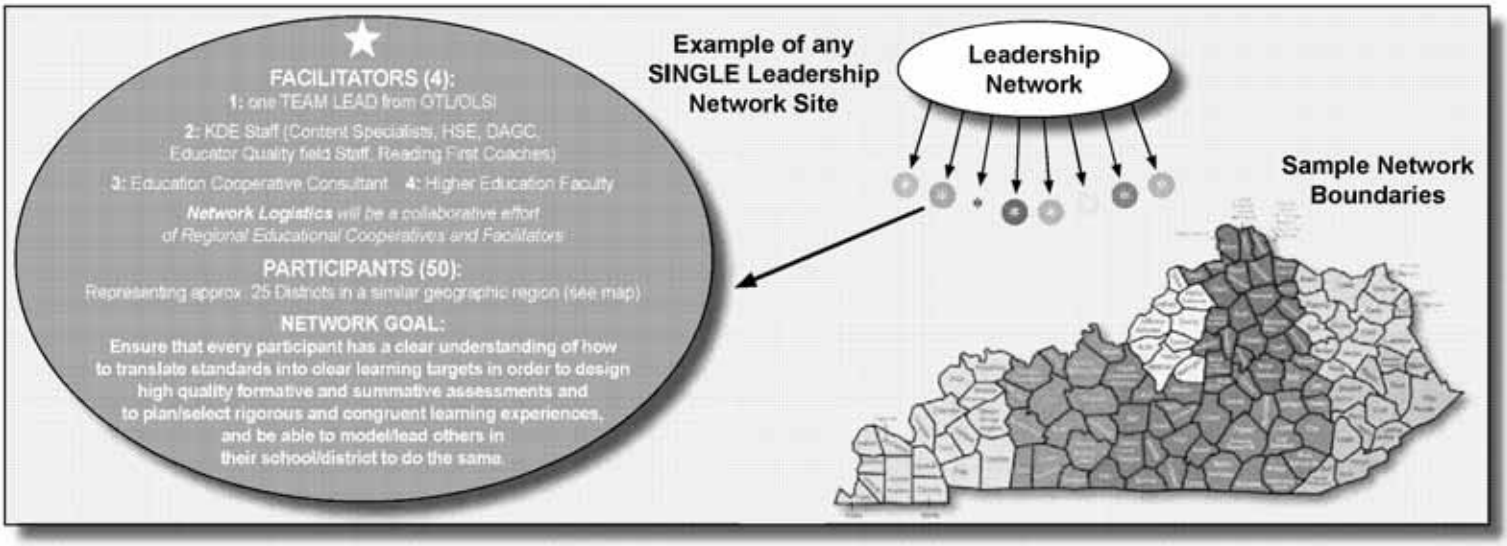
Each network will be focused on developing the understandings, abilities, and leadership skills necessary to implement/support implementation of **Characteristics of Highly Effective Teaching and Learning** contextualized in Kentucky's new standards.

Specifically, each network will enable participants to

- **break down standards into clear learning targets**
- **plan/select rigorous and congruent learning experiences**
- **design high quality formative and summative assessments**
- **model/lead others in their school/district to do these tasks**

Eight networks per **content area** and eight for **administrators** will be held in **geographically distributed** locations throughout the state, each supporting approximately **50 participants**—enough so that **every Kentucky district** can send at least an elementary and secondary teacher leader/administrator to each network. Networks at each site will be supported by **four facilitators.** This will ensure that at least one facilitator at each net-work site also will be available to act as a coach or mentor as the network participants implement practices in their own schools/districts.

Consistency and coherence **across** the eight sites of any Network will be achieved by involving all facilitators in the planning of each network meeting. Consistency and coherence **among** all of the different content/administrative networks will be achieved through the direction of the Core Oversight Team (see ***Statewide Network System*** graphic on next page for detail).



Professional Learning: Scaling Up Highly Effective Teaching and Learning in the Commonwealth Statewide Network System

Commissioner/KDE Leadership

Superintendent Network

Instructional Support Network (ISN)

Core Oversight Team

Content specialists from KDE's Office of Teaching and Learning design, guide (i.e., provides support in the form of training/information/ resources to all network lead facilitators) and provide feedback on the work of all new and established networks in order to ensure a coordinated and consistent focus with Characteristics of Highly Effective Teaching and Learning. This team will also work to collect evaluative data on the status of the ongoing work at the regional/district/school level.

Quality control strategy: consistent and ongoing communication and collaboration among all networks to ensure consistency in network design and delivery.

Science Leadership Network
Configuration
* 8 separate locations

Mathematics Leadership Networks (8)

Language Arts Leadership Networks (8)

Social Studies Leadership Networks (8)

Administrator Leadership Networks (KLA)

NOTE: The content areas above will have the same network configuration (eight regional networks) as illustrated in the graphic to the left. This detail has been omitted for the sake of visual clarity.

INDIVIDUAL DISTRICT LEVEL LEADERSHIP TEAMS would be comprised of:

Superintendent + Science Teacher Leaders + Mathematics Teacher Leaders + Language Arts Teacher Leaders + Social Studies Teacher Leaders + Administrative Leaders + Instructional Supervisors

District Leadership Teams will plan for SCALING TO ALL SCHOOLS/CLASSROOMS in the district. All NETWORK PARTICIPANTS are expected to commit to the Network and the District Leadership Team for a minimum of 3-5 years to build capacity, continuity, and sustainability.

Incentives for District Leadership Teams: **Mini-grants** to begin scaling up the work of the Networks in the district

Repurpose/Refocus existing funding (for example, Teacher Academy Net-works, etc.)

RFAs from KDE (Title II A & B, etc.), CPE (Educator Quality, etc.), will emphasize Highly Effective Teaching and Learning to build on the work of the networks and involve Higher Ed

High Quality Teaching and Learning in Kentucky

Nudquhdv F t hcd

Why so much emphasis around "High Quality Instruction"?

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The 'starting point' (some assertions presented by Tony Wagner based on his work with schools in the United States)

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3. Rsqnmf r bgnnkkd` cdqr gho Í *through galvanizing effort around a* ***shared vision of high quality teaching, learning and content****; setting ambitious* ***goals*** *with* ***monitoring and feedback*** *systems to achieve this vision; then constructing all elements of organization to facilitate rather than constrain success.*

So what really is the 'instructional core'?

"You don't change performance without changing the instructional core," **states Anrig Professor Richard Elmore.** ***"The relationship of the teacher and the student in the presence of content must be at the center of efforts to improve performance."***

V g` s sghr l d` mr +r` xr Dkt nqd+hr sgdqd ` qd a` rhb` kkx nmkx sgqdd v ` xr xnt b` mhmbqd` r d kd` qmhmf ` mc odqenq ` mbd9

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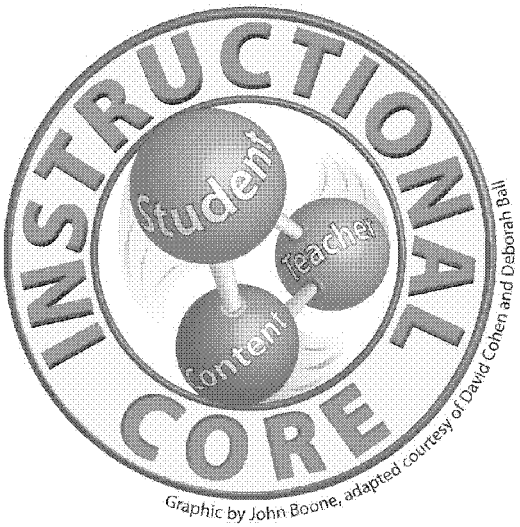
V g` s hr sgd Ï**Instructional Core**Ð>



Student

The work a student does, v hsg f t hc` mbd ` mc ` r r hrs` mbd eqnl ` sd` bgdq+sn kd` qm` mc ` ookx bnmsdms+sn qdekdbs nmv g` s` mc gnv sgdx g` ud kd` qmdc+` mc sn ad ` akd sn ` r r dr r sgdhqnv m kd` qmhmf ` mc odqenq ` mbd ` f ` hmr sdwodbsdc kd` qmhmf ` mc odqenq ` mbd-

Teacher

The work a teacher does sn bqd` sd sgd bnmchshmmr ` mc cdudkno rst cdms b` o` bhsx sn kd` qm` mc ` ookx bnmsdms, a` r dc nm` bkd` qkx cdehmdc hmr sqt bshmm` kl ncdkr sg` shmenq sgd s` rj r

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Content

The concepts, thinking and reasoning processes, skills, and procedures that students are expected to learn and apply hmr odbhehb bnmsdms` qd` r ` mc ` sr odbhehb f q` cd kdudkr- Sgdr d ` qd cdehmdc ax r s` sd ` mc knb` kr s` mc` qcr ` mc ` r r dr r l dmsr-

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Students will nmkx ad ` akd sn kd` qm` mc ` ookx sgd j mnv kdcf d+oqnbdr r dr ` mc r j hkkr cdehmdc ax J dmst bj x r s` mc` qcr ***if*** sgdx ` qd deedbshudkx dmf ` f dc v hsg bg` kkdmf hmf bnmsdms t mcdq sgd f t hc` mbd ne` r j hkkdc+j mnv kdcf d` akd ` mc qdr onmr hud sd` bgdqv gn gnkcr sgdl sn bkd` q+ghf g dwodbs` shmmr-

Teachers will nmkx ad ` akd sn dmf ` f d r st cdmsr v hsg bg` kkdmf hmf bnmsdms hmv ` xr sg` s oqnct bd deedbshud kd` qmhmf qdr t ksr ***if*** sgdx ` qd r t oonqsdc v hsg ghf g pt ` kksx+` kfi mdc hmr sq bshmm` kqdr nt qbdr ` mc v hsg nm,f nhmf +bnmshmt nt r noonqst mkshdr sn kd` qm` ant s+f dmdq` sd ` mc qdbdhud eddca` bj ` ant s+` mc qdekdbs nmsgd pt ` kksx nesgdhq hmr sq bshmm` mc sgd v nq` nesgdhq r st cdmsr v hsg hm` r bgnnk ` mc chr sqbs bt kst qd nebkd` q+ghf g+` bbnt ms` akd dwodbs` shmmr-

School and district leadership will nmkx ad ` akd sn ` bghdud ghf g pt ` kksx hmr sq bshmm` mc bnmshmt nt r kx h oqnuhmf ` b` cdl kb ` bghdudl dms ***if*** sgdx f ` ku` mhyd deenqs` qnt mc ` r g` qdc uhr hmmne v g` s bnmr shst sdr ghf g pt ` kksx sd` bghmf +kd` qmhmf +` mc bnmsdms+r ds` l ahshmt r f n` kr v hsg l nmksnqmf ` mc eddca` bj r xr sdl r sn ` bghdud sghr uhr hmm+` mc bnmr sq bs` kkdkdl dmsr nesgdhq nqf ` mhy` shmmsn è bhkks` sd q` sgdqsg` mbnmr sq` hmr t bbdr r-

Why begin with the Characteristics of High Quality Teaching and Learning?

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Bkd` qkx sd` bgdq +` cl hmhr sq` snq +l dms nq ` mc du` kt ` snq v nt kc ad mdeks eqnl ` cdehmdc r ds ne bg` q` bsdqhr shbr cdr bqahmf ghf g pt ` kksx sd` bghmf ` mc kd` qmhmf - Hhh` mdeenqs sn bqd` sd r t bg ` snnk sgd J dmst bj x Cdo` qs l dms neDct b` shmmg` r adf ` msn bnl ohkd ` mc nqf ` mhyd sgd *Characteristics of High Quality Teaching and Learning*- @bnl l nmr ds nebg` q` bsdqhr shbr ` r v dkk` r bnmsdms r odbhehb bg` q` bsdqhr shbr ` qd bt qpdmskx adhmf cdudknodc ` mc qduhdv dc-

The Characteristics of High Quality Teaching and Learning are hmsdmcdc sn bqd` sd ` bnl l nm onhms neqdedqdmbd enq chr bt r r hmf deedbshud oq` bshbdr hmsd` bghmf ` mc kd` qmhmf ax cdr bqahmf sgd qnkd nesgd sd` bgdq` mc r st cdms hm` mdwdl ok` qx hmr sq bshmm` kdmuhqnml dms- Hs` kknv r sd` bgdq + ` cl hmhr sq` snq ` mc du` kt ` snq sn g` ud chr bt r r hmmr ` qnt mc ` r ds neqdr d` qbg,a` r dc cdr bqdosnq nedeedbshud bk` r r qnl oq` bshbd- Sgd cnbt l dms hr chuhcdc hmsn ehud bnl onmdmsr - D` bg nesgdr d

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- Kd` qmhmf Bkh ` sd
- Bk` rrqnnl @rdrrl dms` mc Qdekdbshnm
- Hhrsqt bshnm` kQhfinq` mc Rst cdms Dmf ` f dl dms
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How can the Characteristics of High Quality Teaching and Learning be used?

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Component	Month
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Hhrsqt bshnm` kQdkdu` mbd	Mnudl adq
J mnv kdcf d neBnmsdms	Cdbdl adq

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V d qdbnl l dmc sg` ssgdrd bg` q` bsdqhrshbr ` mc qdrnt qbdr ad t rdc sn rt oonqschrbt rrhnmr hm oqnedrrhnm` kkd` qmhmf bnl l t mhshdr sg` s` qd enbt rdc nmkd` qmhmf ` ant sv g` sf nnc sd` bghmf ` mc kd` qmhmf knnj r kkjd sn drs` akkrg bnl l nmt mcdqrs` mchmf- Hshr h onqs` mssn l dmshnmsg` shmbqd` rdc enbt r nmrst cdmskd` qmhmf rgnt kc ad sgd oqh ` qx f n` knqchrbt rrhnmonhmshmt rhmf sgd bg` q` bsdqhrshbr+qdrd` qbg ` mc ` kkfimdc qdrnt qbdr- V d gnod sgd bg` q` bsdqhrshbr ` mc rt oonqshmf qdrnt qbdr v hkkgdko sd` bgdqr h okdl dmsghfig pt ` kksx sd` bghmf ` mc kd` qmhmf enq` kkrst cdmsr-

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gsso9.v v v -dct b` shnm+j x-f nu.J CD.Gnl dO` f dQdonr hsnqx.Ot akkb` shnmr.J dmst bj x* Sd` bgdq-gsl

KENTUCKY DEPARTMENT OF EDUCATION

STAFF NOTE

Review Item:

Professional Development: Impact on Professional Learning and Student Outcomes.

Applicable Statute or Regulation:

KRS 156.095 Professional Development, KRS 158.070 Calendar, 704 KAR 3:305 Definition Professional Development

History/Background:

Certified personnel are required to spend four contract days of employment participating in professional development activities as defined by statute. The Kentucky Department of Education does not approve professional development. The professional development coordinator is required to keep records to ensure all staff completes their professional development. District administrators are responsible to ensure the professional development teachers receive affects professional practice and impacts student outcomes.

Policy Issue(s):

Kentucky's Definition and Standards for High Quality Professional Development states in Standard 2 "Professional development is a continuous process of learning through consciously constructed relevant job-embedded experiences so that professional development experiences and professional learning are integrated in the day-to-day work of teachers, administrators, and others to support improved practices, effectiveness and the application of skills, processes, and content." This standard is not supported by requiring professional development to be earned outside the student instructional day. Professional learning should be demonstrated by improved professional performance levels as measured against common standards using a common rubric. Demonstration of continuous learning to impact student achievement should be an indicator in a common statewide certified personnel evaluation plan used by all Kentucky School districts. This evaluation plan would use electronic recording of summative evaluations which would be included in a Kentucky State Longitudinal Data System.

Policy questions:

1. Should the Kentucky Board of Education consider changes in policy that would make professional learning opportunities part of the educator's professional day?

2. Will giving districts the ability to flex time and create professional learning opportunities for teachers and administrators to work collaboratively analyzing problems of practice increase their effectiveness to impact student achievement?
3. Will policy requiring districts to develop a process for the evaluation of professional learning experiences for their role in improving teacher and administrator effectiveness in raising student achievement result in more effective professional learning experiences to increase student achievement?
4. Will policy requiring school councils to work collaboratively with local district personnel to provide professional learning experiences that address the goals for Kentucky schools result in more efficient use of fiscal and human resources to accomplish these goals.

Impact on Getting to Proficiency:

Solving problems of professional practice will become part of the educator's daily work. Successful practices can be documented by improved student outcomes and improved professional practices. The longitudinal data system will allow professional development activities to be connected to educator performance and student outcomes.

Contact Person:

_____ _____

Deputy Commissioner Commissioner of Education

Date:

Kirkpatrick's Four-Level Evaluation Model

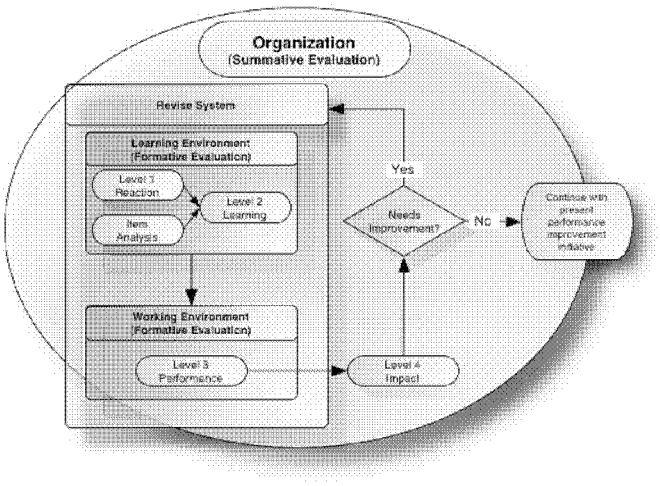
Perhaps the best known training methodology for evaluations is Donald Kirkpatrick's Four Level Evaluation Model that was first published in a series of articles in 1959 in the *Journal of American Society of Training Directors* (now known as T+D Magazine). The series was later compiled and published in a book, "Evaluating Training Programs" in 1975. While Kirkpatrick has written a number of books on the subject, his best known work is the 1994 edition of "Evaluating Training Programs." Kirkpatrick is now Professor Emeritus at the University of Wisconsin and is associated with Kirkpatrick Partners, LLC.

The four-levels of evaluation consist of (1994):

- Reaction - how the learners react to the learning process
- Learning - the extent to which the learners gain knowledge and skills
- Behavior - capability to perform the learned skills while on the job
- Results - includes such items as monetary, efficiency, moral, etc.

Note that some use the term "transfer" in lieu of results to identify the *transfer* of learning to the workplace; however, "performance" is now often the preferred word for "behavior". As Gilbert noted, performance has two aspects — behavior being the means and its consequence being the end. In addition, "impact" is often used for "results," such as *impact* on the business unit.

The chart below shows how the evaluation process fits together:



Level One - Reaction

As the word implies, evaluation at this level measures how the learners react to the training. This level is often measured with attitude questionnaires that are passed out after most training classes. This level measures one thing: the learner's perception (reaction) of the course. Learners are often keenly aware of what they need to know to accomplish a task. If the training program fails to satisfy their needs, a determination should be made as to whether it's the fault of the program design or delivery.

This level is not indicative of the training's performance potential as it does not measure what new skills the learners have acquired or what they have learned that will transfer back to the working environment.

This has caused some evaluators to down play its value. However, the interest, attention and motivation of the participants are often critical to the success of any training process -- people often learn better when they react positively to the learning environment by seeing the importance of it.

When a learning package is first presented, rather it be e-learning, classroom training, CBT, etc., the learner has to make a decision as to whether he or she will pay attention to it. If the goal or task is judged as important and doable, then the learner is normally motivated to engage in it (Markus — Ruvulo, 1990). However, if the task is presented as low-relevance or there is a low probability of success, then a negative effect is generated and motivation for task engagement is low.

This differs somewhat from Kirkpatrick (1996). He writes, *"Reaction may best be considered as how well the trainees liked a particular training program"*. However, the less relevance the learning package is to a learner, then the more effort that has to be put into the design and presentation of the learning package. That is, if it is not relevant to the learner, then the learning package has to "hook" the learner through slick design, humor, games, etc. This is not to say that design, humor, or games are unimportant; however, their use in a learning package should be to promote or aid the "learning process" rather than the "learning package" itself. And if a learning package is built of sound purpose and design, then it should support the learners in bridging a performance gap. Hence, they should be motivated to learn! If not, something went dreadfully wrong during the planning and building processes! So if you find yourself having to hook the learners through slick design, then you probably need to reevaluate the purpose of the learning program.

For more information on reaction, see Self-System.

Level Two - Learning

This is the extent to which participants change attitudes, improve knowledge, and increase skill as a result of participating in the learning process. It addresses the question: *Did the participants learn anything?* The learning evaluation require some type of post-testing to ascertain what skills were learned during the training. In addition, the post-testing is only valid when combined with pre-testing, so that you can differentiate between what they already knew prior to training and what they actually learned during the training program.

Measuring the learning that takes place in a training program is important in order to validate the learning objectives. Evaluating the learning that has taken place typically focuses on such questions as:

- What knowledge was acquired?
- What skills were developed or enhanced?
- What attitudes were changed?

Learner assessments are created to allow a judgment to be made about the learner's capability for performance. There are two parts to this process: the gathering of information or evidence (testing the learner) and the judging of the information (what does the data represent?). This assessment should not be confused with *evaluation*. Assessment is about the progress and achievements of the individual learners, while evaluation is about the learning program as a whole (Tovey, 1997, p. 88).

Evaluation in this process comes through the learner assessment that was built in the design phase. Note that the assessment instrument normally has more benefits to the designer than to the learner. Why? For the designer, the building of the assessment helps to define what the learning must produce. For the learner, assessments are statistical instruments that often poorly correlate with the realities of performance

on the job and they rate learners low on the "assumed" correlatives of the job requirements (Gilbert, 1998). Thus, the next level, performance, is the preferred method of assuring that the learning transfers to the job, but sadly, it is quite rarely performed.

Level Three - Performance (behavior)

This evaluation involves testing the students capabilities to perform learned skills while on the job, rather than in the classroom. Level three evaluations can be performed formally (testing) or informally (observation). It determines if the correct performance is now occurring by answering the question, "Do people use their newly acquired learnings on the job?"

In Kirkpatrick's original four-levels of evaluation, he names this level "behavior." However, behavior is the action that is performed, while the final result of the behavior is the performance. Gilbert said that performance has two aspects — behavior being the means and its consequence being the end (1998). If we were only worried about the behavioral aspect, then this could be done in the training environment. However, the consequence of the behavior (performance) is what we are really after — can the learner now perform and produce the needed results in the working environment?

It is important to measure performance because the primary purpose of training is to improve results by having the students learn new skills and knowledge and then actually applying them to the job. Learning new skills and knowledge is no good to an organization unless the participants actually use them in their work activities. Since level-three measurements must take place after the learners have returned to their jobs, the actual Level three measurements will typically involve someone closely involved with the learner, such as a supervisor.

Although it takes a greater effort to collect this data than it does to collect data during training, its value is important to the training department and organization as the data provides insight into the transfer of learning from the classroom to the work environment and the barriers encountered when attempting to implement the new techniques learned in the program.

Level Four - Results

This is the final results that occur. It measures the training program's effectiveness, that is, "What impact has the training achieved?" These impacts can include such items as monetary, efficiency, moral, teamwork, etc.

As we move from level one to level four, the evaluation process becomes more difficult and time-consuming, however, the higher levels provide information that is of increasingly significant value. Perhaps the most frequently type of measurement is Level-one because it is the easiest to measure, yet it provides the least valuable data. Measuring results that affect the organization is considerably more difficult, thus it is conducted less frequently although it yields the most valuable information.

The first three-levels of Kirkpatrick's evaluation — Reaction, Learning, and Performance are largely "soft" measurements; however, decision-makers who approve such training programs, prefer results (returns or impacts). That does not mean the first three are useless, indeed, their use is in tracking problems within the learning package:

- Reaction informs you how relevant the training is to the work the learners perform (it measures how well the training requirement analysis processes worked).

- Learning informs you to the degree of relevance that the training package worked to transfer KSAs from the training material to the learners (it measures how well the design and development processes worked).
- The performance level informs you of the degree that the learning can actually be applied to the learner's job (it measures how well the performance analysis process worked).
- Impact informs you of the "return" the organization receives from the training. Decision-makers prefer this harder "result," although not necessarily in dollars and cents. For example, a recent study of financial and information technology executives found that they consider both hard and soft "returns" when it comes to customer-centris technologies, but give more weight to non-financial metrics (soft), such as customer satisfaction and loyalty (Hayes, 2003).

Note the difference in "information" and "returns." That is, the first three-levels give you "information" for improving the learning package. While the fourth-level gives you the "returns" for investing in the learning process. A hard result is generally given in dollars and cents, while soft results are more informational in nature. There are exceptions. For example, if the organizational vision is to provide learning opportunities (perhaps to increase retention), then a level-two or level-three evaluation could be used to provide a soft return.

Jack Phillips (1996), who probably knows Kirkpatrick's four-levels better than anyone, writes that the value of information becomes greater as we go up these levels of information (from reaction to results/impacts). For example, the evaluation of results has the highest value of information to the organization, while reaction provides the least information (although like any information, it can be useful). And like most levels of information, the ones that provide the best value are often more difficult to obtain. Thus we readily do the easy ones (levels one and two) and obtain a little information about our training efforts, while bypassing the more difficult ones (three and four) that would provide the most valuable information for the organization.

This final measurement of the training program might be met with a more "balanced" approach or a "balanced scorecard" (Kaplan — Norton, 2001), which looks at the impact or return from four perspectives:

- Financial: A measurement, such as an ROI, that shows a monetary return, or the impact itself, such as how the output is affected. Financial can be either soft or hard results.
- Customer: Improving an area in which the organization differentiates itself from competitors to attract, retain, and deepen relationships with its targeted customers.
- Internal: Achieve excellence by improving such processes as supply-chain management, production process, or support process.
- Innovation and Learning: Ensuring the learning package supports a climate for organizational change, innovation, and the growth of individuals.

Criticisms

Kirkpatrick's four-levels treats evaluation as an end of the process activity. Whereas the objective should be to treat evaluation as an ongoing activity that should begin during the pre-training phase.

Actually, this criticism is inaccurate. For example, "The ASTD Training — Development Handbook" (1996), edited by Robert Craig, includes a chapter by Kirkpatrick with the simple title of "Evaluation." In the chapter, Kirkpatrick discusses control groups and before and after approaches (such as pre and post-tests). He goes on to discuss that level-four should also include a post-training appraisal three or more months after the training to ensure the learners put into practice what they have learned. Kirkpatrick

further notes that he believes the evaluations should be included throughout the training by getting evaluations not only during each session or module, but also after each subject or topic.

The four-levels of evaluations mean very little to the other business units

One of the best training and development books out is "The Six Disciplines of Breakthrough Learning" by Wick, Pollock, Jefferson, — Flanagan (2006). They offer perhaps the best criticism that I have seen - "Unfortunately, it is not a construct widely shared by business leaders, who are principally concerned with learning's business impact. Thus, when learning leaders write and speak in terms of "levels" of evaluation to their business colleagues, it reflects a learning-centric perspective that tends to confuse rather than clarify issues and contribute to the lack of understanding between business and learning functions."

So it might turn out that the best criticism is not leveled at the four-levels themselves, but rather the way we use them when speaking to other business leaders. We tell the business units that the level-one evaluation show the learners were happy and that the level-two show they all passed the test with flying colors, and so on up the line. Yet according to the surveys that I have seen, level-four (impact) is rarely used. While the lower levels of evaluation can be quite useful within the training function (they help us to discuss what type of evaluation we are speaking of), outside of training — development they fall flat. For the most part, the business units' main concern is the **IMPACT** -- did the resources spent on the learning process contribute to the overall health and prosperity of the enterprise?

There are three problematic assumptions of the Kirkpatrick model: 1) the levels are not arranged in ascending order, 2) the levels are not causally linked, and 3) the levels are positively inter-correlated (Alliger and Janak, 1989).

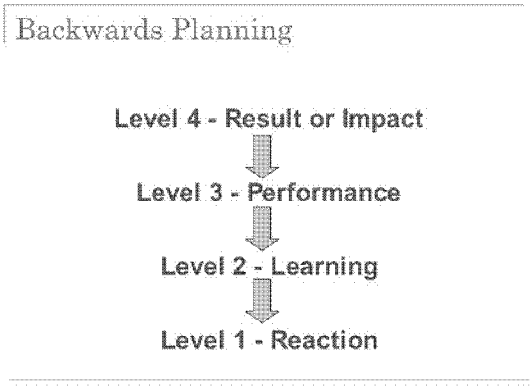
The main problem with the paper is that it puts no limits on what is training and what is not training. For example, they include spirit-building, inculcation of company history or philosophy, and individual growth programs as "training." Therefore, according to the authors, "not all training in organizations is meant to effect change at all four levels." However, the mistake the authors made is using all "learning" programs, such as education and development, under the heading of "training." If you are going to include every formal learning program as "training" as they have, then of course the four levels are not "arranged in ascending order of information provided." Although there are a variety of definitions for training, it is generally considered an HRD intervention or process for fixing a performance problem through some type of learning program. Hence, there is going to be some type of "impact" or "result." On the other hand, development or education programs are more concerned with the growth of the individual, hence, there might not be an immediate impact or result. The use of the learning, rather than training examples indicates that they have fallen into the first trap of meta-analysis -- comparing apples to oranges. That is, they seem to be assuming that all learning processes within an organization are considered training. They have failed to fully identify all constructs underlying the phenomena of interest, thus there is no way we can validate their work.

The only part of Kirkpatrick's Four Levels that has failed to uphold to scrutiny over time is the first level - reaction. For example, a Century 21 trainer with some of the lowest Level one scores was responsible for the highest performance outcomes post-training (level four), as measured by his graduates' productivity. This is not just an isolated incident -- in study after study the evidence shows very little correlation between Level one evaluations and how well people actually perform when they return to their job (Boehle, 2006).

Rather than measuring reaction, what we are now discovering is that we should be preframing the learners by having their managers discuss the importance of attending a training process (on-ramping) and then following-up on them after they return to ensure they are using their mew skills (Wick, et al. 2006).

Improving the Model

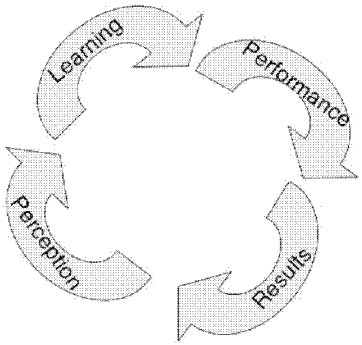
Because of its age and with all the new technology advances, the four-level evaluation model is often criticized nowadays for being too old and simple. Yet, almost five decades after its introduction, there has not been a viable option to replace it. And I think the reason why is that Kirkpatrick basically nailed it, but presented it wrong. Rather than being just an evaluation tool, it should have been presented as both a planning and evaluation tool. To do this, it needs one simple adjustment... flip it upside-down! (Clark, 2008) That is, rearrange the steps into a "backwards planning" tool by starting with the end in mind:



Thus, planing and analysis needs to work backward by identifying:

- the desired impact (outcome or result) that will improve the performance of the business
- the level of performance the learners must be able to do to create the impact
- the knowledge and skills they need to learn in order to perform
- what they need to perceive in order to learn (the need to learn)

Planning it backwards will help to ensure there is a circular causality:



The learners' perception of the need to learn should motivate them to learn, which in turn causes the desired performance that drives the impact desired by our customer (client). This causality should

continue in a circular fashion in that the results achieved should now drive the performers' perceptions of the need to learn more and perform better in order to achieve even better results. Of course this assumes that not only the customer understands the level of impact achieved, but also the performers/learners' perception on how close they came to achieving the desired result.

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158.780 Management improvement programs.

(1) The Kentucky Board of Education shall establish a program for voluntary management improvement, for involuntary supervision, and for assuming full control of a local school district.

(a) The voluntary improvement program shall assist local districts with the development of innovative management practices and help them adopt currently accepted practices.

(b) If the Kentucky Board of Education believes that a critical lack of efficiency or effectiveness in the governance or administration of a local school district exists, it shall conduct an administrative hearing in compliance with KRS Chapter 13B. If it is determined that there is a critical lack of efficiency or effectiveness in the governance or administration, the state board shall assume sufficient supervision of the district to ensure that appropriate corrective action occurs. Neither the state board, the chief state school officer, nor his designee shall assume the supervision of the district until an administrative hearing has been conducted under KRS Chapter 13B.

(c) If the Kentucky Board of Education believes that the pattern of a lack of efficiency or effectiveness in the governance or administration of a school district warrants action, it shall conduct an administrative hearing in compliance with KRS Chapter 13B. If it is determined that the pattern does warrant action, it shall declare the district a "state assisted district" or a "state managed district" and the state board shall then assume control of the district as set forth in this section and KRS 158.785.

(2) The Kentucky Board of Education shall adopt necessary administrative regulations to carry out the provisions of this section and KRS 158.785, including an administrative regulation to more specifically establish and implement the standards for designation as a "state assisted district" and a "state managed district."

(3) The Kentucky Board of Education may delegate to the chief state school officer the authority it deems necessary to carry out the provisions of this section and KRS 158.785. However, neither the state board, the chief state school officer, nor his designee shall assume the supervision of the district until an administrative hearing has been conducted under the provisions of KRS Chapter 13B.

Effective: July 15, 1996

History: Amended 1996 Ky. Acts ch. 32, sec. 1, effective July 15, 1996; and ch 362, sec 6, effective July 15, 1996. -- Amended 1992 Ky. Acts ch. 184, sec. 1, effective July 14, 1992. -- Amended 1990 Ky. Acts ch. 476, Pt. IV, sec. 214, effective July 13, 1990. -- Created 1985 (1st Extra. Sess.) Ky. Acts ch. 10, sec. 16, effective October 18, 1985.

158.785 Collection and review of management data -- Management audit -- Conditions for designation as state assisted or state managed district -- Actions required.

(1) The Kentucky Board of Education shall establish a program to improve specific aspects of the management of local school districts as described in KRS 158.780.

(2) The State Department of Education shall, pursuant to administrative regulations promulgated by the Kentucky Board of Education, collect and review data relative to the instructional and operational performance of local school districts. When a review of the data or of any other information, including site investigations of local management practices, indicates the presence of critically ineffective or inefficient management, the chief state school officer shall order a management audit of the governance and administration of the district. A local school board or superintendent may also request a management audit of the district.

(3) If a management audit, conducted for any of the reasons set forth in subsection (2) of this section, indicates that there is a pattern of a significant lack of efficiency and effectiveness in the governance or administration of a school district, the chief state school officer shall recommend the district to the Kentucky Board of Education either as a "state assisted district" or a "state managed district."

(4) The Kentucky Board of Education shall promulgate an administrative regulation establishing a procedure for considering the recommendation of the chief state school officer to declare a district a "state assisted district" or a "state managed district." This procedure shall fully comply with the procedures for administrative hearings established in KRS Chapter 13B.

(5) When the chief state school officer presents a recommendation to the state board for designation as a "state assisted district" or a "state managed district," he shall establish the following:

   (a) Existence of a pattern of a significant lack of efficiency and effectiveness in the governance or administration of the school district;

   (b) The pattern of a significant lack of efficiency and effectiveness in the governance or administration of the school district continues to exist; and

   (c) State assistance or state management is necessary to correct the inefficiencies and ineffectiveness.

(6) When a district is designated a "state assisted district" under subsection (4) of this section, the following actions shall be required of the chief state school officer:

   (a) Management assistance shall be provided to the district to develop and implement a plan to correct deficiencies found in the management audit.

   (b) The Department of Education shall monitor the development and implementation of the correctional plan to improve the governance or administration of the school district. If the chief state school officer determines that the plan is being inadequately developed or implemented, he shall make a recommendation to the Kentucky Board of Education to declare the district a "state managed district."

(7) If the state board designates a district a "state managed district" under subsection (4) of this section, the following actions shall be required of the chief state school officer:

(a) All administrative, operational, financial, personnel, and instructional aspects of the management of the school district formerly exercised by the local school board and the superintendent shall be exercised by the chief state school officer or his designee.

(b) Any local school board member or the local superintendent may be removed from office by the Kentucky Board of Education pursuant to KRS 156.132.

(c) Notwithstanding any statute to the contrary, after thirty (30) days after a district becomes a "state managed district" any appointment to an administrative position may be revoked by the chief state school officer and the individual employee may be reassigned to any duty for which that person is qualified. The chief state school officer shall provide to the reassigned employee written reasons for the reassignment. The individual shall not be dismissed from subsequent employment except as provided by KRS 156.132 and 161.790.

(d) The chief state school officer shall make the administrative appointments as necessary to exercise full and complete control of all aspects of the management of the district. The chief state school officer, through the appointments, may make any and all decisions previously made by the local school board and the local superintendent. The chief state school officer shall retain clear supervisory and monitoring powers over the operation and management of the district.

(8) A school district shall be designated as a "state managed district" until the Kentucky Board of Education determines that the pattern of ineffective and inefficient governance or administration and the specific deficiencies determined by the management audit have been corrected. Each year following the school year in which the designation of a "state managed district" was made, the chief state school officer shall report the status of the corrective action being taken to the Kentucky Board of Education. No local school district shall remain in the status of a "state managed district" longer than three (3) consecutive school years unless the Kentucky Board of Education extends the time after a complete review of a new management audit. Any judicial review of actions taken by the chief state school officer or the board under KRS 158.780 or this section shall be in accordance with the provisions for conducting judicial review of administrative hearings outlined in KRS Chapter 13B.

Effective: July 15, 1996

History: Amended 1996 Ky. Acts ch. 32, sec. 2, effective July 15, 1996; and ch. 362, sec. 6, effective July 15, 1996. -- Amended 1992 Ky. Acts ch. 184, sec. 2, effective July 14, 1992. -- Repealed and reenacted 1990 Ky. Acts ch. 476, Pt. V, sec. 408, effective July 13, 1990. -- Created 1985 (1st Extra. Sess.) Ky. Acts ch. 10, secs. 17 and 18, effective October 18, 1985.

160.346 Identification of school council needing improvement -- School district assistance plan -- Scholastic audit team reviews -- Transfer of council's authority -- Restoration of council's authority.

(1) (a) A school with a school council identified as needing improvement under KRS 158.6455 shall include in its school improvement plan actions to strengthen the school council and the school-based decision making process at the school.

(b) The local school district shall include in its assistance plan for a school identified in paragraph (a) of this subsection actions to strengthen the functioning of the school council and the school-based decision making process at the school.

(2) (a) A scholastic audit team, established under KRS 158.6455, auditing a school a second time that for two (2) or more successive accountability cycles failed to meet its goal, shall include in the review:

1. The functioning of the school and the school council;
2. The implementation of the school improvement plan and actions related to the school council developed under subsection (1)(a) of this section;
3. The interaction and relationship between the superintendent, central office personnel, and the council; and
4. A recommendation to the commissioner of education in the audit report concerning whether the school council should retain the authority granted to it under KRS 160.345. If the recommendation is to transfer the authority of the school council, the team shall also recommend whether:
   a. The authority should be transferred to the superintendent or a highly skilled educator; and
   b. The school council should continue to act in an advisory capacity until all authority has been restored under subsection (6) of this section.

(b) A scholastic audit team, established under KRS 158.6455, auditing a district of a school subject to subsection (2)(a) of this section, shall include in its review:

1. The overall functioning of the school district;
2. The interaction and relationship between the superintendent, central office personnel, school board members, and the council; and
3. The implementation of the district assistance plan for the audited school. In the audit report, the team shall make a recommendation to the commissioner of education concerning whether the school's council should retain its authority granted under KRS 160.345. If the recommendation is to transfer the authority of the school council, the team shall also recommend whether:

a. The authority should be transferred to the superintendent or a highly skilled educator; and

b. The school council should continue to act in an advisory capacity until all authority has been restored under subsection (6) of this section.

(3) (a) 1. If both the school and the district audit teams recommend transfer of the council's authority to the superintendent, the commissioner of education shall transfer the council's authority under KRS 160.345 to the superintendent. The commissioner shall determine whether the school council shall continue in an advisory capacity and shall notify the local board of education, the district superintendent, the principal of the school, and the school council members of the action.

2. Within thirty (30) days of the commissioner's action, the school council may request that the Kentucky Board of Education consider the matter by submitting a written request including any supporting information. The Kentucky Board of Education shall consider the audit reports, the commissioner's decision, and the request for consideration with any supporting information, and make a final determination.

(b) If both audit teams recommend transfer of the council's authority to a highly skilled educator or if both recommend transfer of the council's authority but are not in agreement as to the party to be granted authority, the commissioner shall make a recommendation to the Kentucky Board of Education, which shall make the final determination. The school council and the superintendent may submit supporting information. The commissioner shall include as part of the recommendation whether the school council shall continue in an advisory capacity. The Kentucky Board of Education shall consider the audit reports, the commissioner's recommendation, and supporting information provided by the school council and superintendent. The commissioner shall notify the local board of education, the district superintendent, the principal of the school, and the school council members of the recommendation and the Kentucky Board of Education's final action.

(c) If the two (2) audit teams disagree in their recommendations about whether the council's authority should be transferred, the school council shall retain its authority.

(4) Subject to the policies adopted for the district by the local board of education, the local district superintendent or the highly skilled educator shall assume all powers, duties, and authority granted to a school council under KRS 160.345 thirty (30) days following the commissioner's recommendation if no request for consideration by the Kentucky Board of Education is submitted or following the final determination of the Kentucky Board of Education, whichever is appropriate.

(5) Within thirty (30) days after assuming the powers, duties, and authority under subsection (4) of this section, the superintendent or highly skilled educator shall consult with the council, if the council has been given an advisory role under subsection (3) of this section, and with stakeholders at the school including parents,

the principal, certified staff, and classified staff, and prepare a plan for developing capacity for sound school-based decision making at the school. The commissioner of education shall review the plan and approve it or identify specific areas for improvement. The superintendent or highly skilled educator shall report to the commissioner every six (6) months on the implementation and results of the approved plan.

(6) The school's right to establish a council or the school's right for the council to assume the full authority granted under KRS 160.345 shall be restored when the school meets its goal for an accountability cycle as determined by the Kentucky Department of Education under KRS 158.6455.

(7) If, in the course of a school or district scholastic audit, the audit team identifies information suggesting that a violation of KRS 160.345(9)(a) may have occurred, the commissioner of education shall forward the evidence to the Office of Education Accountability for investigation.

Effective: July 13, 2004

History: Created 2004 Ky. Acts ch. 188, sec. 1, effective July 13, 2004.

GENERAL ASSEMBLY
COMMONWEALTH OF KENTUCKY

2010 REGULAR SESSION

HOUSE BILL NO. 176

AS ENACTED

WEDNESDAY, JANUARY 13, 2010

AN ACT relating to schools and declaring an emergency.

Be it enacted by the General Assembly of the Commonwealth of Kentucky:

1 ➔Section 1. KRS 160.346 is amended to read as follows:

2 (1) ***For purposes of this section:***

3 ***(a) "Persistently low-achieving school" means:***

4 ***1. For school years 2009-2010 and 2010-2011, based on averaging the***

5 ***percentage of proficient or higher in reading and mathematics on the***

6 ***state assessments under KRS 158.6455:***

7 ***a. A Title I school in the group of Title I schools that contains a***

8 ***minimum of the lowest five (5) or the lowest five percent (5%),***

9 ***whichever is greater, of the Title I schools identified collectively***

10 ***in any school improvement category under the federal No Child***

11 ***Left Behind Act of 2001, 20 U.S.C. secs. 6301 et seq., or its***

12 ***successor, that have failed to make adequate yearly progress for***

13 ***three (3) consecutive years; or***

14 ***b. A non-Title I school in the group of non-Title I schools that***

15 ***contains a minimum of the lowest five (5) or the lowest five***

16 ***percent (5%), whichever is greater, of the non-Title I schools that***

17 ***contain grades seven (7) through twelve (12), or any***

18 ***combination thereof, and has at least thirty-five percent (35%) or***

19 ***greater poverty as identified in the federal No Child Left Behind***

20 ***Act of 2001, 20 U.S.C. secs. 6301 et seq., or its successor, that***

21 ***have failed to make adequately yearly progress for three (3)***

22 ***consecutive years;***

23 ***2. A high school whose graduation rate, based on the state's approved***

24 ***graduation rate calculation, has been sixty percent (60%) for three (3)***

25 ***or more consecutive years; or***

1 ***3. Beginning with the state assessment results for the school year 2011-***
2 ***2012, a school that is in the lowest five percent (5%) of all schools that***
3 ***fail to meet the achievement targets of the state accountability system***
4 ***under KRS 158.6455 for at least three (3) or more consecutive years.***
5 ***For school years 2011-2012 and 2012-2013, the three (3) consecutive***
6 ***years shall be evaluated based on the status of the school under this***
7 ***subparagraph and subparagraph 1. of this paragraph.***
8 ***(b) "School intervention" means a process to turn around a persistently low-***
9 ***achieving school that is chosen by a school council, a superintendent and a***
10 ***local board of education, or the commissioner of education, or the***
11 ***commissioner's designee with approval of the Kentucky Board of***
12 ***Education.***
13 *(2)* (a) A school with a school council identified as needing improvement under KRS
14 158.6455 shall include in its school improvement plan actions to strengthen
15 the school council and the school-based decision making process at the
16 school.
17 (b) The local school district shall include in its assistance plan for a school
18 identified in paragraph (a) of this subsection actions to strengthen the
19 functioning of the school council and the school-based decision making
20 process at the school.
21 *(3)*[~~(2)~~] (a) ***An***[~~A scholastic~~] audit team, established under KRS 158.6455 ***(4) and***
22 ***(5)***, auditing a ***persistently low-achieving*** school[~~ a second time that for two~~
23 ~~(2) or more successive accountability cycles failed to meet its goal~~], shall
24 include in the review ***and report***:
25 1. The functioning of the school and the school council;
26 2. ***A determination of the school council and principal's ability to lead***
27 ***the intervention in the persistently low-achieving school***[~~The~~

1 ~~implementation of the school improvement plan and actions related to~~
2 ~~the school council developed under subsection (1)(a) of this section]~~;
3 3. The interaction and relationship between the superintendent, central
4 office personnel, and the council; and
5 4. A recommendation to the commissioner of education~~[in the audit~~
6 ~~report]~~ concerning whether the school council should retain the authority
7 granted to it under KRS 160.345***, whether the council should be***
8 ***replaced, and whether the current principal should remain as***
9 ***principal in the school***. If the recommendation is to transfer the
10 authority of the school council, the team shall also recommend whether:
11 a. The authority should be transferred to the superintendent or ***to the***
12 ***commissioner of education who shall designate staff to manage***
13 ***the school***~~[a highly skilled educator]~~;~~[and]~~
14 b. The school council should continue to act in an advisory capacity
15 until all authority has been restored under subsection ***(8)***~~[(6)]~~ of
16 this section***; and***
17 ***c. The members of the school council shall be replaced by the***
18 ***commissioner of education***.
19 (b) ***An***~~[A scholastic]~~ audit team, established under KRS 158.6455 ***(4) and (5)***,
20 auditing a district of a school subject to ***paragraph (a) of this*** subsection
21 ~~[(2)(a) of this section]~~, shall include in its review ***and report***:
22 1. The overall functioning of the school district;
23 2. The interaction and relationship between the superintendent, central
24 office personnel, school board members, and the council; and
25 3. ***A determination of the district's ability to manage the intervention in***
26 ***the persistently low-achieving school.***
27 ***(4) Within thirty (30) days of receiving the reports of the school and district audits,***

1 ***the commissioner shall act on the recommendations in the reports and other***
2 ***relevant data that the commissioner considers to have bearing on his or her***
3 ***determination of actions to be taken***[~~The implementation of the district assistance~~
4 ~~plan for the audited school. In the audit report, the team shall make a~~
5 ~~recommendation to the commissioner of education concerning whether the school's~~
6 ~~council should retain its authority granted under KRS 160.345. If the~~
7 ~~recommendation is to transfer the authority of the school council, the team shall~~
8 ~~also recommend whether:~~
9 ~~a. The authority should be transferred to the superintendent or a~~
10 ~~highly skilled educator; and~~
11 ~~b. The school council should continue to act in an advisory capacity~~
12 ~~until all authority has been restored under subsection (6) of this~~
13 ~~section.~~
14 ~~(3) (a) 1. If both the school and the district audit teams recommend transfer of the~~
15 ~~council's authority to the superintendent, the commissioner of education~~
16 ~~shall transfer the council's authority under KRS 160.345 to the~~
17 ~~superintendent. The commissioner shall determine whether the school~~
18 ~~council shall continue in an advisory capacity and shall notify the local~~
19 ~~board of education, the district superintendent, the principal of the~~
20 ~~school, and the school council members of the action~~].
21 ***(5)***[~~2.~~] Within thirty (30) days of the commissioner's action ***on the audit teams'***
22 ***recommendations***, the school council ***or local board of education*** may
23 ***appeal the commissioner's action to***[~~request that~~] the Kentucky Board of
24 Education[~~ consider the matter~~] by submitting a written request including any
25 supporting information. The Kentucky Board of Education shall consider the
26 audit reports, the commissioner's decision, and the request for consideration
27 with any supporting information, and make a final determination. ***If the state***

1 ***board is not scheduled to meet within thirty (30) days following the receipt***
2 ***of an appeal of the commissioner's decision, the board chair shall call a***
3 ***special meeting for action upon the appeal.***
4 [~~(b) If both audit teams recommend transfer of the council's authority to a highly~~
5 ~~skilled educator or if both recommend transfer of the council's authority but~~
6 ~~are not in agreement as to the party to be granted authority, the commissioner~~
7 ~~shall make a recommendation to the Kentucky Board of Education, which~~
8 ~~shall make the final determination. The school council and the superintendent~~
9 ~~may submit supporting information. The commissioner shall include as part of~~
10 ~~the recommendation whether the school council shall continue in an advisory~~
11 ~~capacity. The Kentucky Board of Education shall consider the audit reports,~~
12 ~~the commissioner's recommendation, and supporting information provided by~~
13 ~~the school council and superintendent. The commissioner shall notify the local~~
14 ~~board of education, the district superintendent, the principal of the school, and~~
15 ~~the school council members of the recommendation and the Kentucky Board~~
16 ~~of Education's final action.~~
17 ~~(c) If the two (2) audit teams disagree in their recommendations about whether~~
18 ~~the council's authority should be transferred, the school council shall retain its~~
19 ~~authority.~~]
20 ***(6)***[~~(4)~~] ***If a decision is made to transfer powers, duties, and authority under***
21 ***subsection (4) of this section, the local superintendent*** subject to the policies
22 adopted for the district by the local board of education,[~~the local district~~
23 ~~superintendent~~] or the ***commissioner or the commissioner's designee***[~~highly skilled~~
24 ~~educator~~] shall assume all powers, duties, and authority granted to a school council
25 under KRS 160.345 thirty (30) days following the commissioner's ***action on the***
26 ***audit teams' recommendations***[~~recommendation~~] if no ***appeal to***[~~request for~~
27 ~~consideration by~~] the Kentucky Board of Education is submitted or following the

1 final determination of the Kentucky Board of Education ***on an appeal***, whichever is
2 appropriate.
3 ***(7)***[~~(5)~~] Within thirty (30) days after assuming the powers, duties, and authority under
4 subsection ***(6)***[~~(4)~~] of this section, the superintendent or ***the commissioner or the***
5 ***commissioner's designee***[~~highly skilled educator~~] shall consult with the council, if
6 the council has been given an advisory role under subsection ***(4)***[~~(3)~~] of this section,
7 and with stakeholders at the school including parents, the principal, certified staff,
8 and classified staff, and prepare a plan for developing capacity for sound school-
9 based decision making at the school. The commissioner of education shall review
10 the ***proposed*** plan and approve it or identify specific areas for improvement ***before***
11 ***giving final approval***. The superintendent[~~ or highly skilled educator~~] shall report
12 to the commissioner every six (6) months on the implementation and results of the
13 approved plan.
14 ***(8)***[~~(6)~~] The school's right to establish a council or the school's right for the council to
15 assume the full authority granted under KRS 160.345 shall be restored ***if the school***
16 ***is not classified as persistently low-achieving for two (2) consecutive years***[~~when~~
17 ~~the school meets its goal for an accountability cycle as determined by the Kentucky~~
18 ~~Department of Education under KRS 158.6455~~].
19 ***(9) Each persistently low-achieving school shall engage in one (1) of the following***
20 ***intervention options:***
21 ***(a) "External management option" which requires that the day to day***
22 ***management of the school is transferred to an education management***
23 ***organization that may be a for-profit or nonprofit organization that has***
24 ***been selected by a local board of education from a list of management***
25 ***organizations. The management organization may be approved by the***
26 ***Kentucky Board of Education after a rigorous review process, which shall***
27 ***be developed by the state board by the promulgation of administrative***

1 *regulations. The management organization's authority shall include the*
2 *right to make personnel decisions that comply with KRS Chapter 161 and*
3 *any employee-employer bargained contract that is in effect;*
4 *(b) "Restaffing option" which requires the replacement of the principal and the*
5 *existing school-based decision making council unless the audit reports*
6 *under subsection (3) of this section recommended otherwise, screening of*
7 *existing faculty and staff with the retention of no more than fifty percent*
8 *(50%) of the faculty and staff at the school, development and*
9 *implementation of a plan of action that uses research-based school*
10 *improvement initiatives designed to turn around student performance.*
11 *Personnel actions shall comply with KRS Chapter 161 and notwithstanding*
12 *KRS 160.380(1)(c) relating to filling vacant positions and KRS*
13 *160.345(2)(h)1. relating to transfers;*
14 *(c) "School closure option" which requires the closure of an existing school*
15 *and the transfer of its students to other schools within the district that are*
16 *meeting their accountability measures, reassignment of the school's faculty*
17 *and staff to available positions within the district, and which may result in*
18 *nonrenewal of contracts, dismissal, demotion, or a combination of these*
19 *personnel actions which shall comply with KRS Chapter 161 and*
20 *notwithstanding KRS 160.380 (1)(c) relating to filling vacant positions and*
21 *KRS 160.345(2)(h)1. relating to transfers;*
22 *(d) "Transformation option" means a school intervention option that begins*
23 *with replacing the school principal who led the school prior to*
24 *commencement of the transformation option and replacing the school*
25 *council members unless the audit reports under subsection (3) of this*
26 *section recommended otherwise and instituting an extensive set of specified*
27 *strategies designed to turn around the identified school which shall comply*

1 ***with KRS Chapter 161 and notwithstanding KRS 160.380(1)(c) relating to***
2 ***filling vacant positions and KRS 160.345(2)(h)1. relating to transfers; or***
3 ***(e) Any other model recognized by the federal No Child Left Behind Act of***
4 ***2001, 20 U.S.C. secs 6301 et seq., or its successor.***
5 ***The Kentucky Board of Education shall promulgate administrative regulations to***
6 ***establish the process and procedures for implementing the intervention options***
7 ***identified in paragraphs (a) to (e) of this subsection available to local boards of***
8 ***education and the commissioner of education.***
9 ***(10) Professionally negotiated contracts by a local board of education shall not take***
10 ***precedence over the requirements of paragraphs (b), (c), and (d) of subsection (9)***
11 ***of this section.***
12 ***(11) The Department of Education shall provide services and support to assist the***
13 ***schools identified as persistently low-achieving.***
14 ***(12)***[~~(7)~~] If, in the course of a school or district[~~ scholastic~~] audit, the audit team
15 identifies information suggesting that a violation of KRS 160.345(9)(a) may have
16 occurred, the commissioner of education shall forward the evidence to the Office of
17 Education Accountability for investigation.
18 ➔Section 2. KRS 160.380 is amended to read as follows:
19 (1) As used in this section:
20 (a) "Contractor" means an adult who is permitted access to school grounds
21 pursuant to a current or prospective contractual agreement with the school,
22 school board, school district, or school-affiliated entity, at times when
23 students are present. The term "contractor" includes an employee of a
24 contractor;
25 (b) "Relative" means father, mother, brother, sister, husband, wife, son, daughter,
26 aunt, uncle, son-in-law, and daughter-in-law; and
27 (c) "Vacancy" means any certified position opening created by the resignation,

1 dismissal, nonrenewal of contract, transfer, or death of a certified staff
2 member of a local school district, or a new position created in a local school
3 district for which certification is required. However, if an employer-employee
4 bargained contract contains procedures for filling certified position openings
5 created by the resignation, dismissal, nonrenewal of contract, transfer, or death
6 of a certified staff member, or creation of a new position for which
7 certification is required, a vacancy shall not exist, unless certified positions
8 remain open after compliance with those procedures.

9 (2) ***Except as provided in Section 1 of this Act:***

10 (a) All appointments, promotions, and transfers of principals, supervisors,
11 teachers, and other public school employees shall be made only by the
12 superintendent of schools, who shall notify the board of the action taken. All
13 employees of the local district shall have the qualifications prescribed by law
14 and by the administrative regulations of the Kentucky Board of Education and
15 of the employing board. Supervisors, principals, teachers, and other
16 employees may be appointed by the superintendent for any school year at any
17 time after February 1 preceding the beginning of the school year. No
18 superintendent of schools shall appoint or transfer himself or herself to
19 another position within the school district.

20 (b) When a vacancy occurs in a local school district, the superintendent shall
21 notify the chief state school officer thirty (30) days before the position shall be
22 filled. The chief state school officer shall keep a registry of local district
23 vacancies which shall be made available to the public. The local school
24 district shall post position openings in the local board office for public
25 viewing.

26 (c) When a vacancy needs to be filled in less than thirty (30) days' time to prevent
27 disruption of necessary instructional or support services of the school district,

1 the superintendent may seek a waiver from the chief state school officer. If the
2 waiver is approved, the appointment shall not be made until the person
3 recommended for the position has been approved by the chief state school
4 officer. The chief state school officer shall respond to a district's request for
5 waiver or for approval of an appointment within two (2) working days.
6 (d) When a vacancy occurs in a local district, the superintendent shall conduct a
7 search to locate minority teachers to be considered for the position. The
8 superintendent shall, pursuant to administrative regulations of the Kentucky
9 Board of Education, report annually the district's recruitment process and the
10 activities used to increase the percentage of minority teachers in the district.
11 (e) No relative of a superintendent of schools shall be an employee of the school
12 district. However, this shall not apply to a relative who is a classified or
13 certified employee of the school district for at least thirty-six (36) months
14 prior to the superintendent assuming office, or prior to marrying a relative of
15 the superintendent, and who is qualified for the position the employee holds.
16 A superintendent's spouse who has at least twenty (20) years of service in
17 school systems may be an employee of the school district. A superintendent's
18 spouse who is employed under this provision shall not hold a position in
19 which the spouse supervises certified or classified employees. A
20 superintendent's spouse may supervise teacher aides and student teachers.
21 However, the superintendent shall not promote a relative who continues
22 employment under an exception of this subsection.
23 (f) No superintendent shall employ a relative of a school board member of the
24 district, unless on July 13, 1990, the board member's relative is an employee
25 of the district, the board member is holding office, and the relative was not
26 initially hired by the district during the tenure of the board member. A relative
27 employed in 1989-90 and initially hired during the tenure of a board member

1 serving on July 13, 1990, may continue to be employed during the remainder
2 of the board member's term. However, the superintendent shall not promote
3 any relative of a school board member who continues employment under the
4 exception of this subsection.
5 (g) 1. No principal's relative shall be employed in the principal's school, except
6 a relative who is not the principal's spouse and who was employed in the
7 principal's school during the 1989-90 school year.
8 2. No spouse of a principal shall be employed in the principal's school,
9 except:
10 a. A principal's spouse who was employed in the principal's school
11 during the 1989-90 school year for whom there is no position for
12 which the spouse is certified to fill in another school operated in
13 the district; or
14 b. A principal's spouse who was employed in the 1989-90 school year
15 and is in a school district containing no more than one (1)
16 elementary school, one (1) middle school, and one (1) high school.
17 3. A principal's spouse who is employed in the principal's school shall be
18 evaluated by a school administrator other than the principal.
19 4. The provisions of KRS 161.760 shall not apply to any transfer made in
20 order to comply with the provisions of this paragraph.
21 (3) No superintendent shall employ in any position in the district any person who is a
22 violent offender or has been convicted of a sex crime as defined by KRS 17.165
23 which is classified as a felony. The superintendent may employ, at his discretion,
24 persons convicted of sex crimes classified as a misdemeanor.
25 (4) (a) A superintendent shall require a national and state criminal background check
26 on all new certified hires in the school district and student teachers assigned
27 within the district. Excluded are certified individuals who were employed in

1 another certified position in a Kentucky school district within six (6) months
2 of the date of hire and who had previously submitted to a national and state
3 criminal background check for the previous employment.
4 (b) The superintendent shall require that each new certified hire and student
5 teacher, as set forth in paragraph (a) of this subsection, submit to a national
6 and state criminal history background check by the Department of Kentucky
7 State Police and the Federal Bureau of Investigation.
8 (c) All fingerprints requested under this section shall be on an applicant
9 fingerprint card provided by the Department of Kentucky State Police. The
10 fingerprint cards shall be forwarded to the Federal Bureau of Investigation
11 from the Department of Kentucky State Police after a state criminal
12 background check is conducted. The results of the state and federal criminal
13 background check shall be sent to the hiring superintendent. Any fee charged
14 by the Department of Kentucky State Police and the Federal Bureau of
15 Investigation shall be an amount no greater than the actual cost of processing
16 the request and conducting the search.
17 (d) The Education Professional Standards Board may promulgate administrative
18 regulations to impose additional qualifications to meet the requirements of
19 Public Law 92-544.
20 (5) A superintendent shall require a state criminal background check on all classified
21 initial hires.
22 (a) The superintendent shall require that each classified initial hire submit to a
23 state criminal history background check by the Department of Kentucky State
24 Police. If an applicant has been a resident of Kentucky twelve (12) months or
25 less, the superintendent may require a national criminal history background
26 check as a condition of employment.
27 (b) Any request for records under this section shall be on an applicant fingerprint

1 card provided by the Department of Kentucky State Police. The results of the
2 state criminal background check and the results of the national criminal
3 history background check, if requested under the provisions of paragraph (a)
4 of this subsection, shall be sent to the hiring superintendent. Any fee charged
5 by the Department of Kentucky State Police shall be an amount no greater
6 than the actual cost of processing the request and conducting the search.
7 (6) The superintendent may require a contractor, volunteer, or visitor to submit to a
8 national and state criminal history background check by the Department of
9 Kentucky State Police and the Federal Bureau of Investigation. Any request for
10 records under this section shall be on an applicant fingerprint card provided by the
11 Department of Kentucky State Police. The results of the state criminal background
12 check and the results of the national criminal history background check, if
13 requested, shall be sent to the hiring superintendent. Any fee charged by the
14 Department of Kentucky State Police shall be an amount no greater than the actual
15 cost of processing the request and conducting the search.
16 (7) (a) If a school term has begun and a certified or classified position remains
17 unfilled or if a vacancy occurs during a school term, a superintendent may
18 employ an individual, who will have supervisory or disciplinary authority over
19 minors, on probationary status pending receipt of the criminal history
20 background check. Application for the criminal record of a probationary
21 employee shall be made no later than the date probationary employment
22 begins.
23 (b) Employment shall be contingent on the receipt of the criminal history
24 background check documenting that the probationary employee has no record
25 of a sex crime nor as a violent offender as defined in KRS 17.165.
26 (c) Notwithstanding KRS 161.720 to 161.800 or any other statute to the contrary,
27 probationary employment under this section shall terminate on receipt by the

1 school district of a criminal history background check documenting a record
2 of a sex crime or as a violent offender as defined in KRS 17.165 and no
3 further procedures shall be required.
4 (d) The provisions of KRS 161.790 shall apply to terminate employment of a
5 certified employee on the basis of a criminal record other than a record of a
6 sex crime or as a violent offender as defined in KRS 17.165.
7 (8) (a) Each application or renewal form, provided by the employer to an applicant
8 for a classified position, shall conspicuously state the following: "FOR THIS
9 TYPE OF EMPLOYMENT, STATE LAW REQUIRES A STATE
10 CRIMINAL HISTORY BACKGROUND CHECK AS A CONDITION OF
11 EMPLOYMENT. UNDER CERTAIN CIRCUMSTANCES, A NATIONAL
12 CRIMINAL HISTORY BACKGROUND CHECK MAY BE REQUIRED AS
13 A CONDITION OF EMPLOYMENT."
14 (b) Each application or renewal form, provided by the employer to an applicant
15 for a certified position, shall conspicuously state the following: "FOR THIS
16 TYPE OF EMPLOYMENT, STATE LAW REQUIRES A NATIONAL AND
17 STATE CRIMINAL HISTORY BACKGROUND CHECK AS A
18 CONDITION OF EMPLOYMENT."
19 (c) Each application form for a district position shall require the applicant to:
20 1. Identify the states in which he or she has maintained residency,
21 including the dates of residency; and
22 2. Provide picture identification.
23 (9) The provisions of subsections (4), (5), (6), (7), and (8) of this section shall apply to
24 a nonfaculty coach or nonfaculty assistant as defined under KRS 161.185.
25 (10) A school-based decision making council parent member, as defined under KRS
26 160.345, shall submit to a state and national fingerprint-supported criminal history
27 background check by the Department of Kentucky State Police and the Federal

1 Bureau of Investigation. The results of the state criminal history background check
2 and the results of the national criminal history background check, if requested, shall
3 be sent to the district superintendent. Any fee charged by the Department of
4 Kentucky State Police shall be an amount no greater than the actual cost of
5 processing the request and conducting the search. A parent member may serve prior
6 to the receipt of the criminal history background check report but shall be removed
7 from the council on receipt by the school district of a report documenting a record
8 of a sex crime or criminal offense against a victim who is a minor as defined in
9 KRS 17.500 or as a violent offender as defined in KRS 17.165, and no further
10 procedures shall be required.
11 (11) Notwithstanding any provision of the Kentucky Revised Statutes to the contrary,
12 when an employee of the school district is charged with any offense which is
13 classified as a felony, the superintendent may transfer the employee to a second
14 position until such time as the employee is found not guilty, the charges are
15 dismissed, the employee is terminated, or the superintendent determines that further
16 personnel action is not required. The employee shall continue to be paid at the same
17 rate of pay he or she received prior to the transfer. If an employee is charged with an
18 offense outside of the Commonwealth, this provision may also be applied if the
19 charge would have been treated as a felony if committed within the Commonwealth.
20 Transfers shall be made to prevent disruption of the educational process and district
21 operations and in the interest of students and staff and shall not be construed as
22 evidence of misconduct.
23 ➔Section 3. Whereas, the 2009 Advance Placement results confirmed that the
24 concerted effort of Advance Kentucky dramatically boosted student achievement on
25 demanding AP examinations as evidenced by the percentage of passing scores on the
26 2009 AP math, science, and English examinations in Advance Kentucky schools, which
27 increased 76.6 percent above the previous year; and whereas, AP classes increase student

1 achievement by providing rigor in classes and students receive college credit for each
2 passing AP score, the Kentucky Department of Education shall include in Kentucky's
3 Race to the Top application a description of the intent to expand Advance Kentucky
4 schools by twenty (20) schools each year over a four-year period. The Kentucky
5 Department of Education shall provide fifty percent (50%) of the cost of the program with
6 all additional costs to be covered by grants from philanthropy, local district funding, and
7 other sources of funding, which may include funding from the General Assembly.

8 ➔Section 4. Whereas, operating changes need to be made to conform with state
9 and federal regulations, which affect significant federal funding for the Commonwealth,
10 and the Commonwealth needs to implement these changes quickly, an emergency is
11 declared to exist, and this Act takes effect upon its passage and approval by the Governor
12 or upon its otherwise becoming a law.

Speaker-House of Representatives

President of Senate

Attest: Sean T. Burgin
Chief Clerk of House of Representatives

Approved
Governor

Date January 14, 2010

Education and Workforce Development Cabinet

Kentucky Board of Education

Department of Education

(New Emergency Regulation)

703 KAR 5:180E. Intervention system for persistently low-achieving schools.

RELATES TO: KRS 158.6453, 158.6455, 160.346

STATUTORY AUTHORITY: KRS 156.029(7), 156.070(5), 158.6453, 158.6455, 160.3461(1)(a) and (9)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 160.346 as amended by 2010 Ky. Acts ch._____ requires the Kentucky Board of Education to promulgate administrative regulations to establish the process and procedures for implementing school interventions and alternate management options for schools, districts, and the state for persistently low-achieving schools. This administrative regulation establishes the process and procedures for implementing those interventions and alternate governance options.

Section 1. Definitions. (1) "Assessment Team" means a group assigned by the Commissioner of Education to conduct the or audit required by KRS 160.346 who are selected pursuant to the requirements of 703 KAR 5:120 and KRS 158.6455.

(2) "District Leadership Assessment" means the audit that is conducted:

(a) In a district that contains at least one (1) persistently low-achieving school; and

(b) Pursuant to Section 3 of this administrative regulation.

1 (3) “Needs Assessment” means a formal process to ascertain the strengths and weaknesses of the
2 identified school for the purpose of developing the strategy for the school’s turnaround pursuant
3 to KRS 160.346.
4 (4) “School Leadership Assessment” means the audit that is conducted:
5 (a) In a persistently low-achieving school; and
6 (b) Pursuant to Section 2 of this administrative regulation.
7 Section 2. School leadership assessment. (1)Within sixty (60) days of identification as a
8 persistently low-achieving school, a school leadership assessment shall be performed for a
9 persistently low-achieving school by the assessment team to review the functioning of the school
10 council and also the specific leadership capacity of the principal.
11 (2) The assessment shall make a determination of the school council’s and principal’s ability to
12 lead the intervention in the school based upon the following criteria:
13 (a) The school leadership’s ability to function as an effective learning community and support a
14 climate conducive to performance excellence;
15 (b) The school leadership’s ability to actively engage families and community groups to remove
16 barriers to learning in an effort to meet the intellectual, social, career and developmental needs of
17 students;
18 (c) The school leadership’s ability to focus its professional learning program primarily on job-
19 embedded professional learning;
20 (d) The school leadership’s ability to make instructional decisions that focus on support for:
21 1. teaching and learning;
22 2. organizational direction;
23 3. high performance expectations;

1 4. creating a learning culture; and

2 5. developing leadership capacity.

3 (e) The school leadership's ability to organize the school to maximize use of all available

4 resources (both human and fiscal) to support high student and staff performance; and

5 (f) The school leadership's ability to effectively:

6 1. Identify the needs of all students;

7 2. Set specific, measurable goals to address those needs;

8 3. Implement specific strategies to reach those goals;

9 4. Provide adequate resources to implement those strategies; and

10 5. Frequently monitor implementation of the strategies and make adjustments when strategies are

11 not achieving the desired outcomes.

12 (3) The school leadership assessment shall utilize the

13 (a) Standards and Indicators for School Improvement;

14 (b) the Missing Piece of the Proficiency Puzzle;

15 (c) classroom observations;

16 (d) stakeholder interviews;

17 (e) teacher and principal working conditions survey; and

18 (f) portfolio of school records.

19 (4) The assessment team shall specifically make recommendations regarding whether the:

20 (a) School council has the capability and capacity to continue its roles and responsibilities

21 established in KRS 160.345; and

22 (b) Principal has the capability and capacity to continue his or her roles and responsibilities

23 established in KRS 160.345.

(5) A School Leadership Assessment shall be repeated every two years until the school is no longer identified as persistently low-achieving.

Section 3. District leadership assessment. (1)Within sixty (60) days of identification as a district containing a low-achieving school, a district leadership assessment shall be performed by the assessment team to review the functioning of the district administration and its specific leadership capacity related to each identified school.

(2) The assessment team shall specifically make a recommendation regarding whether the district has the capability and capacity to manage the intervention in the identified school(s).

(3) There shall be only one district leadership assessment per district, regardless of the number of persistently low-achieving schools located in the district.

(4) The assessment shall make a determination of the district's ability to manage the intervention in the school based upon the following criteria:

(a) The district leadership's commitment to support each school in its efforts to be effective learning communities and to support climates conducive to performance excellence;

(b) The district leadership's commitment to actively engage families and community groups to remove barriers to learning in an effort to meet the intellectual, social, career and developmental needs of students;

(c) The district leadership's commitment to provide the resources, time and calendars necessary for each school to build professional learning programs based primarily on job-embedded professional learning;

(d) The district leadership's commitment to support instructional decisions that focus on support for teaching and learning, organizational direction, high performance expectations, creating a learning culture, and developing leadership capacity;

1 (e) The district leadership's ability to provide the human, fiscal and time resources to allow each
2 school to support high student and staff performance; and
3 (f) The district leadership's ability to support, through its district improvement plan, school
4 efforts to effectively:
5 1. Identify the needs of all students;
6 2. Set specific, measurable goals to address those needs;
7 3. Implement specific strategies to reach those goals;
8 4. Provide adequate resources to implement those strategies; and
9 5. Frequently monitor implementation of the strategies and make adjustments if strategies are not
10 achieving the desired outcomes.
11 (5) The district leadership assessment shall utilize the:
12 (a) Standards and Indicators for School Improvement;
13 (b) Stakeholder interviews; and
14 (c) Portfolio of district records.
15 (6) A district leadership assessment shall be repeated every two years as long as the district
16 contains at least one (1) persistently low-achieving school.
17 Section 4. Selection of an intervention option. The intervention option applied to a school shall
18 be determined by the school, the district or the Commissioner, based upon the results of the
19 leadership assessments as established in this section:
20 (1) If the school assessment determines that the school council has sufficient capacity to manage
21 the recovery, and the district assessment determines the district has the capacity to support the
22 recovery, the school council shall, within thirty (30) days after the receipt of the assessment
23 determination, choose an intervention option and develop an action plan. The council shall

present the option and plan to the local board of education, which shall give final approval and provide the necessary support and resources for the recovery effort.

(2) If the school assessment determines that the school council does not have sufficient capacity to manage the recovery and recommends the council's authority be transferred and the district audit finds sufficient district capacity to support the recovery and recommends the council's authority be transferred to the superintendent, the superintendent shall, within thirty (30) days after the receipt of the assessment determination, make a recommendation for an intervention option and submit the choice to the local board of education, which shall make the final determination on the intervention option.

(3) If the school assessment determines that the school council has sufficient capacity to manage the recovery, and the district assessment determines the district does not have the capacity to support the recovery, the school council shall, within thirty (30) days after the receipt of the assessment determination, choose the intervention option and submit its choice to the local board of education, which shall review the option chosen by the school council and submit the choice to the Commissioner of Education who shall approve the choice.

(4) If the school assessment determines that the school council does not have sufficient capacity to manage the recovery and recommends the council's authority be transferred, and the district assessment finds the district lacks sufficient capacity to support the recovery and recommends the council's authority be transferred to the Commissioner of Education, the Commissioner of Education shall, within thirty (30) days after receipt of the assessment determination and in consultation with the school council, superintendent and local board of education, determine the intervention option. The identified school and local district shall implement the intervention option with support from the Kentucky Department of Education.

1 Section 5. Implementation of intervention options. (1) A school or district engaging in the Re-
2 Staffing Option shall:
3 (a) Replace the principal with an individual who has specific training in turning around low-
4 achieving schools and grant the new leader sufficient operational flexibility, including staffing,
5 calendars, time, and budgeting, to fully implement a comprehensive approach in order to
6 substantially improve student achievement outcomes and, if a high school, increase high school
7 graduation rates. The current principal shall be eligible to remain if the school leadership
8 assessment determines the principal has the capacity to lead the recovery.
9 (b) Use standards adopted locally by the board of education to measure the effectiveness of staff
10 who can work within the turnaround environment to meet the needs of students;
11 (c) Select new staff to replace those transferred or dismissed;
12 (d) Implement strategies designed to increase opportunities for career growth, including more
13 flexible working conditions that are designed to recruit, place, and retain staff with the skills
14 necessary to meet the needs of the students in the turnaround school;
15 (e) Provide staff with ongoing, high-quality, job-embedded professional development that is
16 aligned with the school's comprehensive instructional program and designed with school staff to
17 ensure that they are equipped to facilitate effective teaching and learning and have the capacity
18 to successfully implement school reform strategies;
19 (f) Adopt a new governance structure, shall include requiring the school to report to either the
20 district or the Kentucky Department of Education;
21 (g) Use data to identify and implement an instructional program that is research-based and
22 vertically aligned from one grade to the next as well as aligned with the required core academic
23 standards established in 704 KAR 3:303;

1 (h) Promote the continuous use of student data from formative, interim, and summative
2 assessments to inform and differentiate instruction in order to meet the academic needs of
3 individual students;
4 (i) Establish schedules and implement strategies that provide increased learning time; and
5 (j) Provide appropriate social, emotional, and community-oriented services and supports for
6 students.
7 (2) A school or district engaging in the External Management Option shall:
8 (a) choose an education management organization (EMO) from a list of approved EMO's
9 established by the Kentucky Board of Education pursuant to Section 6 of this administrative
10 regulation; and
11 (b) Contract with the EMO to provide day to day management of the school.
12 (3) A school or district engaging in the Transformation Option shall:
13 (a) Replace the principal who led the school prior to commencement of the transformation model
14 with certified principal who has specific training in turning around low-achieving schools. The
15 current principal shall be eligible to remain if the school leadership assessment determines the
16 principal has the capacity to lead the recovery and has specific training in turning around low-
17 achieving schools;
18 (b) Use rigorous, transparent, and equitable evaluation systems for teachers and principals that:
19 1. Take into account data on student growth as a significant factor as well as other factors such as
20 multiple observation-based assessments of performance and ongoing collections of professional
21 practice reflective of student achievement and increased high-school graduations rates; and
22 2. Are designed and developed with teacher and the replacement principal's involvement;

(c) Identify and provide additional leadership and compensation opportunities to school leaders, teachers, and other staff who have increased student achievement and high-school graduation rates, if applicable, and identify and remove those who, after ample opportunities have been provided for them to improve their professional practice, have not done so;

(d) Provide staff with ongoing, high-quality, job-embedded professional development that is aligned with the school's comprehensive instructional program and designed with school staff to ensure they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies which shall include:

1. Subject-specific pedagogy;

2. Instruction that reflects a deeper understanding of the community served by the school; and

3. Differentiated instruction;

(e) Implement strategies designed to increase opportunities for career growth which shall include more flexible working conditions designed to recruit, place, and retain staff with the skills necessary to meet the needs of the students in a transformation school;

(f) Use data to identify and implement an instructional program that is research-based and vertically aligned from one grade to the next as well as aligned with state academic standards;

(g) Promote the continuous use of student data from formative, interim, and summative assessments to inform and differentiate instruction in order to meet the academic needs of individual students;

(h) Increase learning time and create community-oriented schools that:

1. Establish schedules and implement strategies that provide increased learning time; and

2. Provide ongoing mechanisms for family and community engagement; and

(i) Provide operational flexibility and sustained support that:

1. Gives the school sufficient operational flexibility, including staffing, calendar, time, and budgeting to fully implement a comprehensive approach to substantially improve student achievement outcomes and increase high school graduation rates; and

2. Ensures that the school participates in ongoing, intensive technical assistance and related support from the local district and the state.

(4) A school or district engaging in the "School Closure Option" shall develop a plan for the closure of the school. The plan shall include:

(a) A process for the transfer of students and the reassignment of staff to higher performing schools in the district;

(b) A determination regarding the use of the existing facility and other assets; and

(c) A method of monitoring the progress of students in their new school environment.

Section 6. Establishment of approved External Management Organizations.

(1) The list of approved EMOs shall be created by the Commissioner of Education following the application process established in subsection (2) of this section.

(2) The Commissioner shall issue a request for information to solicit EMO applicants who shall detail the scope of the services they are able to provide to persistently low-achieving school. The request for information shall solicit the following information:

(a) The ability of the EMO to staff the school with dynamic leadership during the period of the contract;

(b) The ability of the EMO to conduct a needs assessment in the school and develop a plan of action based on the needs assessment;

(c) The ability of the EMO to deliver a comprehensive list of services designed to turnaround the school(s);

1 (d) The ability of the EMO to screen staff and make decisions on staff assignments;

2 (e) Its familiarity with Kentucky school laws and administrative regulations;

3 (f) The experience of the EMO in turning around low-achieving schools;

4 (g) References from other low-achieving schools or school districts;

5 (h) Evidence by the EMO that its provision of services includes instructional leadership,

6 professional learning support for teachers and other staff, and services to families and

7 community stakeholders; and

8 (i) Evidence of the EMO's financial stability, any pending or threatened litigation, and liability

9 insurance coverage.

10 (3) The Commissioner of Education shall review all responses and determine which applicants

11 meet the criteria in subsection (2) of this section. The qualifying applicants shall be submitted to

12 the Kentucky Board of Education for approval. The list of approved EMOs shall be made

13 public upon approval by the Kentucky Board of Education.

14 Section 7. Incorporation by Reference. (1) The following material is incorporated by reference:

15 (a) "Standards and Indicators for School Improvement", dated March 30, 2000; and

16 (b) "The Missing Piece of the Proficiency Puzzle, dated June 2007.

17 (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at

18 the Kentucky Department of Education, First Floor, Capital Plaza Tower, Frankfort, Kentucky

19 40601, Monday through Friday, 8:00 a.m. to 4:30 p.m..

KENTUCKY'S STATEWIDE SYSTEM OF SUPPORT
ASSIST TEAMS

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Overview

In 2001 Congress enacted the most recent revision to the Elementary and Secondary Education Act (ESEA) more commonly referred to as the No Child Left Behind Act (NCLB). Among the many facets of the law were consequences for schools and school districts that were not making Adequate Yearly Progress (AYP) towards achievement goals for all students. In particular, the law set specific corrective actions that should be taken for schools and school districts that failed to meet the AYP targets for several consecutive years.

In Kentucky, our schools and school districts had been operating under a high stakes accountability model for over a decade when NCLB was enacted. We had been assessing our students and designating schools and districts for improvement during that time so it was nothing new to our state when the consequences under NCLB begin to occur.

Reporting under NCLB began with our state assessment results at the conclusion of the 2002-2003 school year. The system in Kentucky used a graduated scale and school districts in Kentucky were identified using a Tier status. Tiers were based on the number of years a school district did not meet the AYP targets.

- Tier 1 occurred after a district had failed to meet AYP for two consecutive years;
- Tier 2 occurred after three consecutive years; and
- Tier 3 occurred after four consecutive years.

Each tier had specific consequences that became increasing more severe. At the Tier 3 level, the state is required to take corrective action in order to assist in "turning around" the school district. Based on the timeline established under NCLB, the first time that a school district would reach the Tier 3 status was at the conclusion of the 2005-06 school year.

In the fall of 2005, in anticipation of districts moving to Tier 3 the next year, the Kentucky Department of Education (KDE) began to consider a new approach to assisting these districts. Discussions began to occur between KDE and two of our education partners, the Kentucky Association of School Superintendents (KASS) and the Kentucky School Boards Association (KSBA), about a new model that would be unique in its intervention approach. Never before had these partners collaborated in the way they would for this initiative.

Voluntary Partnership Assistance Teams

The result of this partnership effort was the creation of a new model of intervention called the Voluntary Partnership Assistance Team (VPAT). The program would begin in the winter of 2006 as a pilot with seven school districts. School districts that were currently at Tier 2 would

have the opportunity to apply to the program. It was labeled as "voluntary" because, if chosen for the pilot, districts would be participating before they achieved Tier 3 status the next year.

The VPAT intervention would provide the local district with an intensive, collaborative, assistance process designed to build capacity at the district and school levels and provide essential support and oversight for immediate and sustained improved student achievement. The membership of each VPAT would be a five person team that would be formed to assist the district in reviewing the needs of the district and developing an improvement plan to address those needs. Each team would consist of the district superintendent (who would act as team leader), a KASS mentor for the superintendent, a KSBA Board Mentor, a Highly Skilled Educator (the Highly Skilled Educator program began in Kentucky with education reform in 1990 and has proven success in turning around schools), and a KDE staff member. While this base team was required, districts could choose to add membership if they felt it meet their circumstances.

The VPAT process began with each pilot district participating in a scholastic audit. The scholastic audit is a comprehensive analysis of the learning environment, efficiency, and academic performance of a school district. The purposes of the audit are to analyze strengths and limitations of the instructional and organizational effectiveness and to make specific recommendations to improve teaching and learning.

As stated earlier, districts that were at Tier 2 following the 2004-05 test results were given the opportunity to volunteer for the pilot phase of this program. Seven districts responded and were accepted into the pilot: Christian County, Fulton County, Gallatin County, Lawrence County, Madison County, Monroe County, and Russellville Independent. These districts all became Tier 3 districts after release of the 2006 NCLB Reports. According to the accountability system in Kentucky, these districts must meet AYP for two consecutive years in order to be released from consequences. That criteria means that all seven would remain in Tier 3 status until at least the release of the 2008 NCLB scores (August 2008).

In the fall of 2006 the VPAT program became a permanent part of the state's system of support. The VPAT program is one of three options the state made available to districts who had reached the Tier 3 level of consequences under the No Child Left Behind Act of 2001 (NCLB). The other two options are State Assistance Teams (SAT) and Network Assistance Teams (NAT). These three options make up the state's system of support as required by NCLB for districts falling into this level of consequences. The chart on the next page describes each option.

Option A - VPAT Voluntary Partnership Assistance Team	**Option B – SAT** State Assistance Team	**Option C - NAT** Network Assistance Team
Five-member team made up of the local superintendent, an assigned superintendent mentor from the Kentucky Association of School Superintendents (KASS), a representative from the Kentucky School Boards Association (KSBA), a Highly Skilled Educator, and a KDE administrator.	Flexible teams consisting of field-based staff (Achievement Gap Coordinators and District Support Facilitators) and Frankfort based staff. One team member is the lead for coordinating communication and activity of the team while the other members move on and off the team based on the need for their areas of expertise.	Local district leadership provides evidence of the capacity to work with a network proven effective in improving student achievement and building capacity for support in implementing improvement plans. A review of school reform networks is available at http://llanes.panam.edu/reform/srn/intro.

In 2007-08 there were 45 Tier 3 districts in Kentucky: 24 VPAT, 12 SAT and 9 NAT.

What have we learned?

With the release of the NCLB data for 2008, we now can assess the success of the program with the original seven districts. With the 2008 scores we have the first opportunity for a district to come completely out of NLCB consequences. 43% (3 of 7) districts from the pilot are now out of consequences. Keep in mind that these districts had never met AYP since the implementation of NCLB. They must meet AYP for two consecutive years to exit consequences.

Pilot Districts	2007 and 2008 AYP Results
Christian County	Did not meet AYP in either year, remain Tier 3
Fulton County	Out of Consequences - Meet all AYP targets in both 2007 and 2008
Gallatin County	Meet AYP in 2007, left VPAT program in 2007-08, failed to meet AYP in 2008, still at Tier 3. Need to meet AYP in 2009 and 2010 to exit consequences.
Lawrence County	Did not meet AYP in 2007, but did meet AYP in 2008. Need to meet AYP in 2009 to exit consequences.
Madison County	Out of Consequences - Meet all AYP targets in both 2007 and 2008
Monroe County	Out of Consequences - Meet all AYP targets in both 2007 and 2008
Russellville Independent	Meet AYP in 2007, left VPAT program in 2007-08, failed to meet AYP in 2008, still at Tier 3. Need to meet AYP in 2009 and 2010 to exit consequences.

Progress is coming more quickly since the program was expanded. Six of the additional seventeen (17) VPAT districts (35%) that entered the program the year after the pilot (2006-07) made AYP in both 2007 and 2008 and are out of consequences. That makes the success rate for VPAT (38%).

The success of the VPAT program has been most evident in the districts where the district leadership (board of education and superintendent) have embraced the intent of the group, accepted the constructive criticism the scholastic audit brings and integrated the recommendations of the team into their daily practice. The two districts that have not seen an improvement in their student achievement have not been fully prepared to accept the intensive, collaborative, assistance process designed of the VPAT and were not ready to build capacity at the district and school levels and provide essential support and oversight for immediate and sustained improved student achievement.

The VPAT program has shown the most significant success rate, followed closely by the SAT option (33.3%). Only one district that chose the NAT option (11%) has made it out of consequences. This option has proven less effective in building leadership capacity in school districts and to helping bring up student achievement.

The Future

We believe that we have created a high quality, cost efficient intervention model that has gone beyond any intervention model we have used in Kentucky in the past. Previous interventions have focused on the department of education coming in to "fix" a school or district. The VPAT model is, by design, a model that assists school districts in improving student achievement by providing needed support while allowing the district to maintain control and take ownership for their actions. Tommy Floyd, superintendent of the Madison County Schools, had this to say about the VPAT experience and what it has meant to his district as they have improved the learning of their students:

"I believe the VPAT program was the catalyst for the positive changes in student learning that have occurred in the Madison County Schools over the last two years. The intervention team provided the support and guidance necessary for our district to move forward. More importantly, unlike some previous intervention models, the VPAT model leaves the district in control and allows us to build our own internally capacity and to make our own decisions about what is best for our kids."

Kentucky's Highly Skilled Educators Program

http://www.education.ky.gov/KDE/Administrative+Resources/School+Improvement/Assistance+to+Schools/Highly+Skilled+Educators/

History and Statutory Authorization

In 1990, the Kentucky Education Reform Act (KERA) brought a transformation of education in the state. One of the provisions of the original KERA was the Distinguished Educator (DE) Program, codified as KRS 158.782, which was the predecessor to the current Highly Skilled Educators (HSE) Program. The purpose of the DE Program was twofold. First, it was initiated to provide support to schools whose accountability index declined over a two-year biennium. Second, it was designed as a means to reward our most outstanding teachers and administrators with recognition for excellence, a salary incentive, and an opportunity to assist other teachers, administrators and schools. Schools whose scores declined over five points were considered to be "in crisis". Schools "in decline" and schools "in crisis" were assigned a Distinguished Educator.

Changes from DE to HSE

In 1998, the General Assembly changed the name from the Distinguished Educator Program to the Highly Skilled Educators Program as the state's assessment system transitioned from KIRIS to CATS. The statute was revised to provide a focus of assistance to low-performing schools.

Program Facts

In 1994-1996, 53 schools were served by 50 DEs. Improved Academic Index at all 53 schools were reported with 34 of the 53 exceeding their goal.

In 1996-1998, 178 schools were served by 49 DEs. Of the 167 schools with improved Academic Index reported, 85 exceeded their goal.

In 1998-2000, 66 schools were served by 63 HSEs. Reports indicated that 65 schools had an improved Academic Index. All Level 3 schools moved out of the Level 3 classification by meeting or exceeding their goal.

In 2000-2002, 53 schools and 2 districts were served by 54 HSEs. The Academic Index improved at 46 schools. Again, all Level 3 schools moved out of the Level 3 classification by meeting or exceeding their goal.

In 2002-2004, 84 schools and 4 districts were served by 55 HSEs. Improved Academic Index at 80 schools were reported. All Level 3 schools with the exception of 2 moved out of the Level 3 classification by meeting or exceeding their goal.

In 2004-2006, 47 schools and 2 districts were served by 49 HSEs. The Academic Index improved at all schools and districts served by HSEs by an average of 7.5 points. All but 3 Level 3 schools came out of assistance by meeting or exceeding their goal.

Eligibility Criteria

In order to be eligible to apply for a position as a Highly Skilled Educator the following criteria must be met:

A. Kentucky certification as an educator

B. A minimum of five completed years of successful experience as a teacher or educational administrator

C. Involvement in teaching or administration completed within the last three years

D. Current full-time employment with a Kentucky school district

Selection Process

Those who meet the eligibility criteria must submit the following by the established deadlines stated on the application in order to participate in the selection process:

1. A completed application

2. A resume

3. Four confidential references

4. Submit a map showing current home and work county locations and travel availability if selected as an HSE

The selection process is rigorous and applicants are held to the highest standards. Candidates progress through a series of steps that serve to continuously narrow the pool of applicants from which the next cadre will be selected. The application process covers a period of five months and consists of the following steps:

1. Written Assessment:

Open response questions are designed by a team of KDE experts and administered to applicants then responses are double-blind scored by KDE personnel.

2. Performance Events:

Based on the written assessment scores, candidates are selected to move to the second phase of the selection process. Selected candidates participate in a full day assessment which includes a simulated HSE experience, delivery of a professional development session and a technology assessment.

3. Reference Checks:

KDE personnel conduct in-depth reference checks for the applicants who successfully complete the performance events evaluation. Background checks by the Kentucky State Police Agency are also completed.

4. Site Visits:

KDE representatives make visits to work sites of all applicants who advance from Step 3. The site visit includes shadowing the applicant and interviews with applicants, colleagues, students and supervisors.

5. Interviews:

KDE personnel conduct an interview with each prospective candidate still remaining in consideration for placement.

Highly Skilled Educators Training

Once applicants are selected as HSEs, they are required to participate in three to four weeks of training during the months of July and August. The specialized training assures that these educators have the skills and resources necessary to deliver exceptional service to schools under a variety of diverse and unique circumstances.

Additionally, trainings continue throughout the school year through monthly regional team meetings and HSE cadre training sessions that are scheduled every 6 - 8 weeks. Training topics are selected based on the needs of the schools in assistance and the HSEs' Individual Growth Plans.

Schools Receiving Assistance and HSE Assignment

Highly Skilled Educators provide assistance to schools with a growth accountability index that falls below the assistance point: Level 1, Level 2, and Level 3.

Level 3 -- classification assigned to a school that has an index score that places it in the lowest one-third (1/3) of all schools below the assistance line. Level 3 schools are first priority when determining HSE assignments.

Level 2 -- classification assigned to a school that has an index score that places it in the middle one-third (1/3) of all schools below the assistance line.

Level 1 -- classification assigned to a school that has an index that places it in the highest one-third (1/3) of all schools below the assistance line.

HSE educational and professional experiences are matched with the needs of the schools in need of assistance. Geographical information is also a consideration when making placement decisions.

HSE Employment and Compensation

Originally DEs were to receive as compensation 150% of their salary at the time of appointment, adjusted for twelve-month employment. In the 1994-1996 budget bill language, this was adjusted downward to 135%.

HSEs remain employees of their home district. The Kentucky Department of Education signs a Memorandum of Agreement (MOA) with the HSEs' home districts on an annual basis. MOAs are renewable for a second year and may be renewable for a third year.

HSEs continue to receive their salary, with no loss of benefits, through their home school districts. HSEs receive 135% of their current daily salary for 235 days of employment. The additional 35% is not

calculated into retirement benefits. The cap for salary changes year to year. The projected cap for first year salaries for HSEs during the 2010-2011 year is at $100,000 - $107,000.

Evaluation of Highly Skilled Educators

HSEs remain as employees of their home district while serving in the program; therefore, traditional personnel evaluations are not conducted by KDE. Informal evaluations are used to assess the work of the HSEs on a continuing basis using the following tools:

a. HSE monthly reports

b. HSE mentor visits

c. HSE cadre participation

d. Development and presentation of HSE cadre training tools, resources and documents

e. Anecdotal information shared by HSEs

f. Feedback from HSE ASSIST Team Leaders

g. Conversations with HSEs and school/district administrators

h. HSE end of the year and/or exit reports

i. State ASSIST accountability reports for assisted schools

j. NCLB reports for assisted schools

Impact

A study by the Partnership for Kentucky Schools entitled *Improving Low-Performing Schools: A Study of Kentucky's Highly Skilled Educators Program*, drew several conclusions about the impact and effectiveness of the Highly Skilled Educators Program. Their data found impact in four critical areas. The areas and some of the findings are below:

Curriculum and Instruction

a. Teachers attributed improvement in their teaching to HSEs

b. Teachers reported that HSEs contributed to improvement in teacher knowledge of effective teaching

c. Teachers credited HSEs with helping to improve curriculum and instructional coordination in the school

d. Teachers credited HSEs with increasing attention to state test data

Professional Development

a. Teachers found professional development to be more focused on curriculum and instruction and the critical needs of the school

Leadership, School Organization and Morale

a. Teachers believed that school leadership had improved as a result of the HSE

b. Teachers believed that the presence of an HSE improved morale, and contributed to a shared school-wide focus and a culture of collaboration that had not previously existed

Test Scores

a. Overall, HSE schools outperformed the rest of the schools in the state

b. A higher proportion of HSE schools (56%) met their accountability index goal than did non-HSE schools (46%)

c. Thirteen percent fewer HSE schools than non-HSE schools had scores that were lower than the previous biennium

d. No HSE school remained in need of assistance while 8% of non-HSE schools fell into that category

e. Overall, HSE schools gained twice as much as the non-HSE schools

The report also provides recommendations for strengthening the program in the future.

The scope and quality of the HSE intervention turns what would otherwise be a punitive set of sanctions into assistance that is appreciated and has a positive impact on low-performing schools.

The MISSING PIECE

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OF THE PROFICIENCY PUZZLE

The MISSING PIECE OF THE PROFICIENCY PUZZLE

Recommendations for Involving Families and Community in Improving Student Achievement

Commissioner's Parents Advisory Council
Final Report to the Kentucky Department of Education
June 2007

The Commonwealth Institute for Parent Leadership

Kentucky Association of School Councils

*every*child. *one*voice.

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Kevin M. Noland
Interim Commissioner of Education

Dear Friends of Education:

Although the Commissioner's Parents Advisory Council began under my predecessors and was given its current charge by Commissioner Gene Wilhoit, I and the Kentucky Department of Education staff fully share their deep commitment to increasing parent and community involvement in Kentucky schools.

I am proud of our state's accomplishments in education. The many provisions in Kentucky law for ensuring that parents and community members have a powerful voice in our public schools have, I am certain, been a wellspring of this success. But more remains to be done, and the proposed new standard for parent and community engagement in schools and recommendations for future action point the way.

Since becoming Interim Commissioner, I have attended every CPAC meeting from start to finish, and I know how dedicated its members are and how much effort they have put into their work. I am grateful to Cindy Baumert and Dennis Pearce for their leadership, and to the CPAC members for their constructive efforts and spirit of true partnership. I also commend the KDE staff for its fine work and many contributions.

The real work now lies before us. I will urge my successor to embrace this report and work closely with CPAC members and KDE staff to make our state the first in the nation to rise to proficiency in the practice of family and community engagement.

Best wishes,

Kevin M. Noland

Kevin Noland
Interim Commissioner
Kentucky Department of Education

Executive Summary

From its beginning under Commissioner Wilmer Cody in 1999, the purpose of the Commissioner's Parents Advisory Council (CPAC) has been to advise the Kentucky Department of Education on policy issues and to increase parent leadership for improving public education. CPAC has over 30 parent members from across the state, selected at the discretion of the commissioner.

On March 30, 2006, the then Commissioner Gene Wilhoit gave CPAC members this instruction: "My goal is outstanding practice to involve parents in every school in Kentucky. Your charge is to pull together an agenda for the state and produce a document that builds on what exists and pushes us to a higher level."

Building on our state's long experience with reform, CPAC strongly recommends that Kentucky become the first state in the nation to set a standard for family and community involvement that is focused on improving student achievement. This standard includes six objectives designed to involve families and the community to improve student achievement, so that our state will meet its goal of all children reaching proficiency by 2014 and thereafter. We wish to make clear that for the purposes of this report, parents and/or families means natural, adoptive or foster parents; close relatives; legal or educational guardians; and/or community or agency advocates.

In the *Kentucky Family and Community Involvement Guide to Student Achievement*, a comprehensive performance assessment tool, CPAC proposes specific school-level descriptors for each objective. These descriptors include provisions that every student in Kentucky will have a parent, or another adult, who knows how to support that student's academic achievement. The objectives are as follows:

1. Relationship-building: The school staff builds productive, personal relationships with parents of all students.
2. Communications: Two-way information in many forms flows regularly between school staff and parents about students' academic achievement and individual needs.
3. Decision-making: School staff encourages, supports, and expects parents to be involved in school improvement decisions and to monitor and assist school improvement.
4. Advocacy: For each student, the school staff identifies and supports a parent or other adult who can take personal responsibility for understanding and speaking for that child's learning needs.
5. Learning Opportunities: The school staff ensures that families have multiple opportunities to understand how to support their children's learning.
6. Community Partnerships: The school staff engages and partners with community members to plan and implement substantive work to improve student achievement.

To implement these objectives, CPAC recommends that the Kentucky Department of Education take four major actions:

1. **Set high expectations, measure performance, and report progress.** Adopt the proposed Kentucky Family and Community Involvement Guide to Student Achievement as an audit tool that can serve as a scoring guide, or rubric. In addition, incorporate these individual performance descriptors, as appropriate, into the Standards and Indicators for School Improvement (SISI) document.
2. **Help schools improve relationship-building and communications.** Encourage schools to adopt a "customer satisfaction" model by developing training modules that local districts

can use. Make data and other information on family involvement available on the KDE website, including the results of a regular statewide parent survey. Establish family and community involvement advisory councils at all levels – local, district, and state.

3. **Provide resources and support.** Develop an infrastructure for state support of districts and schools that includes training, resources, tools, and recognition for real achievement in family and community involvement. Add reader-friendly information and resources to the KDE website, including the work of the CPAC, research on parent involvement and effective practice, as well as state and community-based resources that could facilitate coordination of family involvement.
4. **Build capacity through professional development.**
    - Invest in parents by providing funding for statewide parent leadership training, developing a parent education curriculum for monitoring a student's progress, and developing a diverse network of parents who are trained and supported by the Kentucky Department of Education to act as mentors, trainers, and team members to assist Kentucky schools, districts, and parents.
    - Invest in educators, through professional development, on strategies for engaging families in improving student achievement.
    - Invest in collaboration by developing joint parent-teacher training on cultural competence, and by improving training for SBDM councils and audit teams on the effective use of the new objectives and performance descriptors.
    - Invest in evaluation by developing measurements to assess the impact of professional development on levels of family and community involvement, teacher satisfaction, school climate, and student outcomes; and by recognizing schools and districts that have fully implemented the new objectives.

It's easy to become overwhelmed with the number of underachieving students. I want this report to strongly express the importance of each student needing a parent, advocate, or mentor to assist in achieving academic success. If everyone could be encouraged to first reach one student and then continue to add others, I believe we could win the battle and close the achievement gap.

Tina Brooks, Fayette County

History and Mission

From its beginning under Commissioner Wilmer Cody in 1999, the purpose of the Commissioner's Parents Advisory Council (CPAC) has been to advise the Kentucky Department of Education on policy issues and to increase positive leadership of parents for improving public education. The CPAC considers topics that are of interest to parents, especially ways that parents and communities can assist schools in raising the achievement level for all schools and every student.

The Commissioner's Parents Advisory Council has over 30 parent members from across the state, nominated by the Kentucky Parent Teacher Association, the Kentucky Association of School Councils, and the Prichard Committee for Academic Excellence. CPAC members are selected at the discretion of the Commissioner for two-year terms and meet quarterly. A majority of CPAC members have completed the Commonwealth Institute for Parent Leadership (CIPL) training offered by the Prichard Committee. In addition, many have benefitted from training provided by the PTA and Kentucky Association of School Councils. These three leadership programs have created a cadre of experienced parent leaders who have become local, district, and state PTA leaders; members of local school boards and school based decision-making councils; and members of state bodies such as the state scholastic audit team, the state textbook selection committee, and the special education legislation committee.

The Kentucky Education Reform Act (KERA) of 1990, one of the first and best-designed standards-based state education reform laws, was a landmark both for the state and the nation. KERA relied partly on National PTA Standards when the general assembly in 1990 required that parents be members of school-based decision making (SBDM) councils, making Kentucky the only state in the union with required parent involvement in key decisions about learning and instruction for all K-12 schools.

It is our state's goal that all Kentucky children, no matter where they live or what their background, will become proficient learners of the core curriculum by the year 2014 and thereafter. CPAC members see their mission as establishing as a high priority the kind of parent and community involvement that will strengthen the accountability system established by KERA and will have a positive impact on student achievement throughout Kentucky.

Knowledgeable, informed parents from across the state have taken part in the process of writing this report. It's proof that parents understand the need for parent involvement to be a means to an end in schools, rather than an end in itself. It is our hope that this guide will help educators move to that perspective as well, so that engaging parents becomes an important strategy for improving achievement.

Beverly Raimondo, Fayette County

In the 17 years since the law was passed, we have traveled more than two-thirds of the way to 2014. At its April 2007 meeting, the state board examined performance data on the progress that schools are making toward proficiency and found that fewer than half of Kentucky's public schools are projected to meet the state's accountability goal by the 2014 deadline. State Board members have determined that a "cultural change" is needed in public schools across the state and emphasized the urgency needed to ensure that Kentucky schools reach the state goal.

In 2006, roughly 51 percent of schools were meeting their goals, 37 percent were "progressing," and 12 percent were either "progressing but declining"or "in assistance." Data projections of performance in 2014 indicate that only 37 percent of schools will achieve the state goal. Approximately 50 percent will be progressing, and 13 percent of schools will be in assistance.[1]

This same concern has been building within CPAC discussions for the past few years. On March 30, 2006, the then Commissioner Gene Wilhoit personally gave CPAC members this instruction:

> My goal is outstanding practice to involve parents in every school in Kentucky. Your charge is to pull together an agenda for the state and produce a document that builds on what exists and pushes us to a higher level.

The opportunity to build on Kentucky's history as a pioneer in school improvement across an entire state was irresistible. Immediately, CPAC members began working to take this charge and make it their own. First, they developed a vision to share with the leadership of the Kentucky Department of Education, a vision centered on Kentucky children:

> The vision of the Commissioner's Parent Advisory Council is outstanding parent and community involvement practices that focus on improved student achievement and that touch all students in every Kentucky school.

Throughout our work, CPAC members have studied state and national standards, research on the impact of parent and community involvement on student achievement, and the literature on effective practice. Accordingly, the resolve was made to recommend proven practices, so that districts and schools would make available opportunities for family and community involvement that were defined by state and national standards, examined by well-designed and rigorous research, and tested through effective programs.

Building on these findings and on our state's long experience with reform, CPAC members unanimously recommend that Kentucky become the first state in the nation to adopt comprehensive objectives and school-level performance descriptors for family and community involvement focused on improving student achievement. In the *Kentucky Family and Community Involvement Guide to Student Achievement* in Appendix 1, CPAC proposes specific school-level descriptors for each objective, which include provisions that every student in Kentucky will have a parent, or another adult, who knows how to support that student's academic achievement. The purpose of each objective is to involve families and the community to improve student achievement, so that our state will meet its goal of all children reaching proficiency by 2014 and thereafter.

Educational Advocacy works. We should not be afraid to say that children need the support of their parents and/or other adult advocates to become college-ready graduates and productive citizens. All students need assistance in preparation for postsecondary education or a career. It is no longer acceptable to barely pass all your high school classes and get your diploma.

Cindy Baumert, Jefferson County

Why is this Important?

Thirty years of research and a long history of federal and state legislation demonstrate the importance of parent involvement in their children's learning and development. In the No Child Left Behind Act (NCLB) of 2001, the federal government for the first time offered a definition of parent involvement:

> Regular, two-way and meaningful communication about student learning and other school activities, including:
>
> - Assisting their child's learning
> - Being actively involved in their child's education at school
> - Serving as full partners in their child's education and being included, as appropriate, in decision-making and on advisory committee to assist in the education of their child
> - The carrying out of other activities such as those described in section 1118.
> - Public Law 107-110, Title IX, Section 9109 (32)

CPAC has adopted this basic definition of parent involvement as its premise. This report further holds that schools should develop a productive relationship with every student's parent(s) or family, and provide enough resources and support so that each student will have a parent or other adult who knows and understands the following:

- The academic expectations and individual needs that must be addressed to prepare that child for post-secondary education or work
- A variety of ways to access resources to help the child meet these academic expectations and address his or her individual needs
- How to advocate for the child's educational rights under Kentucky law and federal programs such as No Child Left Behind (NCLB) and the Individuals with Disabilities Education Act (IDEA)
- The basic duties, responsibilities and benefits of serving on committees, task forces, councils, and parent organizations

This definition and these basic expectations underlie all the recommendations proposed in this report. We wish to make clear that for the purposes of this report, parents and/or families means natural, adoptive or foster parents; close relatives; legal or educational guardians; and/or community or agency advocates.

It's the law. Both Kentucky law and the No Child Left Behind Act require that all students must achieve proficiency in reading and math by the year 2014, that gaps between different groups of students must be eliminated, and that every school must make adequate progress each year to meet those goals. In addition, Kentucky law requires all students reach proficiency in science, social studies, writing, practical living, and arts and humanities. These laws, and additional legislation such as the federal Individuals with Disabilities Education Improvement Act (IDEA) and the state achievement gap bill (Senate Bill 168), specifically define ways in which parents are to be involved in ensuring that their child becomes a proficient learner.[2] (For more information about state and federal law, see Appendix 3.)

We know that our schools are staffed with dedicated, hard-working teachers and administrators, but we also know that all stakeholders must take part in the school improvement process. Disparities in parent and family engagement and in the use of community resources widen the achievement gap and contribute to poor school performance. Our state has raised its standards and expectations for students; now we must raise our expectations for parents, families and community members as well. We need a vision for parent and community involvement, one that will focus our efforts in identifying barriers and providing resources to improve achievement for all students.

Research shows the way. Family and community involvement can have a powerful and positive impact on student outcomes. According to *A New Wave of Evidence: The Impact of School, Family and Community Connections on Student Achievement*, a research review published by the Southwest Educational Development Laboratory in 2002,[3] students with involved parents, no matter what their income or background, are more likely to:

- Earn higher grades and test scores, and enroll in higher-level programs
- Be promoted, pass their classes, and earn credits
- Attend school regularly
- Have better social skills, show improved behavior, and adapt well to school
- Graduate and go on to post-secondary education

A solid body of research finds that families of all income and education levels, and from all ethnic and cultural groups, support their children's learning at home. Families with more income and education, however, tend to be more engaged at school and have more resources to help their children at home. Supporting all families to be more involved at school and better informed about what children are learning in class must become a widely-used strategy for improving learning and addressing the achievement gap.

Programs and special efforts to engage families make a difference. Teacher outreach to parents can result in strong, consistent gains in student performance in both reading and math. Effective outreach practices include meeting with families face to face, sending learning materials home, and keeping in touch about progress.[4] Workshops for parents on helping their children are linked to higher reading and math scores.[5] Schools with highly rated partnership programs make greater gains on state tests than schools with lower-rated programs.[6]

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Higher performing schools effectively involve families and community. Schools that succeed in engaging families from diverse backgrounds share three key practices:

- Focus on building trusting, collaborative relationships and two-way communications among teachers, families, and community members
- Recognize, respect, and address families' needs, as well as bridge class and cultural differences
- Embrace a philosophy of partnership where power and responsibility are shared and where families are effective advocates for their children[7]

Parent leadership and community organizing efforts are improving schools. Parent leadership training and community organizing programs, which are growing across the country, expand families'

knowledge of how the system works and how to make it work for their children. Unlike school-based parent involvement, parent leadership and community organizing programs build partnerships to support schools and hold them accountable for results. These organizing efforts have led to upgraded school facilities, improved school leadership and staffing, higher quality learning programs, new resources to improve teaching and curricula, and new funding for after-school and family support programs.[8]

The Process

In July 2005, the then Commissioner Wilhoit and CPAC members concluded that current ways used by the state to measure and hold schools accountable for parent involvement are inadequate. Districts and schools are not provided with enough training and resources to employ parent involvement effectively to improve student achievement. In researching actions taken by other states, a CPAC member found an interesting precedent, *A Shared Responsibility: Recommendations for Increasing Family and Community Involvement in Schools* (2005), a report produced by the Maryland Family and Community Involvement Initiative, chaired by the state PTA.

After further discussion of how Kentucky could best approach the task of producing its own report and recommendations to improve the practice of family and community engagement across the state, CPAC invited Anne Henderson, a senior consultant with the Community Involvement Program at the Annenberg Institute for School Reform, to facilitate the process.

At the March 2006 CPAC meeting, Shaun Murphy, Branch Manager of Community Support for Students and Families at KDE, shared information about existing Department initiatives involving families and community. CPAC agreed to serve as the executive committee of a new family and community involvement initiative, to drive the work, determine logistics, and involve others in carrying out the process. CPAC members Cindy Baumert and Dennis Pearce were chosen to serve as co-chairs.

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Throughout the summer of 2006, Shaun Murphy and Linda Robinson, a program consultant with the 21st Century Community Learning Center Program, shared more information about current KDE initiatives. CPAC members also investigated Department data and reports on student achievement. In August, CPAC held a "data party," where Cheri Meadows, Branch Manager of Council Development and Planning, led a CPAC committee through an exercise of analyzing scholastic audit and review reports and other student data. The group found that while the Kentucky Standards and Indicators for School Improvement (KY SISI) have school-level performance descriptors that address parent involvement, some audit reports lacked adequate recommendations for using parent involvement to improve student achievement. (KDE uses the SISI document to conduct scholastic audits and reviews to identify opportunities for improvement and provide guidance for planning and development of comprehensive school and district improvement plans.)

CPAC members also found that in the School Report Card, data on parent involvement are limited to the number of volunteer hours and the number of voters in school council elections. There are no defined criteria for measuring these data, and accuracy differs from school to school and district to district. These data do not address the authentic participation (see box on the next page) necessary for improving student achievement.

Authentic Participation

The Harvard Family Research Project has defined "authentic participation in school reform" as having seven qualities:

1. A community of parents committed to school improvement
2. Relationship of trust between parents and school staff
3. Development of parent participation and leadership skills
4. Opportunities for parents to influence the process and outcomes of an issue
5. Parent involvement in a deliberation process where all participants are on an equal footing
6. New roles for administrators and teachers as partners who listen to parents' concerns, work with them on issues, and engage them in open dialogue
7. Changes in local administrative systems to support authentic participation

At meetings in the fall of 2006, CPAC used information gleaned from the data party to identify four areas for inquiry: communications, expectations, training, and resources. CPAC members were charged with developing each area, defining parent involvement in terms of its impact on student achievement.

When I was concerned about instruction in my daughter's elementary school, I started to ask questions and then join committees so I could help make decisions. Within a short time I completely understood and supported what the teachers were doing, and I was able to back up their work both at home and by volunteering at school. The best part was that it was great for my daughter. Her teachers and parents were all on the same page, supporting each others' work and creating an environment in which she could thrive.

Lois Quilligan, Boyle County

From that work, a committee of CPAC members developed six objectives for family and community involvement and drafted performance descriptors in January 2007. In February and March, a small group of CPAC members met several times to refine the six objectives and in this process created a guide that would make clear to Kentucky parents, schools, and districts the stages of performance and development they have achieved. This guide, the *Kentucky Family and Community Involvement Guide to Student Achievement* is intended to reveal the path for improvement of family and community involvement in a similar way that KDE uses the SISI document in the scholastic audit process. This group presented the guide on March 29th to the entire CPAC for review. At that meeting, CPAC decided to recommend that these performance descriptors be incorporated, where appropriate, into the KDE school improvement process as a guide for a family and community involvement audit. This guide and its objectives and descriptors are described in the next section. A full copy is included in Appendix 1.

The Objectives

Building on Kentucky's pioneering tradition of setting high standards for students, CPAC strongly recommends that Kentucky become the first state in the nation to set a standard for family and community involvement that is focused on improving student achievement. This standard includes six objectives designed to involve families and the community to improve student achievement, so that our state will meet its goal of all children's reaching proficiency by 2014 and thereafter. We wish to make clear that for the purposes of this report, parents and/or families means natural, adoptive or foster parents; close relatives; legal or educational guardians; and/or community or agency advocates.

The basis of these objectives comes from the work of Joyce Epstein and her colleagues at the National Network for Partnership Schools which has been published by the National PTA.[10] The CPAC built on that work to further define how schools can involve parents and community in improving student achievement.

In addition, CPAC developed the *Kentucky Family and Community Involvement Guide to Student Achievement*, a comprehensive performance assessment tool, which proposes specific school-level descriptors for each objective so schools can make continuous improvement. These objectives and descriptors are supported by the research that CPAC reviewed[11] and include provisions that every student in Kentucky will have a parent, or another adult, who knows how to support that student's academic achievement.

> *Working together to support students is viewed with cynicism by parents with histories of being disrespected in and outside the schools because of where they live and who they are. Awareness of that cynicism might temper harsh judgments (on both sides) and promote school activities designed to demonstrate early and often the schools' commitment to all students. Many parents and families must be convinced. My experience (on CPAC) has helped me realize the urgency and the challenge of bringing socio-economically challenged parents to the table.*
>
> **Bani Hines-Hudson, Jefferson County**

This list includes each objective, along with the descriptors of *proficient* level school performance. The full guide appears in Appendix 1.

1. **Relationship-building: The school staff builds productive, personal relationships with parents of all their students.**
   - Parents report that school staff understands and demonstrates how strong relationships with parents contribute to effective teaching and learning.
   - School staff implements systematic steps to welcome the parents of new and English-as-a-Second-Language (ESL) students (for example, using home visits, personal calls or letters, open houses and/or other methods).

- Parents and other stakeholders report that they are actively welcomed when they visit the school.
- School staff implements systematic steps to encourage parents to attend school activities and participate in decisions about their children's learning.
- School staff involves parents in personal communication about their students' progress at least once a month.
- School staff completes needs assessment with all parents to determine resources necessary for their child's academic success.
- All parents are asked for feedback on the school's efforts to welcome and engage parents and the feedback is used to improve the school's efforts.

2. Communications: Two-way information in many forms flows regularly between school staff and parents about students' academic achievement and individual needs.

- School staff implements systematic efforts to inform parents about academic goals, class work, grades and homework for their children in their home language. (For example, classroom contracts, student assignment books, homework websites, and online grade books).
- School staff offers varied ways that parents can share information with teachers about their children's learning needs. (For example, phone and e-mail contacts, offering parent conferences, making home visits, or other methods).
- School staff partners with community leaders and organizations to build parent understanding of academic expectations, school strategies, and student achievement results.
- School staff offers parents opportunities to discuss school-wide achievement issues, including assessment data, at least once a semester.
- School staff implements systematic efforts to maximize parent-teacher conference participation. (For example, offering multiple locations, convenient times, follow-up with parents who do not reply to first notices, and opportunities for student-led conferences).
- At least 50 percent of parents respond to annual school and/or district stakeholder surveys.
- Stakeholder survey data is consistently used to plan school improvement efforts and to evaluate their effectiveness.

3. Decision-making: School staff encourages, supports and expects parents to be involved in school improvement decisions and to monitor and assist school improvement.

- The school staff offers professional learning community opportunities, workshops, and easily accessible written information to equip parents for service on the SBDM council and committees.
- School council and committees facilitate broad parent participation by actively recruiting diverse membership, providing interpreters and translated materials when needed, setting convenient meeting times, and seeking wide parent input. At least 40 percent of parents vote in SBDM parent election.
- Parents on the SBDM council and committees engage and mentor many other parents by reporting to multiple groups and seeking input through surveys, meetings, and varied other methods.
- The school council adopts measurable objectives and plans coherent strategies to build authentic parent participation, and the school council monitors the implementation and impact of that work.
- School council policies ensure active roles for parents on SBDM council and committees, and other groups making decisions about school improvement.
- Parents report that they are treated as valued partners on school leadership teams,

SBDM council and committees, the school council, and other groups making decisions about school improvement.
- School staff has a plan to identify new and experienced parent leaders who support and build capacity for parents to serve effectively on the school council and committee work.

4. Advocacy: For each student, the school staff identifies and supports a parent or another adult who takes personal responsibility for understanding and speaking for each child's learning needs.

- School staff ensures every student has a parent and/or another adult who knows how to advocate, or speak up for them, regarding the student's academic goals and individual needs.
- Most parents participate actively in student led conferences or other two-way communication about meeting their child's individual learning needs.
- Parents report participating actively and effectively in required planning for individual learning, for example, Individual Education Plans, Individual Learning Plans, Gifted Student Plans, 504 Plans, and intervention strategies to ensure college readiness (Senate Bill 130).
- School staff gives parents clear, complete information on the procedures for resolving concerns and filing complaints, and the council reviews summary data on those complaints to identify needed improvements.
- School staff ensures that parents and community members are well informed about how to become educational advocates, or how to access a trained educational advocate when needed.
- As students are identified by school staff as having disabilities or performing at the novice level, additional intentional steps are taken to ensure that parents have the option to use a trained advocate to assist them in speaking for their child's needs.

5. Learning Opportunities: School staff ensures that families have multiple learning opportunities to understand how to support their children's learning.

- Parents have multiple opportunities to learn about and discuss the following:
  - Kentucky standards and expectations for all students
  - The school's curriculum, instructional methods, and student services
  - The school's decision-making process, including opportunities for parents to participate on SBDM councils and committees
  - Their children's learning and development, along with legal and practical options for helping their children succeed, such the IEP and/or ILP process
  - Community resources to support learning
  - Opportunities to participate in state and district school improvement efforts, such as forums, committees, and surveys
- School staff makes systematic use of written communications (for example, newsletters, websites, and bulletin boards) to help parents understand their own children's progress and the progress of the school.
- School staff displays proficient student work with scoring guides to demonstrate academic expectations to parents and students, and updates the displays regularly.
- School staff offers parent workshops and meetings in convenient locations to help parents develop skills in supporting their children's learning and the school's improvement efforts.
- School council has a classroom observation policy that welcomes families to visit all classrooms.
- School staff develops parent leaders who contribute regularly to other parents' understanding and who help meet other parent learning needs.

6. Community Partnerships: The school staff engages and partners with community members to plan and implement substantive work to improve student achievement.

- School leadership regularly shares information on student achievement and involves business and community leaders in school improvement efforts.
- School leadership develops partnerships with several businesses, organizations, and agencies to support student learning and create mentors for students and parents.

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- School leadership collaborates with employers to support parent and volunteer participation in students' education.
- School staff collaborates with businesses, organizations, and agencies to address individual student needs and shares that information with parents.
- Parents make active use of the school's resources and community resources and report that they provide meaningful help to resolve family challenges that could interfere with student learning. (For example, FRYSC or Title I coordinators connect family with community resources and follow up.)
- School staff offers and publicizes community-based learning activities aligned with the curriculum, such as tutoring linked to the curriculum and internships, for all students and parents.

Productive working relationships lead to effective communication, enabling families to become partners in decision-making. When sound decisions are made putting the school on track to serve all students well, policies will be in place to support and encourage advocacy, learning opportunities, and community partnerships.

Carol Edelen, Jefferson County

The objectives and school-level performance descriptors proposed in the attached *Kentucky Family and Community Involvement Guide to Student Achievement* follow the four ratings used in the Kentucky assessment of student performance: novice, apprentice, proficient, and distinguished. CPAC hopes that this rating system will allow schools to identify opportunities for improvement and will offer guidance for improving their practice of family and community involvement.

Recommendations

To implement these objectives, the Commissioner's Parents Advisory Council recommends that the Kentucky Department of Education take four major actions:

1. Set high expectations, measure performance, and report progress.

Adopt the *Kentucky Family and Community Involvement Guide to Student Achievement* as a scoring guide, or rubric, for measuring continuous improvement. The guide includes performance descriptors that identify how schools can assess their family and community involvement procedures, policies, and other efforts toward improving student achievement. This guide can be used in a similar manner as the culture, equity, and school safety audits. In addition, CPAC recommends that these individual performance descriptors be incorporated as appropriate into the KDE SISI document.

2. Help schools improve relationship-building and communications.

KDE should encourage schools to adopt a "customer satisfaction" model in order to become welcoming and family-friendly, build relationships, and to develop a system of two-way exchange of information and ideas.

- Make data on family and community involvement available on the KDE website and in other media and formats.
- Implement a systemic, on-going statewide student, parent and community survey to yield required information for KDE and to build a database for further analysis and research.
- Develop a "Frequently Asked Questions" feature on the state and district websites that includes school or district communication policies and processes.
- Develop "customer satisfaction" training modules that districts can use for school staff.
- Establish Student, Family and Community Involvement Advisory Councils at all levels – local, district and state.

3. Provide Resources and Support.

Develop an infrastructure for state support that includes training, resources, tools, and recognition for real achievement in family and community involvement. The department charged with coordinating this effort should have direct access to the commissioner.

- Offer incentives and recognition for exemplary practice that has resulted in improved outcomes for students, including student achievement.
- Add a section to the KDE website that includes the work of the CPAC, research on parent involvement, and effective practice in reader-friendly language.
- Identify and categorize community-based resources that could be used to facilitate coordination of family involvement with public school staff.
- Identify and categorize state resources that could be used to facilitate coordination of family involvement, such as categorical funding programs including Title I, IDEA, the 21st Century Community Learning Centers and Family Resource and Youth Service Centers.

4. Build capacity through professional development

Administrators, teachers, other school staff, and parent leaders need to acquire knowledge, skills, and resources to work together productively to improve student achievement.

Invest in parents:

- Introduce legislation to provide funding for statewide parent leadership training and a network of support. Cover parents' rights as well as responsibilities.

- Develop a parent education curriculum that parallels the student's progress from pre-school to graduation.
- Develop a diverse network of parents who are trained and supported by the Kentucky Department of Education to act as mentors, trainers, and team members to assist Kentucky schools, districts, parents, and community groups in the involvement tasks necessary to support each Kentucky child to reach proficiency.

Invest in educators:

- Add strategies for engaging families in improving student achievement to existing professional development programs for administrators and teachers
- Include proficient performance rubric in E-walk tool. Offer embedded professional development on effective strategies to engage families in schools.
- Offer incentives for professional organizations to develop and offer professional development on parent/family involvement.

Invest in collaboration:

- Implement joint parent/teacher training in cultural responsiveness.
- Incorporate family and community members in school level professional learning communities.
- Include teachers in training programs for working with community resources and developing relationships with families in their neighborhoods.
- Improve the training of SBDM councils to include effective use of objectives and performance descriptors.
- Improve the training of audit teams to include effective use of objectives and performance descriptors.
- Sponsor and or host community parent involvement forums.

Invest in evaluation:

- Develop measurements and a monitoring plan to assess the impact of professional development on parent involvement.
- Identify schools and districts that have fully implemented the objectives and performance descriptors and assess the impact on levels of family and community involvement, teacher satisfaction, school climate, and student outcomes.

While I was campaigning for a position on my local school board, several residents in my community expressed how disconnected they felt to the school system because they did not have children in the school. They also said they would like to participate and possibly contribute financially to our school if someone would simply take the time to keep them informed.

Tina C. Crase,
Walton-Verona Independent Schools

Follow-up and Conclusion

As a pioneer in the national standards-based education reform movement, Kentucky's example has been an inspiration to other states. In this spirit, CPAC has created a *Kentucky Family and Community Involvement Guide to Student Achievement* that includes these six objectives and performance descriptors for continuous improvement in family and community involvement in schools to assist KDE in reaching the state's goals for student achievement. All our members look forward to a continued collaboration with KDE staff to bring these proposals to life.

Because CPAC is a standing council, not a committee charged with a single task, we anticipate working on a number of related initiatives in the future, as the new Commissioner of Education may request and our members will propose. On the drawing board are a new state parent and community involvement policy, guidelines for districts and schools, an annual or bi-annual state survey of parent satisfaction, and tool kits for school and parent leaders.

We hope this report will help to unleash a powerful wave of activity in our schools and a great leap forward in student achievement. The future of our state depends on it.

When I was state PTA president and traveling around Kentucky, it amazed me how many parents were eager to be a part of their child's educational life but were not given that chance. I believe these six objectives will set a high standard for teachers and administrators to open the door to these parents.

Sharon Whitworth, Spencer County

Appendix 1. *Kentucky Family and Community Involvement Guide to Student Achievement*

Objective 1: Relationship-building

School staff builds productive, personal relationships with parents* of all their students.

Distinguished	Proficient	Apprentice	Novice
Teachers and staff have developed collaborative partnering relationships with all parents and students to improve teaching and learning.	Parents report that school staff understands and demonstrates how strong relationships with parents contribute to effective teaching and learning.	Parents report their relationship with school staff is about discussing student academic performance and/or behavior.	Parents report that teacher/parent relationships are limited to discipline issues and/or reports of poor academic performance.
Administrators and school staff welcome and actively seek parents of all new and ESL students to encourage early relationship building.	School staff implements systematic steps to welcome the parents of new and ESL students (for example, using home visits, personal calls or letters, open houses, and/or other methods).	Relationships with parents of new and ESL students are informal, occasional or accidental, and information is provided if requested.	School staff has limited involvement with parents of new and ESL students.
District and school staff provide training to involve all stakeholders in the process of improving the interaction between school, home and community.	Parents and other stakeholders report that they are actively welcomed when they visit the school.	Some parents report they are welcome to visit school.	Parents report that school staff makes little effort to welcome parents or community members when they visit the school.
Parents and community stakeholders have authentic participation, help plan and implement school and district improvement activities.	School staff implements systematic steps to encourage parents to attend school activities and participate in decisions about their children's learning.	Parents are invited to attend school activities related to their own child and are encouraged to attend parent teacher conferences.	Parents receive information on school activities and are invited to conference if child is not doing well.
District and school staffs encourage continuous and meaningful communication with all parents about their student's academic goals and progress.	School staff involves parents in personal communication about their students' progress at least once a month.	Administrators and school staff are available to parents by appointment only to discuss their student's progress.	Most communication from administrators is regarding safety and discipline issues,
District and school staff identify family interests, needs and barriers and provides services to ensure academic success.	School staff completes needs assessment with all parents to determine resources necessary for their child's academic success.	Teachers informally collect some student needs data and some parents are contacted to discuss those needs.	School staff has no plan for gathering information about students' learning needs.
Student/family feedback data on school welcoming and engagement efforts is retained in a useable confidential format and can be retrieved for district or school assistance to families.	All parents are asked for feedback on school's efforts to welcome and engage parents, and the feedback is used to improve school's efforts.	Staff occasionally asks for feedback on school's efforts to welcome and engage parents, in an informal or casual way with no regular data collection.	Student/family feedback is not included in any assessment of the school's efforts to welcome and engage parents.

* By parent or family, we mean a natural, adoptive or foster parent; or other adult serving as parent, such as a close relative, legal or educational guardian, and/or a community or agency advocate

Objective 2: Communications

Two-way information in many forms flows regularly between school staff and parents* about students' academic achievement and individual needs.

Distinguished	Proficient	Apprentice	Novice
Multiple two-way communications in the home language are used to communicate academic goals, class work, and homework, and grades. (See Proficient examples.)	School staff implements systematic efforts to inform parents about academic goals, class work, grades and homework for their children in their home language. (For example, using classroom contracts, student assignment books, homework websites, and online grade books.)	School staff relies on one-way communication in English to inform parents about academic goals, class work, grades and homework. (For example, newsletters, marquees, and agendas.)	School staff uses only one-way communication with parents to inform them about student work. (For example, student report cards and behavior reports.)
District/school staff, parents and community stakeholders work together to learn from and use all resources available to meet the student's and parent's learning needs.	School staff offers varied ways that parents can share information with teachers about their children's learning needs. (For example, phone and e-mail contacts, offering parent conferences, and making home visits.)	School staff uses informal conversation and/or a parent teacher conference to listen to parents or inform parents of students' learning needs.	Parents receive information about student's learning needs when the student is failing academically.
School and district staffs use several strategies to involve community leaders to assist in parent education on issues directly related to student achievement.	School staff partners with community leaders and organizations to build parent understanding of academic expectations, school strategies, and student achievement results.	School staff sometimes provides community organizations with information about academic expectations for parents who use their services.	School staff rarely provides general information to the community about academic expectations of students.
District and school leadership ensure that student achievement is discussed each semester with all parents.	School staff offers parents opportunities to discuss school-wide achievement issues, including assessment data, at least once a semester.	Student achievement data or achievement results are communicated informally to parents by school staff.	School staff, as mandated by law, addresses data on student achievement.
A conference is held twice a year for all students and includes parent or advocate, student and teachers. School council develops ways to address data that is collected.	School staff implements systematic efforts to maximize parent-teacher conference participation. (For example, offering multiple locations, convenient times, follow-up with parents who do not reply to first notices, opportunities for student-led conferences.)	Parent -teacher conferences are held twice a year on school grounds and some teachers send invitations to parents.	Optional parent-teacher conferences are offered at school and parents are notified if a teacher wants to conference.
District and school culture audits or surveys are conducted each year with all stakeholders and response rate is at least 75%.	At least 50% of parents respond to annual school and/or district stakeholder surveys.	District-wide stakeholder surveys are given to parents and teachers encourage parents to respond.	Parents are not encouraged to give feedback on school or student performance.
Stakeholders help plan district and school survey content regarding school performance as it relates to their child.	Stakeholder survey data is consistently used to plan school improvement efforts and to evaluate their effectiveness.	School staff develops a survey that is sent to parents, with low response rate and results are reported in school improvement plan.	School staff develops a short survey that is distributed to parents, response rate is low and results are not shared with all stakeholders.

* By parent or family, we mean a natural, adoptive or foster parent; or other adult serving as parent, such as a close relative, legal or educational guardian, and/or a community or agency advocate

Objective 3: Decision-making

School staff encourages, supports and expects parents to be involved in school improvement decisions and to monitor and assist school improvement.

Distinguished	Proficient	Apprentice	Novice
All stakeholders are provided with multiple opportunities to learn about the decision- making process and to participate at all levels including professional learning communities, school council, and its committees	School staff offers professional learning community opportunities, workshops, and accessible written information to equip parents for service on SBDM council and committees.	Parents elected to serve on school council and some other parents who serve on SBDM committees are invited to attend training offered by school or district.	Parents elected to serve on school council are invited to attend basic district training. No effort to include other parents on SBDM committees.
School council and committees have all stakeholder groups represented, provide interpreters and translated materials, meetings are well publicized and convenient. At least 60% of parents vote in SBDM parent election.	School council and committees facilitate broad parent participation by actively recruiting diverse membership, providing interpreters and translated materials, setting convenient meeting times, seeking wide parent input. At least 40% of parents vote in SBDM parent election.	School council and committees have some parent members, may provide translators, meet at time and place convenient to staff. Elections are held at convenient times and are publicized, but less than 20% of the parents vote in SBDM parent election.	School council has parent members as required by law, parents are not asked to serve on committees, meeting time and place is determined by principal. Low voter turnout for SBDM parent election.
School council seeks all parents' input and mentors participation through multiple sources and seeks all stakeholder groups' involvement.	Parents on the SBDM council and committees engage and mentor many other parents by reporting to multiple groups and seeking input through surveys, meetings, and varied other methods.	School council chair reports feedback to head of largest parent organization who then decides further dissemination methods or input. There is no provision for parent input other than as required by school law.	School council chair sends council minutes to largest parent organization with no follow-up.
Parents and community stakeholders are trained in academic achievement planning and authentic participation, with school council regularly checking the implementation and impact of that work.	School council adopts measurable objectives and plans coherent strategies to build authentic parent participation, and the school council monitors the implementation and impact of that work.	School council has some parent involvement components and action items that deal with specific academic areas. Little or no funding is provided. Little or no implementation and impact checking is done.	School council has some parent involvement action items imbedded in a few components. They are usually not measurable, have little to no funding, and consistent implementation and impact checking is not done.
School council actively recruits parents to serve on committees related to school improvement that review and revise objectives continuously and is informed by data.	School council policies ensure active roles for parents on SBDM committees, in school improvement planning, and also in decisions about the education of their individual children.	School council encourages parents to serve only on SBDM committees that deal with parent involvement and/or school climate.	School council does not encourage parent participation on SBDM committees or school planning.
Parents and stakeholders are trained to create, measure and sustain authentic participation in all areas of school improvement at School and district level.	Parents report that they are treated as valued partners on school leadership teams, SBDM council and committees, and other groups making decisions about school improvement.	Parents report that they are sometimes encouraged to take part in discussions about school improvement.	Staff and parents have no knowledge of authentic participation.
School staff fosters a community of stakeholders and parents who continually sustain and support each other in school council and committee work.	School staff has a plan to identify new and experienced parent leaders who support and build capacity for parents to serve effectively on the school council and in committee work.	School staff provides opportunities for outgoing parent council members to meet with new parent council members to share knowledge of serving on the council.	Teachers share information from year to year with parents who serve on the school council and/or overlaps council terms of parents.

* By parent or family, we mean a natural, adoptive or foster parent; or other adult serving as parent, such as a close relative, legal or educational guardian, and/or a community or agency advocate

Objective 4: Advocacy

For each student, school staff identifies and supports a parent* or another adult who can take personal responsibility for understanding and speaking for that child's learning needs.

Distinguished	Proficient	Apprentice	Novice
District and school staff supports a community of trained parents and advocates who work together to ensure all students are meeting their academic goals and learning needs.	School staff ensures every student has a parent and/or another adult who knows how to advocate, or speak up for them, regarding the students academic goals and learning needs.	There is evidence that school staff know which students have a parent or another adult who can speak up for them regarding their academic goals and learning needs.	School staff does not know which students have a parent or another adult who can speak up for them regarding academic goals and learning needs.
District and school staff partners with all parents and advocates to discuss, monitor and share successful strategies for meeting individual learning needs	Most parents participate actively in student led conferences or other two-way communication about meeting their child's individual learning needs.	Some parents are involved in informal conversation with school staff to address their child's individual learning needs.	School staff does not involve parents to address their child's learning needs. School staff only informs parents of student's academic progress.
Parents report that district and school staff facilitates sharing of ideas and training to effectively participate in developing IEPs, ILPs, GSPs, 504 plans and interventions for college readiness.	Parents report participating actively and effectively in required planning for individual learning, for example, Individual Education Plans, Individual Learning Plans, Gifted Student Plans, 504 Plans, and intervention strategies to ensure college readiness (Senate Bill 130.)	Parents report that they are invited to attend meetings to discuss Individual Education Plans, Individual Learning Plans, 504 plans and/or intervention strategies.	Parents report that they are informed as required by law to participate in Individual Education Plans, Individual Learning Plans, and intervention strategies.
School staff collaborates with stakeholders in developing policies and procedures to resolve issues and complaints and to identify needed improvements.	School staff gives parents clear, complete information on the procedures for resolving concerns and filing complaints, and the council reviews summary data on those complaints to identify needed improvements.	School council has a policy and a process to resolve issues or complaints and outcomes are sometimes tracked and reported to the council.	Teachers handle parent complaints but outcomes are not tracked or reported.
District and school staff ensure that parents and community members are trained to serve as educational advocates or to access trained educational advocates for students to meet their academic goals.	School staff ensures that parents and community members are well informed about how to become an educational advocate or how to access an educational advocate when needed.	School staff makes minimal effort to encourage parents to advocate for their child's academic success.	School staff puts forth no effort to encourage parents to advocate for their child's academic success.
District and school staff partners with advocates of students with disabilities and/or novice level performance to improve the way school meets student learning needs.	As students are identified by school staff as having disabilities or performing at the novice level, additional intentional steps are taken to ensure that the parent has the option to use a trained advocate to assist them in speaking for their child's needs.	Novice level students are identified by school staff to receive targeted strategies for academic improvement. Parents are informed of the strategies but do not receive training on how to use those strategies or how progress will be measured.	Some teachers provide additional help or strategies to novice learners in their classroom but do not inform the parents about strategies used.

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Objective 5: Learning Opportunities

School staff ensures that families have multiple learning opportunities to understand how to support their children's learning.

Distinguished	Proficient	Apprentice	Novice
District and school leadership involve all stakeholders, use many community resources and opportunities to explain standards and rights as defined under Proficient, and expects that all parents will have adequate information and understanding of these practices. Parents with barriers to learning are individually assisted.	Parents have multiple opportunities to learn about and discuss: • Kentucky standards and expectations for all students. • School's curriculum, instructional methods, and student services. • School's decision-making process, including opportunities to participate on SBDM councils and committees. • Their children's learning and development, along with legal and practical options for helping their children succeed such as participation in IEP and/or ILP process. • Community resources to support learning. • Opportunities to participate in state and district school improvement efforts, such as forums, committees, and surveys.	School provides open house and family nights for some parents to learn about: • Kentucky standards and expectations for all students. • School's curriculum, instructional methods, and student services. • School's decision-making process, including opportunities for parents to participate on councils and SBDM committees. • Their children's learning and development, along with legal and practical options for helping their children succeed such as participation in IEP and/or ILP process. • Community resources to support learning.	School provides one open house a year and offers some written materials about: • Kentucky standards and expectations for all students. • School's decision-making process, including opportunities for parents to participate on councils and SBDM committees.
All stakeholders are engaged in conversation and written communication about the academic progress of all students in school and district.	School staff makes systematic use of written communications (for example, newsletters, Web sites, bulletin boards) to help parents understand their own children's academic progress and the progress of school.	School staff provides parents with information about their child's academic progress and the progress of the school.	School staff provides parents only with information mandated by reporting requirements on student achievement.
School staff exhibits and rotates proficient and distinguished work and provides resources to achieve at higher levels.	School staff displays proficient student work with scoring guides to demonstrate academic expectations to parents and students, and updates the displays regularly.	School staff exhibits some student work with scoring guide and proficient level work.	Some student work of various levels is exhibited in the classroom.
District and school staffs collaborate with parents and community members to provide training on how to support children's learning, district and school improvement efforts.	School staff offers parent workshops or meetings in convenient locations to help parents develop skills in supporting their children's learning and school's improvement efforts.	School staff offers targeted parent workshops and meetings to help parents develop skills to support their child's learning.	School staff offers some information to parents to learn how to support their child's learning.
School staff has posted council policy on classroom visits, with access to all classrooms.	School council has a classroom observation policy that welcomes families to visit all classrooms.	School council has a classroom observation policy that allows parents access to most classrooms by appointment only.	School staff allows parents to visit regular education classrooms upon request. There is no school policy.
Parent leaders regularly work with all parents to develop ways to improve parent understanding of learning issues.	School staff develops parent leaders who contribute regularly to other parents' understanding and who help meet other parent learning needs.	School staff relies on the parent organizations to provide learning opportunities for parent leadership.	There is little or no development of parent leaders.

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Objective 6: Community Partnerships

School staff engages and partners with community members to plan and implement substantive work to improve student achievement.

Distinguished	Proficient	Apprentice	Novice
School staff networks and partners with multiple businesses and organizations to support student achievement at a school council and a programmatic level.	School leadership regularly shares information on student achievement and involves business and community leaders in school improvement efforts.	School leadership periodically meets with some business leaders to discuss information on student achievement.	School leadership informs the community once a year about student achievement. (For example, letters to editor or newspaper article).
District and school staff leverages all partnerships to gain maximum benefit to support all students learning from the human and financial resources available.	School leadership develops partnerships with several businesses, organizations, and agencies to support student learning and create mentors for students and parents.	Some teachers ensure that students participate in programs within the community that are linked to student learning.	After school programs are offered to some students.
School leadership and council compacts with an employer network that promotes adult participation in education.	School leadership collaborates with employers to support parent and volunteer participation in students' education.	Employer-partners adopt practices to promote and support parent and volunteer participation in students' education.	School leadership rarely invites employers to support adult participation in education.
District and school staffs collaborate with all willing organizations to support parents and advocates in addressing individual student needs.	School staff collaborates with businesses, organizations, and agencies to address individual student needs and shares that information with parents.	School staff occasionally collaborates with community agencies to address individual student needs. Information is provided to parents upon request.	Staff sometimes collaborates with community agencies to address general student academic needs.
School staff and parents have seamless integration of consistent and sustained family support services from school and the community to reduce student barriers to learning.	Parents make active use of school and community resources and report that they provide meaningful help to resolve family challenges that could interfere with student learning. (For example, FRYSC or Title 1 coordinators connect family with community resources and follow up.)	Parents are made aware of family support services in school and in the community that are provided for students. (For example, families know about community resources through school coordinators but it is up to the family to access those resources.)	Parents are given information about community resources from school program coordinators or school staff.
District staff and school leadership ensures all stakeholders are aware of community-based learning opportunities that are linked to student-specific needs.	School staff offers and publicizes community-based learning activities, such as tutoring linked to the curriculum, for all students and parents.	School staff maintains a resource directory on some agencies, programs and services that will provide services for students.	School staff rarely updates or communicates with local agencies or programs that provide learning services.

* By parent or family, we mean a natural, adoptive or foster parent; or other adult serving as parent, such as a close relative, legal or educational guardian, and/or a community or agency advocate

Appendix 2. *Glossary*

CDIP	Comprehensive District Improvement Plan
CIPL	Commonwealth Institute for Parent Leadership, a program operated by the Prichard Committee for Academic Excellence
CPAC	Commissioner's Parent Advisory Council
CPL	Center for Parent Leadership, a program of the Prichard Committee for Academic Excellence
CSIP	Comprehensive School Improvement Plan
FRYSC	Family Resource and Youth Services Center
GSP	Gifted Student Plan
ILP	Individual Learning Plan
KASC	Kentucky Association of School Councils
KERA	Kentucky Education Reform Act of 1990
KDE	Kentucky Department of Education
KPTA	Kentucky Parent-Teacher Association
PTA	Parent-Teacher Association
Parent	A natural, adoptive or foster parent or other adult serving as parent, such as a close relative; a legal or educational guardian; and/or a community or agency advocate
PLC	Professional Learning Community is composed of collaborative teams whose members work interdependently to achieve common goals linked to he purpose of learning for all.
SA	Scholastic Audit
SBDM	School-Based Decision Making
School Staff	All full and part-time regular permanent employees of the school.
School leadership	Principal, school based decision making councils, department chairperson(s), team leaders, committee chairperson(s), coordinators of special programs parent organizations, support centers, the instructional team, and the administrative team.

Appendix 3: *Parent Involvement Provisions in Kentucky State and Federal Law*

Kentucky Law

Kentucky's commitment to family involvement is strong and clear: "The General Assembly recognizes that public education involves shared responsibilities. State government, local communities, parents, students, and school employees must work together to create an efficient public school system. Parents and students must assist schools with efforts to assure student attendance, preparation for school, and involvement in learning. The cooperation of all involved is necessary to assure that desired outcomes are achieved . . ." (KRS 158.645)

Kentucky's education law recognizes the importance of parent involvement in a number of different statutes, including the landmark Kentucky Education Reform Act (KERA).

- KERA requires that parents be members of school-based decision making (SBDM) councils, which make key decisions about learning and instruction. Parents also must be involved in setting targets and developing plans to close achievement gaps. (KRS 160.345) For the purpose of SBDM, parents are defined as "parents, step-parents, or foster parents, or a person who has legal custody of a student and with whom the student resides." (KRS 160.345)
- Yearly school and district report cards are required by state law (as well as in NCLB) to give parents and citizens more information about their schools. (KRS 158.6453)
- Kentucky school law provides for family resource and youth services centers (FRCs at elementary schools and YSCs at middle and high schools), based at local schools with at least 20 percent of low-income students. FRCs and YSCs must have advisory councils, with at least one-third parent members. (KRS 156.497)
- Kentucky law also requires parent involvement in the preschool and primary programs. A "critical attribute" of the primary program is "positive parent involvement." (KRS 158-031) The preschool program requires that schools involve parents. (KRS 157.3175)

The Achievement Gap Bill, Senate Bill 168 (KRS 158.649), enacted in 2002, requires all schools to close achievement gaps, which are defined as a "substantive performance difference" in all subject areas on Kentucky's test for accountability by gender, disability, English proficiency, race, and poverty.

- In schools with substantive achievement gaps, school councils must establish targets and plans every two years to close the gaps.
- Schools failing to meet targets after the first two-year cycle must submit plans to the superintendent for review and approval.
- Parents, faculty, and staff must be involved in establishing the targets and plans for closing achievement gaps.
- Public meetings at the school and district levels must be held to report on progress and plans.

The Readiness Examination Bill, Senate Bill 130 (KRS 158.6453), enacted in 2006, requires a high school or college readiness exam at the expense of the Kentucky Department of Education. The assessment program shall include:

- A high school readiness examination to assess English, reading, mathematics, and science in grade 8;
- A college readiness examination to assess English, reading, mathematics, and science in grade 10;

- The ACT college admissions and placement examination to assess English, reading, mathematics, and science, to be taken by all students in grade 11.

A student whose scores on the high school readiness examination indicate readiness shall be counseled to enroll in accelerated courses; and a student whose scores on the college readiness examination administered in grade 10 or the ACT college admissions and placement examination administered in grade 11 indicate a high degree of readiness for college shall be counseled to enroll in accelerated courses, with an emphasis on Advanced Placement classes.

Students in grades 10, 11, and 12 may take the WorkKeys assessments from ACT, Inc. in reading for information, locating information, and applied mathematics.

- A student whose scores on the WorkKeys assessments indicate that additional assistance is required in reading for information, locating information, or applied mathematics shall have intervention strategies for accelerated learning incorporated into his or her learning plan.
- A student meeting the WorkKeys threshold established by the Cabinet for Workforce Development shall be issued the appropriate Kentucky employability certificate.

The Kentucky Board of Education has a policy statement titled "Parent and Family Involvement Initiative" that recognizes the importance of the family's role in educating children. The statement encourages schools to welcome parents and families and engage them in their child's education. [12]

A number of committees at the state and local level must include parents:

- The membership of superintendent screening committees must include parents.
- The state board requires that parents be represented on local facilities planning groups that study building and redistricting needs of school districts.
- Parents are represented on the School Curriculum, Assessment and Accountability Council that advises the board of education and legislature on implementation of the Commonwealth Accountability Testing System and No Child Left Behind.
- State law provides that four of the 19 members of the Advisory Council for Gifted and Talented Education must be parents. (KRS 158.648)
- Parents are included on school audit teams. (KRS 158.6455)

Federal Law

The No Child Left Behind law (NCLB) of 2001 (P.L. 107-110) holds public schools accountable to provide all students with a quality education and has extensive requirements for involving families in setting policy, developing agreements on how to work with staff to improve achievement, and writing school improvement plans. This law is modeled on state reform laws such as KERA.

Families in schools that receive funding under Title I of NCLB (because they serve concentrations of low-income children) may transfer their children to a higher-performing school, if the current school does not make "adequate yearly progress" for two years in a row. Students who do not transfer must be offered supplemental services, such as after-school tutoring or classes in reading and math, paid for by the school district.

The law's obligations and opportunities for parent involvement can offer resources to make that adequate yearly progress. Section 1118 requires parent involvement at several points:

1. **School-parent compact:** Every Title I school must have a school-parent compact, developed with and approved by parents. The compact must describe how the school and parents will build a partnership to improve student achievement.
2. **School and district policy:** Each Title I school and district must write a parent involvement

policy that also has been developed with and agreed upon by parents. The district policy must describe how parents will be involved in developing plans to improve schools and engage families.

3. **Report cards:** Each year, the school district must distribute a report card specifying how every school and the district as a whole are performing. Both the school and district report cards must be in a language and format that parents can understand.
4. **Parent choice:** If a Title I school has not made adequate yearly progress in improving student performance, parents have two options. They may request a transfer or they can ask for supplemental services and become involved in developing a school improvement plan.
5. **State review:** The state education agency must monitor the school districts' Title 1 programs to make sure they carry out the law. If the district is not involving parents as the law requires, parents can appeal to the state.
6. **Communication:** For the first time, federal law defines parent involvement as regular, two-way, and meaningful communication about student learning and other school activities.

Some provisions of NCLB apply to all public schools, not just Title I schools. Every school district or school can choose to develop a strong partnership program, even if such action is not required. Other federal laws also require parent involvement. For example, the Federal Individuals with Disabilities Education Act (IDEA) requires that parents be included on individual education planning meetings for students with special learning needs.

Endnotes

[1] Cathy Lindsey, Kentucky Teacher, May 2007, page 1

[2] This information is drawn from: Anne T. Henderson, No Child Left Behind: What's in it for Parents (Lexington, KY: Center for Parent Leadership, 2002) and Cindy Heine, Kentucky School Updates: A Parent/Citizen Guide for 2006-08 (Lexington, KY: Prichard Committee for Academic Excellence, December 2006).

[3] Anne T. Henderson and Karen L. Mapp, A New Wave of Evidence: The Impact of School, Family and Community Connections on Student Achievement (Austin TX: Southwest Educational Development Laboratory, 2002)

[4] Westat and Policy Studies Associates, The Longitudinal Evaluation of School Change and Performance in Title I Schools, Volume I. (Washington, DC: US Department of Education, Office of the Deputy Secretary, Planning and Evaluation Service, 2001) www.ed.gov/offices/OUS/PES/esed/lescp_highlights.html

[5] Ann V. Shaver and Richard T. Walls, Effect of Title I Parent Involvement on Student Reading and Mathematics Achievement (Journal of Research and Development in Education, 31 (2) , 1998, 90-97)

[6] Joyce L. Epstein et al., Scaling Up School-Family-Community Connections in Baltimore: Effects on Student Achievement and Attendance (Baltimore, MD: CRESPAR and the Center on School, Family and Community Partnerships, Johns Hopkins University, 1997).

[7] Karen L. Mapp, Having Their Say: Parents Describe How and Why They Are Involved in Their Children's Education (School Community Journal 13, no. 1 2003, 35-64.)

[8] Kavitha Mediratta, Norm Fruchter and Anne Lewis, Organizing for School Reform (NY: Institute for Education and Social Policy, New York University, 2002)

[9] M. Elena Lopez and Holly Kreider, "Beyond Input: Achieving Authentic Participation in School Reform," The Evaluation Exchange, IX, 2, Summer 2003 (www.gse.harvard.edu/hfrp/eval/issue22/theory.html)

[10] We are indebted to the work of Joyce Epstein and her colleagues at the National Network for Partnership Schools for developing the framework of six types of family involvement, and to the National Standards for Parent Involvement in Education, based on Epstein's work, published by the National PTA. These objectives are built upon their work.

[11] See Henderson and Mapp, A New Wave of Evidence; Joyce Epstein, School, Family and Community Partnerships (Boulder CO; Westview Press, 2001), and the Web site of the Harvard Family Research Project: http://www.gse.harvard.edu/hfrp/projects/fine.html

[12] Cindy Heine, KENTUCKY SCHOOL UPDATES: A Parent/Citizen Guide for 2006-08, (Lexington KY: Prichard Committee for Academic Excellence, December, 2006

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Cindy Baumert and Dennis Pearce
Co-Chairs, Commissioner's Parents Advisory Council

Commissioner's Parents Advisory Council Members

Members are listed by their affiliation with one of three key state organizations that represent parents and families.

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Earlie Fugate	Paducah Independent Schools, McCracken County
Debra Gensheimer	Warren County
Dreama Gentry	Berea Independent Schools, Madison County
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Scholastic Audits and District Management Audits

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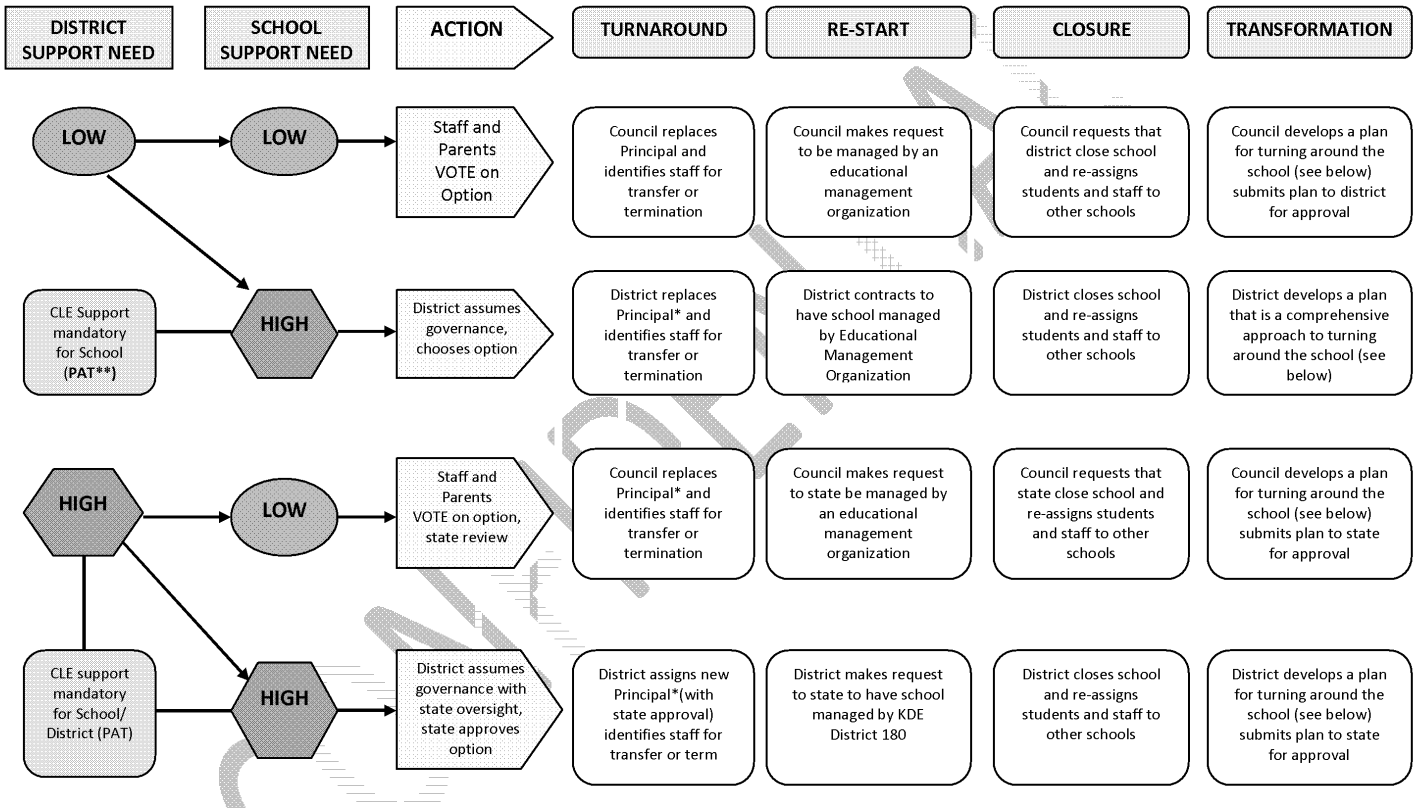
EDUCATIONAL RECOVERY FLOWCHART



Transformation: a comprehensive strategy that, at a minimum, replaces the school leadership and develops and rewards teacher and leader effectiveness; adopts comprehensive instructional programs; extends time for students and staff and offers community-oriented services; and provides operating flexibility and intensive support.

*Principal chosen from individuals with Educational Recovery Leader credentials

**PAT (Partnership Assist Team) includes mentor/coach for Board of Ed and Superintendent (District) or Council and Principal (School)

SCHOOL INTERVENTION MODELS

There are four school intervention models referred to in Selection Criterion (E)(2): turnaround model, restart model, school closure, or transformation model. Each is described below.

(a) Turnaround model. (1) A turnaround model is one in which an LEA must--

(i) Replace the principal and grant the principal sufficient operational flexibility (including in staffing, calendars/time, and budgeting) to implement fully a comprehensive approach in order to substantially improve student achievement outcomes and increase high school graduation rates;

(ii) Use locally adopted competencies to measure the effectiveness of staff who can work within the turnaround environment to meet the needs of students,

(A) Screen all existing staff and rehire no more than 50 percent; and

(B) Select new staff;

(iii) Implement such strategies as financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions that are designed to recruit, place, and retain staff with the skills necessary to meet the needs of the students in the turnaround school;

(iv) Provide staff with ongoing, high-quality, job-embedded professional development that is aligned with the school's comprehensive instructional program and designed with school staff to ensure that they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies;

(v) Adopt a new governance structure, which may include, but is not limited to, requiring the school to report to a new "turnaround office" in the LEA or SEA, hire a "turnaround leader" who reports directly to the Superintendent or Chief Academic Officer, or enter into a multi-year contract with the LEA or SEA to obtain added flexibility in exchange for greater accountability;

(vi) Use data to identify and implement an instructional program that is research-based and "vertically aligned" from one grade to the next as well as aligned with State academic standards;

(vii) Promote the continuous use of student data (such as from formative, interim, and summative assessments) to inform and differentiate instruction in order to meet the academic needs of individual students;

(viii) Establish schedules and implement strategies that provide increased learning time (as defined in this notice); and

(ix) Provide appropriate social-emotional and community-oriented services and supports for students.

(2) A turnaround model may also implement other strategies such as—

(i) Any of the required and permissible activities under the transformation model; or

(ii) A new school model (*e.g.*, themed, dual language academy).

(b) Restart model. A restart model is one in which an LEA converts a school or closes and reopens a school under a contract with an education management organization (EMO) that has been selected through a rigorous review process. (An EMO is a for-profit or non-profit

organization that provides "whole-school operation" services to an LEA.) A restart model must enroll, within the grades it serves, any former student who wishes to attend the school.

(c) School closure. School closure occurs when an LEA closes a school and enrolls the students who attended that school in other schools in the LEA that are higher achieving. These other schools should be within reasonable proximity to the closed school and may include, but are not limited to new schools for which achievement data are not yet available.

(d) Transformation model. A transformation model is one in which an LEA implements each of the following strategies:

(1) Developing and increasing teacher and school leader effectiveness.

(i) Required activities. The LEA must--

(A) Replace the principal who led the school prior to commencement of the transformation model;

(B) Use rigorous, transparent, and equitable evaluation systems for teachers and principals that--

(1) Take into account data on student growth (as defined in this notice) as a significant factor as well as other factors such as multiple observation-based assessments of performance and ongoing collections of professional practice reflective of student achievement and increased high-school graduations rates; and

(2) Are designed and developed with teacher and principal involvement;

(C) Identify and reward school leaders, teachers, and other staff who, in implementing this model, have increased student achievement and high-school graduation rates and identify and remove those who, after ample opportunities have been provided for them to improve their professional practice, have not done so;

(D) Provide staff with ongoing, high-quality, job-embedded professional development (*e.g.*, regarding subject-specific pedagogy, instruction that reflects a deeper understanding of the community served by the school, or differentiated instruction) that is aligned with the school's comprehensive instructional program and designed with school staff to ensure they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies; and

(E) Implement such strategies as financial incentives, increased opportunities for promotion and career growth, and more flexible work conditions that are designed to recruit, place, and retain staff with the skills necessary to meet the needs of the students in a transformation school.

(ii) Permissible activities. An LEA may also implement other strategies to develop teachers' and school leaders' effectiveness, such as--

(A) Providing additional compensation to attract and retain staff with the skills necessary to meet the needs of the students in a transformation school;

(B) Instituting a system for measuring changes in instructional practices resulting from professional development; or

(C) Ensuring that the school is not required to accept a teacher without the mutual consent of the teacher and principal, regardless of the teacher's seniority.

(2) Comprehensive instructional reform strategies.

(i) Required activities. The LEA must--

(A) Use data to identify and implement an instructional program that is research-based and "vertically aligned" from one grade to the next as well as aligned with State academic standards; and

(B) Promote the continuous use of student data (such as from formative, interim, and summative assessments) to inform and differentiate instruction in order to meet the academic needs of individual students.

(ii) Permissible activities. An LEA may also implement comprehensive instructional reform strategies, such as--

(A) Conducting periodic reviews to ensure that the curriculum is being implemented with fidelity, is having the intended impact on student achievement, and is modified if ineffective;

(B) Implementing a schoolwide "response-to-intervention" model;

(C) Providing additional supports and professional development to teachers and principals in order to implement effective strategies to support students with disabilities in the least restrictive environment and to ensure that limited English proficient students acquire language skills to master academic content;

(D) Using and integrating technology-based supports and interventions as part of the instructional program; and

(E) In secondary schools--

(1) Increasing rigor by offering opportunities for students to enroll in advanced coursework (such as Advanced Placement or International Baccalaureate; or science, technology, engineering, and mathematics courses, especially those that incorporate rigorous and relevant project-, inquiry-, or design-based contextual learning opportunities), early-college high schools, dual enrollment programs, or thematic learning academies that prepare students for college and careers, including by providing appropriate supports designed to ensure that low-achieving students can take advantage of these programs and coursework;

(2) Improving student transition from middle to high school through summer transition programs or freshman academies;

(3) Increasing graduation rates through, for example, credit-recovery programs, re-engagement strategies, smaller learning communities, competency-based instruction and performance-based assessments, and acceleration of basic reading and mathematics skills; or

(4) Establishing early-warning systems to identify students who may be at risk of failing to achieve to high standards or graduate.

(3) Increasing learning time and creating community-oriented schools.

(i) Required activities. The LEA must--

(A) Establish schedules and implement strategies that provide increased learning time (as defined in this notice); and

(B) Provide ongoing mechanisms for family and community engagement.

(ii) Permissible activities. An LEA may also implement other strategies that extend learning time and create community-oriented schools, such as--

(A) Partnering with parents and parent organizations, faith- and community-based organizations, health clinics, other State or local agencies, and others to create safe school environments that meet students' social, emotional, and health needs;

(B) Extending or restructuring the school day so as to add time for such strategies as advisory periods that build relationships between students, faculty, and other school staff;

(C) Implementing approaches to improve school climate and discipline, such as implementing a system of positive behavioral supports or taking steps to eliminate bullying and student harassment; or

(D) Expanding the school program to offer full-day kindergarten or pre-kindergarten.

(4) Providing operational flexibility and sustained support.

(i) Required activities. The LEA must--

(A) Give the school sufficient operational flexibility (such as staffing, calendars/time, and budgeting) to implement fully a comprehensive approach to substantially improve student achievement outcomes and increase high school graduation rates; and

(B) Ensure that the school receives ongoing, intensive technical assistance and related support from the LEA, the SEA, or a designated external lead partner organization (such as a school turnaround organization or an EMO).

(ii) Permissible activities. The LEA may also implement other strategies for providing operational flexibility and intensive support, such as--

(A) Allowing the school to be run under a new governance arrangement, such as a turnaround division within the LEA or SEA; or

(B) Implementing a per-pupil school-based budget formula that is weighted based on student needs.

If a school identified as a persistently lowest-achieving school has implemented, in whole or in part within the last two years, an intervention that meets the requirements of the turnaround, restart, or transformation models, the school may continue or complete the intervention being implemented.

About *High Schools That Work*

High Schools That Work (HSTW) was established in 1987 by the SREB State Vocational Education Consortium, a partnership of SREB, its member states, their school systems and school sites.

HSTW has grown from 28 pilot sites in 13 states to its current size of more than 1,200 sites in 30 states and the District of Columbia, including: Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia and West Virginia.

HSTW uses research-proven strategies to help states transform their public high schools into places where all students learn at high levels.

The program is based on the belief that most students can master complex academic and technical concepts if schools create an environment that encourages students to make the effort to succeed. Member schools implement 10 Key Practices for changing what is expected of students, what they are taught and how they are taught.

SREB provides member states and sites with staff development, technical assistance, communications and publications, and assessment services.

The program has its own *HSTW* Board.

http://www.sreb.org/page/1078/high_schools_that_work.html

EVENTS

07/14/2010 - 07/17/2010
24th Annual SREB *High Schools That Work* Staff Development Conference >>

PUBLICATIONS

***High Schools That Work*: An Enhanced Design to Get All Students to Standards**

***High Schools That Work* Supportive Networks and Services**

FOR INFORMATION, CONTACT:

Gene Bottoms
Senior Vice President
(404) 875-9211
Beth Andrews
Executive Assistant to the Senior Vice President
(404) 879-5577

Making Middle Grades Work

Too many students leave the middle grades unprepared to succeed in rigorous high school studies and unable to take advantage of all that high school can offer. By ninth grade, many struggling students have fallen behind and are on a path to become high school dropouts.

Through SREB's middle grades initiative, SREB states are among the first in the nation to implement strategies that address the crucial middle grades and key transition into high school. *Making Middle Grades Work (MMGW)* helps states, districts and schools look at what they expect, what they teach and how they teach young adolescents to prepare for success in further education.

MMGW is a network of schools, districts and states committed to improving school and classroom practices in the middle grades by implementing a framework of Key Practices and conditions for continuous improvement. The *MMGW* brochure, *Making Middle Grades Work*: An Enhanced Design to Prepare All Middle Grades Students for Success in High School, details the essential elements and other components of the framework.

http://www.sreb.org/cgi-bin/MySQLdb?VIEW=/public/view_page.txt&currentpage=1080

EVENTS

03/04/2010 - 03/05/2010
Re-Energizing Your Implementation of the *HSTW/MMGW* Design >>
07/14/2010 - 07/17/2010
24th Annual SREB *High Schools That Work* Staff Development Conference >>

PUBLICATIONS

***Making Middle Grades Work*: An Enhanced Design to Prepare All Middle Grades Students for Success in High School**

Preparing Middle Grades Students for High School Success: A Comparative Study of Most- and Least-Improved Middle Grades Schools

FOR INFORMATION, CONTACT:

Yvonne Thayer
Senior Director
(404) 879-5548

Save the Children.

Memorandum

To: David Cook
From: Andrew Hysell
Date: December 11, 2009
Re: Race to the Top Application for Initial Funding, CFDA Number: 84.3945A

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(Note, under the evidence section of the application, you may want to mention our program as an example of how Kentucky has addressed the issue of lowest-achieving schools over the past 5 years. That state has funded our program for 4 years plus).

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- R` ud sgd Bghkcqdmst snqr+v nqj hmf v hsg r l ` kkf qnt or nebghkcqdmnmr j hk,a` r dc qd` chmf st snqh` kr ` kr n dl oknx end ` shud ` r r dr r l dms r+nm` qdf t k` qa` r hr+sn hmend v ddj kx hmr sqt bshmm-

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- R` ud sgd Bghhcqdmnodq` sdr hsr d` dqx bghhcgnnc oqnf q` l r,,D` dqx Rsdor enqRbgnnk Rt bbdr r 'DRRR(Î hmdq` q` kJ dmst bj x- Sgd DRRR oqnf q` l g` r ` enbt r nmhme` mr sn oqd,J ` f d bghhcqdm` mc hr cdr hf mdc sn Ïaq` hcÐv hsg R` ud sgd Bghhcqdm Ò hsdq` bx oqnf q` l + sq` mr hshmmhmf j hcr hmrsn r bgnnk- Sghr ydqn sn dhf gsf q` cd l ncdkhr bnmr hcdqdc ax l ` mx dct b` shmmdwodqsr ` r ` oqdedqqdc hmsdqudmshmm enqh oqnuhmf dct b` shmmodqenq ` mbd ` mc hmbqd` r hmf f q` ct ` shmmq` sdr -

GATEWAY to COLLEGE

NATIONAL NETWORK

Essential Elements of the Model

All Gateway to College programs will implement the following essentials elements.

1. **Sustainable Partnerships.** Programs are self-sustaining through K – 12, college, and community partnerships. District per-pupil expenditure pays for tuition and books and colleges use their existing infrastructure to limit operational costs. District and college needs are met.

2. **College-based.** Gateway programs are an integral part of the college. All classes and staff offices are on campus. Flexible class times fit non-traditional students' schedules. The college calendar is adhered to and some students take summer classes to graduate before "aging out." Students have full access to college courses, facilities, and support services. Students *feel* like college students because they *are* full-fledged college students.

3. **Dual Credit.** Courses align to allow dual credit (high school and college). Students achieve a high school diploma and significant college credit toward an AA or certificate. Alignment work is undertaken with an "every-credit counts, no wasted credits" mindset.

4. **Staffing.** Program staff is experienced with at-risk youth program delivery. An initial staffing plan includes a full-time director; administrative assistant; two full-time resource specialists (student counselor, coach, mentor, advisor); reading, writing, and math faculty (often part-time adjuncts); and support staff (e.g., tutors, academic lab facilitators). Faculty hold masters degrees to meet highly qualified requirements.

5. **Student Selection.**

   Eligibility. Student eligibility is firmly based on the following criteria. An eligible student: is between 16 and 20 years old; has dropped out or is on the verge of dropping out of high school; is behind in credits for age and grade level; has a GPA of 2.0 or below (or exhibits other risk factors); lives in an eligible district; has expressed the goal of earning a diploma; and reads at an 8th grade level or higher.

   Assessment. Students are selected through an intensive intake and evaluation process. Student reading, writing, grammar, math, and affective skills are assessed prior to their acceptance. Network-approved selection tools and guidelines are used to assess a student's chance for success while maintaining the Gateway mission.

   Referral. The program serves as a clearinghouse for reconnecting youth to education. Those students not selected are counseled to a better option. These options may include GED, ESL/ELL, K – 12 or college alternatives, and community-based programs.

   Matriculation. New students begin each college term (including summer if possible).

JCPS
FCPS
Paducah

Stephen Rice
Dir. Ed. Leaning
Language
Ford RTTT Proposal Dec & Jan
TEK

6. **Student Progress.**
   Foundation. All students begin with Gateway Foundation in a learning community of 20-25 students. They take coursework in reading, writing, math, college survival, and an academic lab. Each learning community is assigned a resource specialist (RS) who works intensively with each student until graduation. RSs teach college guidance and career development courses in order to provide more holistic support by getting to know their students as learners.

   Transition. Students transition onto the comprehensive campus (called Gateway Continuation) where they complete the dual credit coursework needed for their diploma. An individual's transition path varies. Based on Foundation grades, maturity-level, and skill-level (including college placement test results), they are placed in the appropriate next sequence of courses. Some will need to repeat some/all Foundation courses. Some need further developmental-level work. Most will begin taking at least one college transfer-level class in their second term.

   Continuation. Continuation courses are taught by regular college faculty. A Gateway student attends these courses as a "regular" college student. As a rule, their identity as a Gateway student is transparent. Continuation students maintain a connection to the Gateway community through ongoing contact with their RS (including required advising). They use academic support services and participate in leadership opportunities. An additional connection is maintained through the career development class taught by the RS during a student's second term. RSs help students create an academic plan to meet diploma requirements, college, and career goals.

   Graduation. Students graduate from the program when they complete their diploma requirements. RSs assist graduating students (and anyone "aging out") to transition to further college (e.g., assist with financial aid and scholarship applications) and toward career goals.

7. **Collaboration.** The program relies on a team-based approach to student success. Team members work together to support student progress, and students rely on each other as supports and resources. Forming positive peer groups is part of the transformative power of Gateway to College.

8. **Teaching and Learning.** Program curriculum builds basic academic and life skills. It inspires personal and academic development and is a catalyst for scaffolded growth. Students are given high expectations and regularly engage in rigorous assignments relevant to 21st century work and their lives. Faculty are trained on and committed to the Gateway pedagogy.

9. **Student Support.** Student support is woven into the fabric of Gateway both in and out of the classroom. Students are part of a college family grounded in mutual respect where adult thinking and behavior are cultivated. Students reflect on their growth, and their success is celebrated regularly and zestfully. Programs give consideration for how to best serve students' special needs. Partnerships allow programs to serve students holistically and comprehensively.

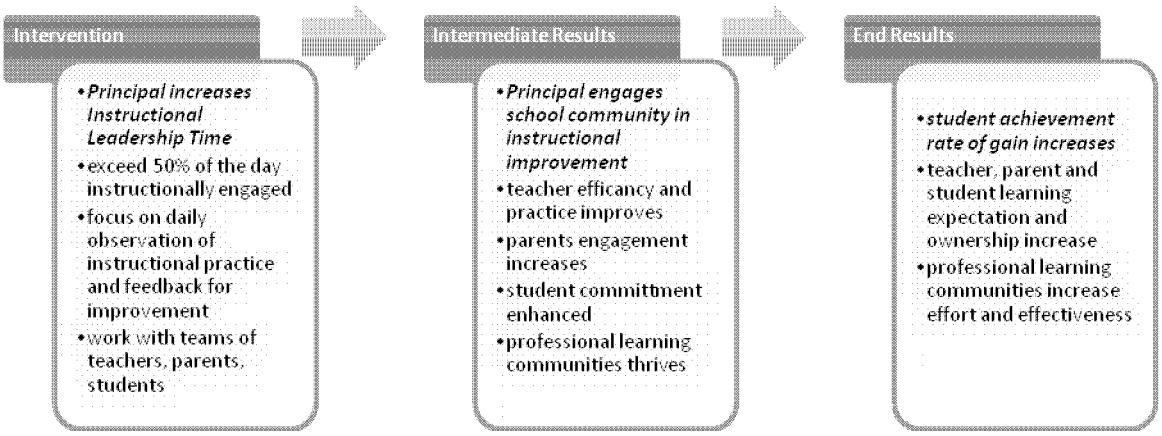
10. **Professional Growth.** Gateway programs have a strong culture of professional development. Team members are passionate about helping to solve the dropout crisis. Individual development becomes the norm, not the exception. Program team members share good ideas and rely on each other for input and feedback. Self-transformation is part of the culture and is expected from team members and students alike.

School Administrative Manager (SAM) program

The SAM change process starts with the principal's use of his/her time data to increase instructional leadership time. Time Change coaches, teacher leaders and the SAM help the principal be reflective on how to use the time and, most importantly, to positively impact teacher performance, parent engagement and student learning. Teacher and staff perception of the principal role and school climate issues play a critical part in the effectiveness of the principal's work. Surveys and both annual and daily data collection provide continuous feedback loops to maximize the impact of improvement efforts.

The logic model for The National SAM Project is based on ten years of research that ties principal instructional leadership to student achievement gain. (Leithwood, et.al) Research has established that the school principal is the second most important factor in driving student achievement. The National SAM Project provides baseline principal time use data to help the school leader refocus on instructional leadership work, improving teacher performance, parent efficacy and student engagement, rather than managerial tasks.

SAM Process: Time



The initial study demonstrated a significant change in principal practice and established a correlation with increased student achievement rate of gain at the pilot sites. (Shellinger, ERIC, 2005) As the project expanded to ten states and over 300 schools, The Wallace Foundation commissioned an 18 month independent study examining the change of time use by participating principals.

(PSA, 2009) The study concluded that SAM principals change their daily practice and use of time with significant gains in instructional leadership activities. Proving this intermediate step toward increased student achievement rate of gain is a major accomplishment and has been established in schools of all levels, sizes, configurations and student demographics. Evaluators determined that principal change of practice, increasing instructional leadership time, is **statistically significant** in both model 1 and model 2 SAM schools. High delegation, model 1, 2 & 3 schools, where SAMs or another staff member served as the first responder for five high management tasks, also showed significant gains.

Dr. Joe Murphy of Vanderbilt University, the primary author of the national principal performance standards, ISSLC, said: *"The SAM Project is the first time we can demonstrate a change of principal practice, increasing time spent on instructional leadership, in the history of educational leader preparation and development."*

Principals can transform schools and improve student learning when they focus on essential tasks. Principals are in a unique position to help transform schools, and a strong principal can help change any school into a professional learning community that focuses on improving teaching and learning. Research has shown that these broad sets of leadership practices are linked to improved student learning:

Setting directions, including a vision, goals and high expectations;

Becoming a leader of leaders by working with other key staff members to distribute various leadership roles;

Developing teachers and other staff members by providing instructional leadership and quality professional development and building strong learning communities; and

Redesigning and transforming the school by building a culture focused on teaching and learning to achieve goals.

Management duties prevent principals from devoting more time to instruction. Even as we demand higher student achievement from our schools, principals are increasingly under pressure to perform duties that pull them away from instructional leadership. Though school leaders would like to be more involved in instructional leadership, studies show that principals – even those in

the highest performing schools – spend up to 75 percent of their time on management. However, with guidance on how to delegate non-instructional tasks, principals spend dramatically more time on practices that lead to improved teaching and learning.

THE NATIONAL SCHOOL ADMINISTRATION MANAGER (SAM) PROJECT HELPS GIVE PRINCIPALS THE TIME AND SKILLS TO FOCUS ON INSTRUCTION

• **The SAM Project has been in development for several years and is being piloted in school districts across the country.**

The SAM Project began in Louisville, KY, in 2002 the Alternative School Administration Study. The study looked at conditions that prevented principals from making instructional leadership their priority and developed strategies to change those conditions.

The Wallace network of educators in ten states developed and implemented the SAM Project in its pilot stage. The network includes educators in California, Delaware, Georgia, Illinois, Iowa, Kansas, Kentucky, Massachusetts, Missouri, New York, and Texas. Participating school districts agreed to fund project-related positions over several years and The National SAM Project, supported by The Wallace Foundation, provided training and data collection costs as part of the pilot.

• **The SAM Project has created a process that allows principals to focus time on improving instruction and learning.** As a part of the SAM Project, principals do not stop managing their buildings – they simply learn to delegate some of their management responsibilities, creating more time to spend on teaching practice, student learning and school improvement. They continue to oversee the school's management, but hand over many tedious and time-consuming activities involved with being a building manager.

• **The SAM Project consists of five core elements**:

A readiness and willingness by principals and districts to commit to increasing time for instructional leadership;

An initial Time/Task Analysis Data Collection™ of how the principals spend their time;

Principals' engaging with a School Administration Manager (SAM) in daily meetings;

External coaching; and

Follow-up Time/Task Analysis Data Collection after one year to assess improvement.

The SAM Project is primarily a change process and a statewide and district wide change strategy. The project goes beyond simply adding new staff to help individual principals improve instruction in their schools. It aims to ensure that the entire community is aware that changing principal time use is critical to transforming schools. This is a complex change strategy that SAMs can help facilitate.

KENTUCKY DEPARTMENT OF EDUCATION

SEEK Calculations

District: 134 Covington Independent - School Year: 2009 - 2010 **Date Generated: September 15, 2009 3:35:12 PM**

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

Assessment	$ 1,564,375,646	Prior Year End of Year AADA	3,300.795
Per Pupil Assessment	$ 473,939	Growth	0.000
91-92 State Per Pupil Funding	$ 2,843.00	Prior Year AADA Plus Growth	3,300.795
Transportation (Unprorated)	$ 1,206,814	At Risk	2,823.346
Maximum Tier I Rate	47.2	Prior Year December 1 Child Count	
Levied Equivalent Rate	93.6	Low Incidence (Severe: Weight 2.35)	165
Base Year Levied Equivalent Rate	93.6	Moderate Incidence (Moderate: Weight 1.17)	418
Current year Levied Equivalent Rate	97.0	High Incidence (Speech: Weight 0.24)	125
Current Year Second Month Growth Factor %	0.000	Prior Year Home & Hospital	6.937
		Limited English Proficiency	64

SEEK CALCULATION:

	Per Pupil	Total
Guaranteed Base *	$ 3,866.00	$ 12,760,873
At Risk	496.00	1,637,258
Home & Hospital	8.00	26,125
Exceptional Child	1,062.00	3,505,727
Transportation	290.00	955,891
Limited English Proficiency	7.00	23,753
Calculated Base Funding	$ 5,729	$ 18,909,627
Less 30 Cent Local Effort	1,422.00	4,693,127
Calculated STATE Portion	$ 4,307	$ 14,216,500
State Tier I	292.00	963,648
Hold Harmless	0.00	0
Adj to Appropriation **	-425.00	-1,438,748
Total State SEEK *	$ 4,163	$ 13,741,400
Prior Year Adjustment	0.00	0
Total State Funds	$ 4163.00	$ 13,741,400
Less Capital Outlay		330,080
Net General Fund SEEK		$ 13,411,320

NICKELS:

FSPK		
Local	$	782,188
State	$	394,546
Original Growth Nickel		
Local	$	0
State	$	0
Equalized Growth Nickel		
Local	$	0
Recallable Nickel		
Local	$	0
State	$	0
Equalized Facility Funding Nickel		
Local	$	0
State	$	0

* CAPITAL OUTLAY in the amount of $330,080.00 is included in the total guaranteed base.

**ADJ TO APPROPRIATION represents SFSF Funds.

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

KENTUCKY DEPARTMENT OF EDUCATION

SEEK Calculations

District: 181 Franklin County - School Year: 2009 - 2010 **Date Generated: September 15, 2009 3:35:12 PM**

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

Assessment	$ 3,162,717,851	Prior Year End of Year AADA	5,383.830
Per Pupil Assessment	$ 587,448	Growth	0.000
91-92 State Per Pupil Funding	$ 2,362.00	Prior Year AADA Plus Growth	5,383.830
Transportation (Unprorated)	$ 2,420,528	At Risk	2,214.087
Maximum Tier I Rate	45.9	Prior Year December 1 Child Count	
Levied Equivalent Rate	61.3	Low Incidence (Severe: Weight 2.35)	133
Base Year Levied Equivalent Rate	61.3	Moderate Incidence (Moderate: Weight 1.17)	434
Current year Levied Equivalent Rate	62.4	High Incidence (Speech: Weight 0.24)	190
Current Year Second Month Growth Factor %	0.000	Prior Year Home & Hospital	5.449
		Limited English Proficiency	95

SEEK CALCULATION:

	Per Pupil	Total
Guaranteed Base *	$ 3,866.00	$ 20,813,887
At Risk	238.00	1,283,949
Home & Hospital	4.00	20,521
Exceptional Child	622.00	3,347,685
Transportation	356.00	1,917,247
Limited English Proficiency	7.00	35,258
Calculated Base Funding	$ 5,093	$ 27,418,547
Less 30 Cent Local Effort	1,762.00	9,488,154
Calculated STATE Portion	$ 3,330	$ 17,930,393
State Tier I	137.00	737,515
Hold Harmless	0.00	0
Adj to Appropriation **	-315.00	-1,687,388
Total State SEEK *	$ 3,154	$ 16,980,520
Prior Year Adjustment	0.00	0
Total State Funds	$ 3154.00	$ 16,980,520
Less Capital Outlay		538,383
Net General Fund SEEK		$ 16,442,137

NICKELS:

FSPK	
Local	$ 1,581,359
State	$ 337,976
Original Growth Nickel	
Local	$ 0
State	$ 0
Equalized Growth Nickel	
Local	$ 0
Recallable Nickel	
Local	$ 1,581,359
State	$ 337,976
Equalized Facility Funding Nickel	
Local	$ 0
State	$ 0

* CAPITAL OUTLAY in the amount of $538,383.00 is included in the total guaranteed base.

**ADJ TO APPROPRIATION represents SFSF Funds.

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

KENTUCKY DEPARTMENT OF EDUCATION

SEEK Calculations

District: 465 Oldham County - School Year: 2009 - 2010 **Date Generated: September 15, 2009 3:35:12 PM**

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

Assessment	$ 6,035,438,226	Prior Year End of Year AADA	10,754.502
Per Pupil Assessment	$ 561,201	Growth	0.000
91-92 State Per Pupil Funding	$ 2,308.00	Prior Year AADA Plus Growth	10,754.502
Transportation (Unprorated)	$ 4,819,584	At Risk	1,556.404
Maximum Tier I Rate	45.6	Prior Year December 1 Child Count	
Levied Equivalent Rate	70.3	Low Incidence (Severe: Weight 2.35)	328
Base Year Levied Equivalent Rate	70.8	Moderate Incidence (Moderate: Weight 1.17)	761
Current year Levied Equivalent Rate	70.3	High Incidence (Speech: Weight 0.24)	579
Current Year Second Month Growth Factor %	0.000	Prior Year Home & Hospital	4.982
		Limited English Proficiency	245

SEEK CALCULATION:

	Per Pupil	Total
Guaranteed Base *	$ 3,866.00	$ 41,576,905
At Risk	84.00	902,559
Home & Hospital	2.00	18,762
Exceptional Child	647.00	6,959,303
Transportation	355.00	3,817,487
Limited English Proficiency	8.00	90,928
Calculated Base Funding	$ 4,962	$ 53,365,944
Less 30 Cent Local Effort	1,684.00	18,106,315
Calculated STATE Portion	$ 3,279	$ 35,259,629
State Tier I	161.00	1,736,257
Hold Harmless	0.00	0
Adj to Appropriation **	-313.00	-3,364,159
Total State SEEK *	$ 3,127	$ 33,631,727
Prior Year Adjustment	0.00	0
Total State Funds	$ 3127.00	$ 33,631,727
Less Capital Outlay		1,075,450
Net General Fund SEEK		$ 32,556,277

NICKELS:

FSPK	
Local	$ 3,017,719
State	$ 816,261
Original Growth Nickel	
Local	$ 3,017,719
State	$ 816,261
Equalized Growth Nickel	
Local	$ 3,017,719
Recallable Nickel	
Local	$ 3,017,719
State	$ 816,261
Equalized Facility Funding Nickel	
Local	$ 0
State	$ 0

* CAPITAL OUTLAY in the amount of $1,075,450.00 is included in the total guaranteed base.

**ADJ TO APPROPRIATION represents SFSF Funds.

2009 - 2010 Tentative (Jul 20 2009 11:02AM)

The Education Trust

Closing the gaps in opportunity and achievement, pre-K through college.

Education Watch
State Report

APRIL 2009

Improving Achievement and Closing Gaps

All around America, people are talking about ways to improve education. Important discussions are focusing on the gaps in educational opportunity and achievement that separate low-income students and students of color from others. Most constructive conversations on the topic begin not with finger-pointing or theorizing but with a careful look at hard evidence.

In this document, The Education Trust presents an array of data in a consistent format so that educators, parents, and public officials in every state and the nation can squarely face this issue. Each "Education Watch State Report" shows how well schools are serving different groups of young people. Similar disturbing patterns exist in virtually every state and the nation:

- Educational performance is too low, and big gaps separate low-income students and students of color from others.
- Improvement, while real, is far too slow.

Changing these patterns is essential. One reason is that America's population is changing fast. Indeed, low-income students and students of color now constitute a majority of the nation's public school students. But opportunity gaps have rigged the system against their educational success. This report documents these gaps and shows the resulting toll in student achievement.

The good news is that achievement gaps are not inevitable. Around the country, evidence is unequivocal that low-income students and students of color achieve at high levels when schools and school systems are organized to support student success.

We hope you will use the information in this report to close the opportunity and achievement gaps once and for all.

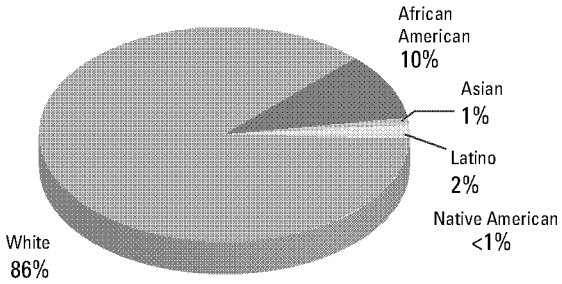
KENTUCKY

Vital Statistics

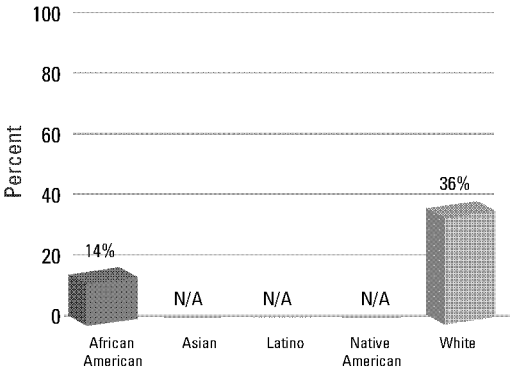
An overview of the state's student population, the levels of achievement in reading and mathematics, and high school and college graduation rates.

Public K-12 Enrollment, 2005-06

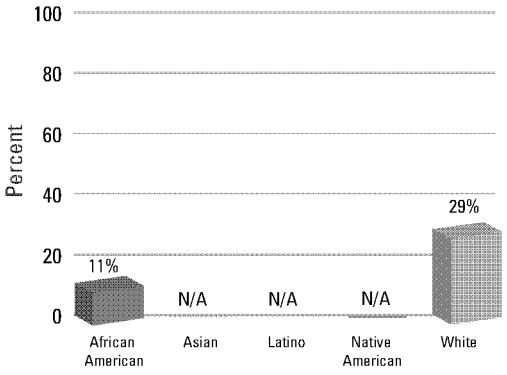
(636,647 total students)



Reading—Fourth-Grade Students Scoring Proficient or Higher on the National Assessment in 2007

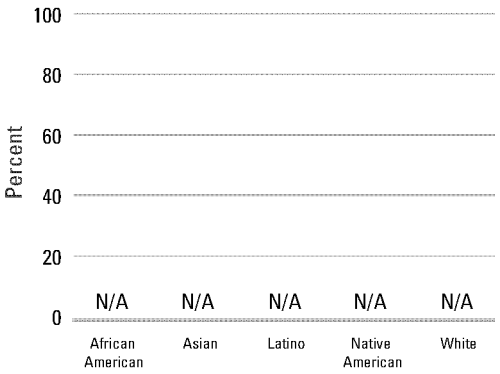


Math—Eighth-Grade Students Scoring Proficient or Higher on the National Assessment in 2007



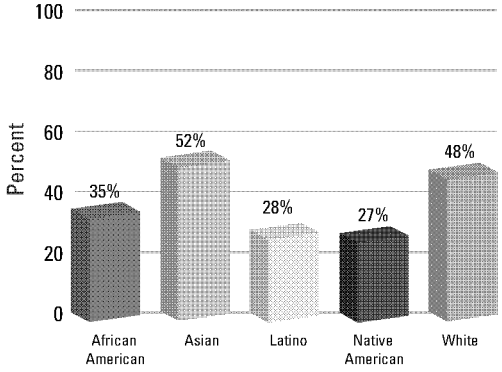
On-Time High School Graduation Rates

(Averaged Freshman Graduation Rate, 2006)



Public College Graduation Rates

(Freshmen Entering Fall 2000 Who Graduated By 2006)



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Helpful Hints

Throughout this report, explanatory information appears in the shaded areas to help you interpret the various charts. If you are having difficulty understanding a chart, look here for clarification. For more in-depth information about data sources, technical terms, and calculations, see the Notes section at the end of the report. In addition, small inconsistencies in some numbers or percentages are due to rounding.

Data to Support Honest Conversations About Where We Are and What We Need to Do

Data are at the heart of any successful school-improvement process, but understanding which data to focus on and how to analyze the information can be challenging. In this report, The Education Trust offers a roadmap to help you understand education data commonly collected in the states and the nation. The report contains information in four areas:

Demographics: A Snapshot of Today and Tomorrow

This section provides a context for understanding other data presented in this report. As you will see, performance outcomes vary greatly across student groups. Knowing the size of each student group and how fast each is growing can help education leaders plan more effectively to meet the academic needs of all students.

Achievement: Reading, Mathematics, and Science

Results from the National Assessment of Educational Progress (NAEP) provide unique opportunities for state-to-state comparisons of overall student performance, differences among groups, trends over time, and progress among states. NAEP results also provide a powerful external check on states' standards and assessments. The results of state assessments appear here, but wide variations in these assessments prevent comparisons among states.

This report focuses on results at crucial educational turning points: fourth-grade reading, when students begin to use their reading skills to acquire content knowledge in other subjects, and eighth-grade mathematics, when students transition from computation to the abstract reasoning required in higher level mathematics classes. The report also includes NAEP science data for the first time.

Attainment: High School and College Graduation

Achievement alone does not tell the full story of student success. A high school diploma is a basic requirement for a good job and additional education. And in an information economy, many jobs require a bachelor's degree or higher. Low graduation rates adversely affect the economy of your state and have lifelong consequences for students.

Opportunity: Teacher Quality, Academic Rigor, Funding

Too often, our system takes those who start from behind and gives them less of everything they need to succeed: high-quality teachers, a rigorous curriculum, and adequate and equitable funding. What's more, most states do not even collect sufficient data on educational opportunity. This final section examines the available data so states can begin to close the opportunity and achievement gaps.

About The Education Trust

The Education Trust promotes high academic achievement for all students at all levels—pre-kindergarten through college. We work alongside parents, educators, policymakers, and community and business leaders across the country in transforming schools and colleges into institutions that serve all students well. Lessons learned in these efforts, together with unflinching data analyses, shape our state and national policy agendas. Our goal is to close the gaps in opportunity and achievement that consign far too many young people—especially those who are black, Latino, American Indian, or from low-income families—to lives on the margins of the American mainstream.

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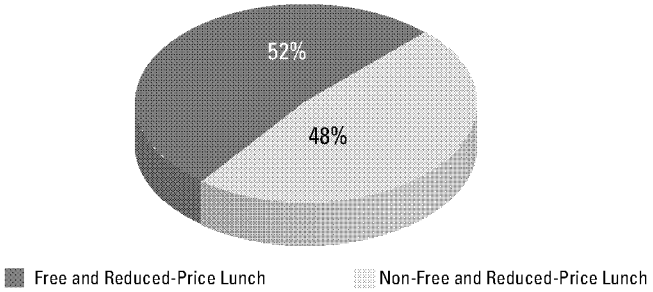
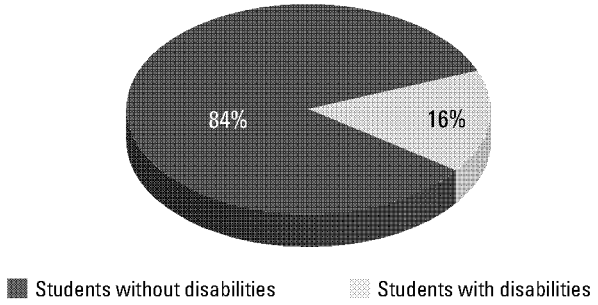
Demographics

Public schools educate students from diverse backgrounds. These charts show the percentages of low-income students, students with disabilities, and English-language learners enrolled in your schools.

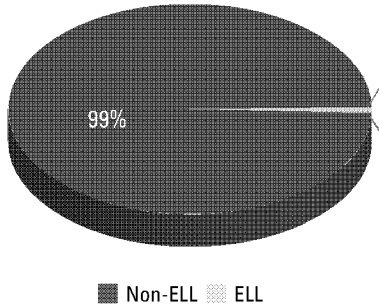
Low-Income Students, 2005-06
Percentage eligible for free and reduced-price lunch



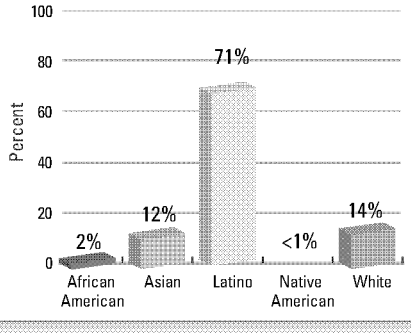
Students With Disabilities, 2005-06
Percentage classified under IDEA



English-Language Learners, 2005-06



Distribution of English-Language Learners, 2005-06



A Shifting Population

Changes in state population ages 5-24, 2006-20

This table shows the youth population of your state in 2006 and U.S. Census Bureau projections of the population in 2020. In addition to noting the overall change in population in your state, look at the third column to see which groups are growing fastest.

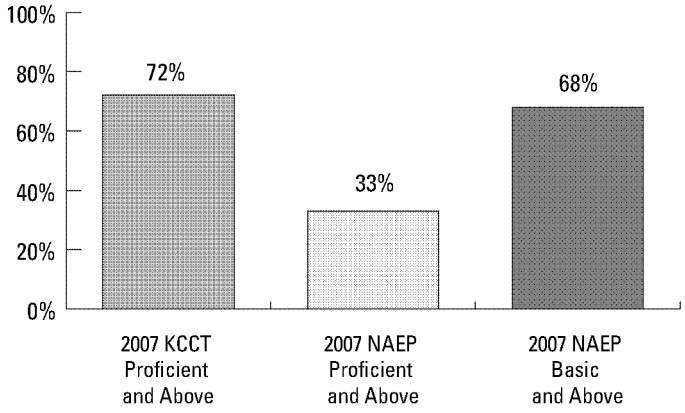
	Population 2006	Projected Population 2020	Projected Change 2006-20
African American	95,959	98,254	2%
Asian	9,487	10,994	16%
Latino	12,922	15,426	19%
Native American	1,865	1,900	2%
White	970,540	894,820	**-8%**
Total	1,090,773	1,021,394	**-6%**

Achievement: Reading

All states annually test students' knowledge and skills to determine whether students are meeting grade-level standards. But states' tests and standards vary widely, making comparisons among states impossible. One way to assess the rigor of state standards is to compare student proficiency rates on state tests with those on the NAEP exam.

Are students proficient in reading?

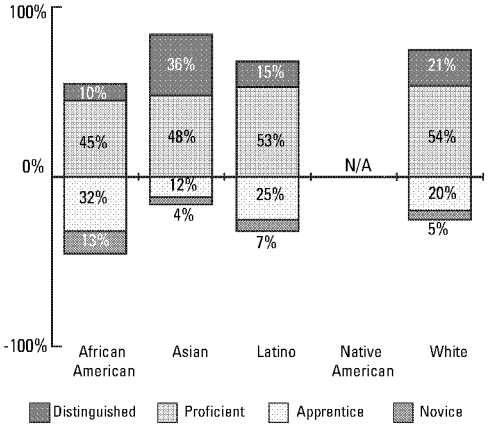
Grade 4 Overall Reading/English Language Arts Performance
Kentucky Core Content Test and NAEP



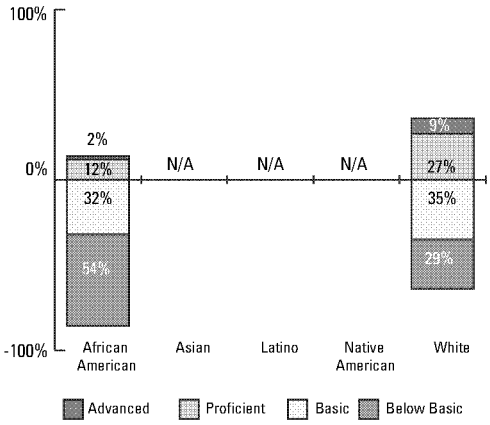
Overall averages mask underlying gaps in achievement. The horizontal line across the middle of both charts represents the "proficient" level on the state assessment and NAEP, respectively. Students falling below this line are below proficient.

Do results vary by group?

2007 Kentucky Core Content Test
Grade 4 Reading



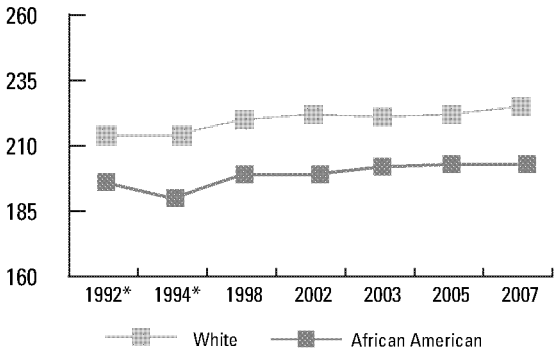
2007 NAEP—Kentucky
Grade 4 Reading



This chart shows the fourth-grade reading performance of various student groups over time. The pattern is encouraging if it shows rising student achievement and narrowing gaps between student groups.

Is Kentucky closing the gap?

NAEP Grade 4 Reading



	Score Gap		
	1998	2003	2007
African American-White Gap	21	19	22

* NAEP did not permit accommodations for students with disabilities and English-Language Learners for these years.

Is NAEP performance improving?

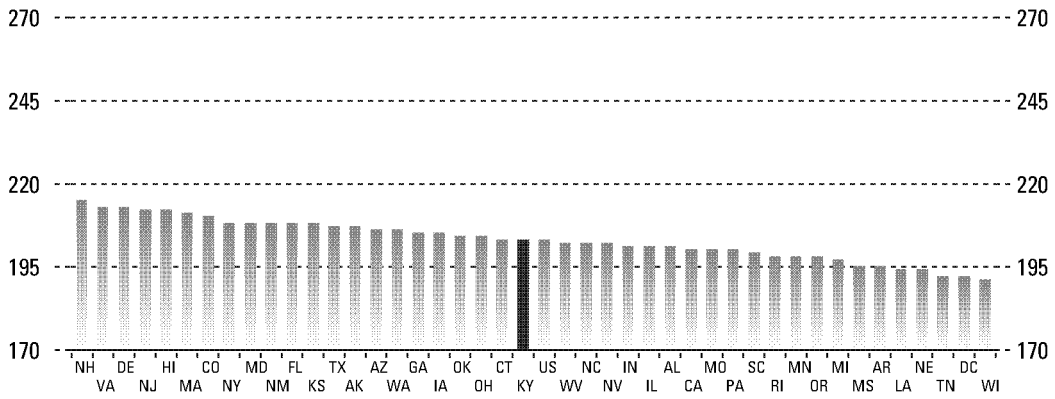
Grade 4 Reading

	NAEP Scale Score		Change from 1998-2007	
	1998	2007	State Change	Biggest Gainers
African American	199	203	4	24 (DE)
Asian	N/A	N/A	N/A	30 (MA)
Latino	N/A	N/A	N/A	42 (DE)
Native American	N/A	N/A	N/A	17 (NM)
White	220	225	5	15 (DE, FL)
All	218	222	4	18 (DE, DC, FL)

The first three columns of numbers in this table show the progress of fourth-grade students on the NAEP reading test. The last column shows the progress of the states that made the greatest gains over the same period for the same student group. From 1998 to 2007, Delaware had the largest gains for African-American, Latino, and white students, proving it is possible to make significant gains for all students.

How does the reading performance of African-American students compare across states?

2007 NAEP Grade 4 Reading Average Scale Score

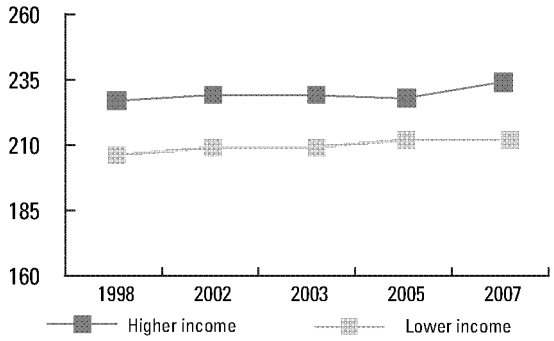


Comparing NAEP results across states reveals that some states are far more successful than others in educating students of color. This chart compares the performance of fourth-graders from the largest population of color in your state with the same population in other states.

Just as the chart on page 4 illustrates the gaps in reading achievement among fourth-graders of different ethnic backgrounds, this chart does the same for higher income and lower income students.

Is Kentucky closing the gap?

NAEP Grade 4 Reading



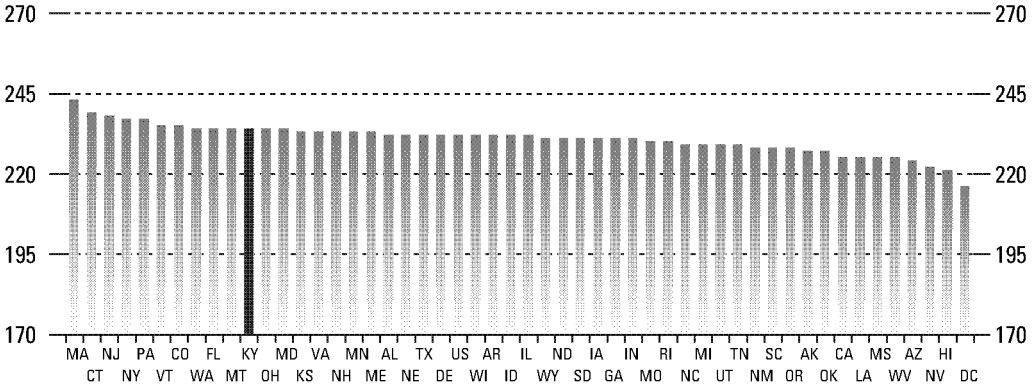
	Score Gap		
	1998	2003	2007
Gap Between Lower Income and Higher Income Students	21	20	22

(Lower income students are eligible for free or reduced-price lunch. Higher income students are not.)

The next two charts display the states from highest to lowest according to the reading achievement of fourth-graders from higher income and lower income families.

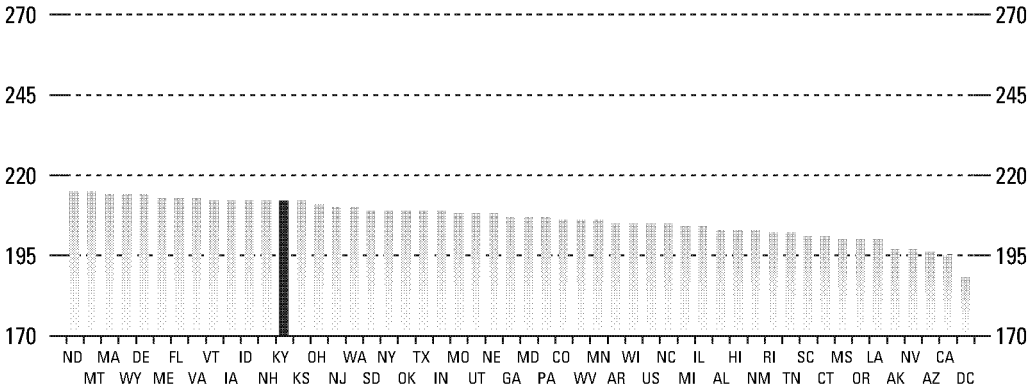
How does the reading performance of higher income students compare across states?

2007 Grade 4 Reading Average Scale Score



How does the reading performance of lower income students compare across states?

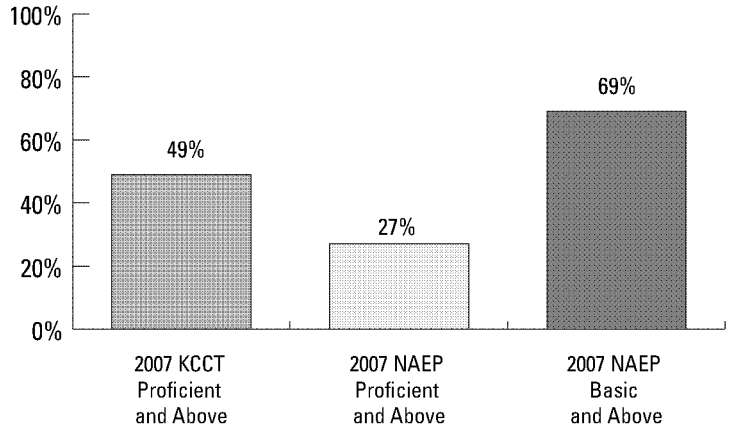
2007 Grade 4 Reading Average Scale Score



Achievement: Mathematics

Are students proficient in mathematics?

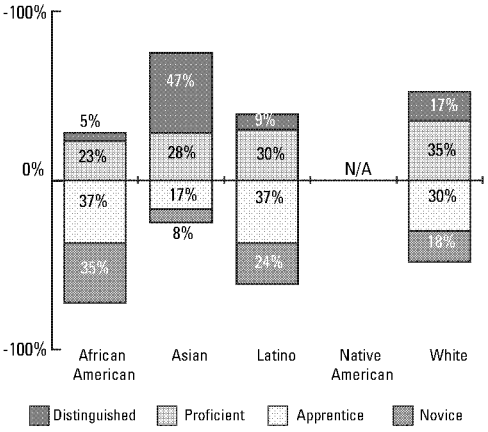
Grade 8 Overall Mathematics Performance
Kentucky Core Content Test and NAEP



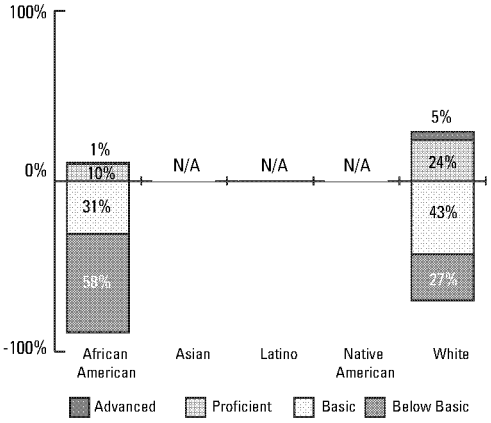
All states annually assess students' knowledge and skills to determine whether students are meeting grade-level standards. But states' standards and tests vary widely, making comparisons among states impossible. One way to assess the rigor of state standards is to compare student proficiency levels on the state test with those on the NAEP exam.

Do results vary by group?

2007 Kentucky Core Content Test
Grade 8 Mathematics



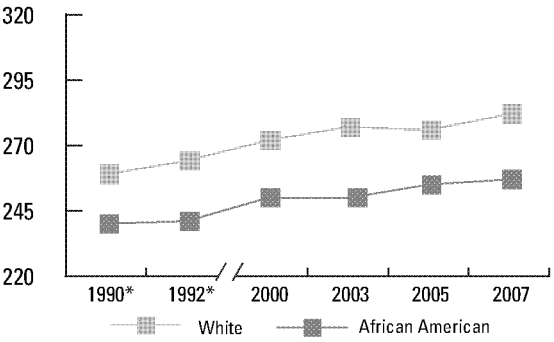
2007 NAEP—Kentucky
Grade 8 Mathematics



Overall averages mask underlying gaps in achievement. The horizontal line across the middle of both charts represents the "proficient" level on the state assessment and NAEP, respectively. Students falling below this line are below proficient.

Is Kentucky closing the gap?

NAEP Grade 8 Mathematics



	Score Gap		
	2000	2003	2007
African American-White Gap	22	27	25

This chart shows eighth-grade mathematics performance of various student groups over time. The pattern is encouraging if it shows rising student achievement combined with narrowing gaps between student groups.

* NAEP did not permit accommodations for students with disabilities and English-Language Learners for these years.

Achievement: Mathematics

The first three columns of numbers in this table show the progress of eighth-grade students on the NAEP mathematics test. The last column shows the progress of the states that made the greatest gains over the same period for the same student group. From 2000 to 2007, Massachusetts posted the largest gains for Latino, Asian, and white students and the second largest for African-American students, proving it is possible to make significant gains for all students.

Is NAEP performance improving?

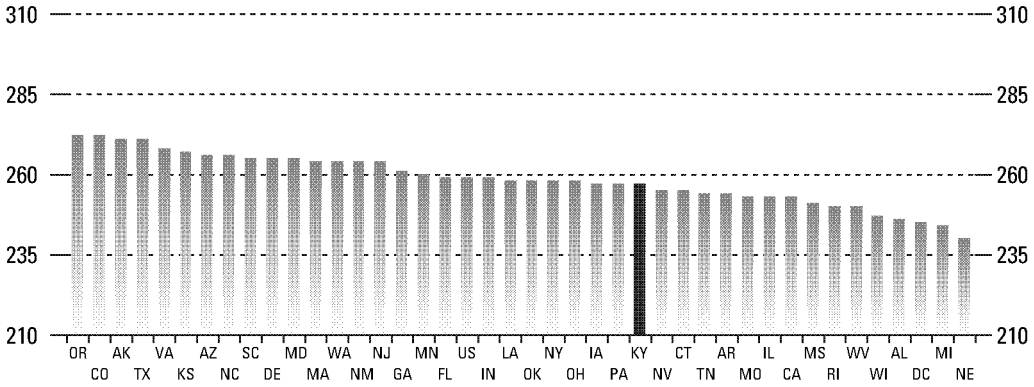
Grade 8 Mathematics

	NAEP Scale Score		Change from 2000-2007	
	2000	2007	State Change	Biggest Gainers
African American	250	257	7	27 (AR)
Asian	N/A	N/A	N/A	23 (MA)
Latino	N/A	N/A	N/A	24 (MA)
Native American	N/A	N/A	N/A	21 (ND)
White	272	282	10	21 (MA)
All	270	279	9	19 (MA)

Comparing NAEP results across states reveals that some states are far more successful than others in educating students of color. This chart compares the performance of eighth-graders from the largest population of color in your state with the same population in other states.

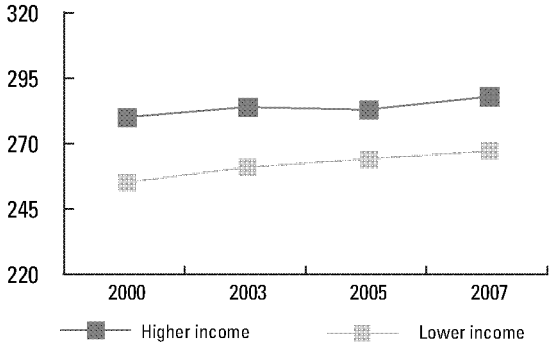
How does the mathematics performance of African-American students compare across states?

2007 Grade 8 Mathematics Average Scale Score



Is Kentucky closing the gap?

NAEP Grade 8 Mathematics



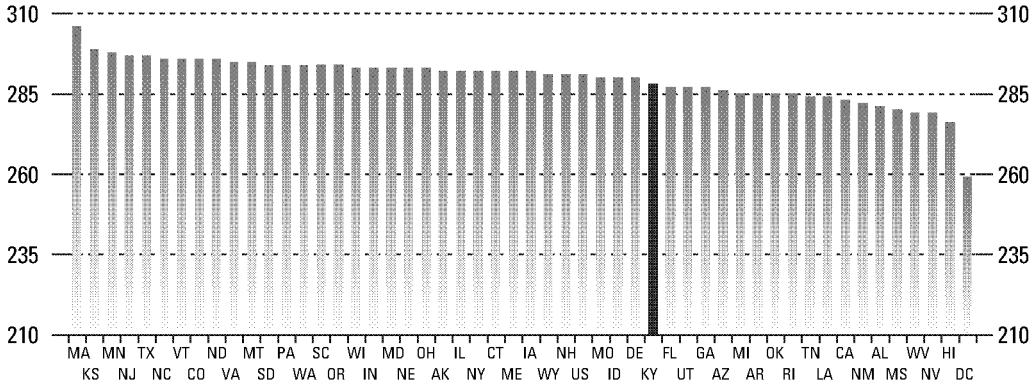
	Score Gap		
	2000	2003	2007
Gap Between Lower Income and Higher Income Students	25	23	21

(Lower income students are eligible for free or reduced-price lunch. Higher income students are not.)

Just as the charts on page 7 illustrate the gaps in mathematics achievement among eighth-graders of different ethnic backgrounds, this chart does the same for higher income and lower income students.

How does the mathematics performance of higher income students compare across states?

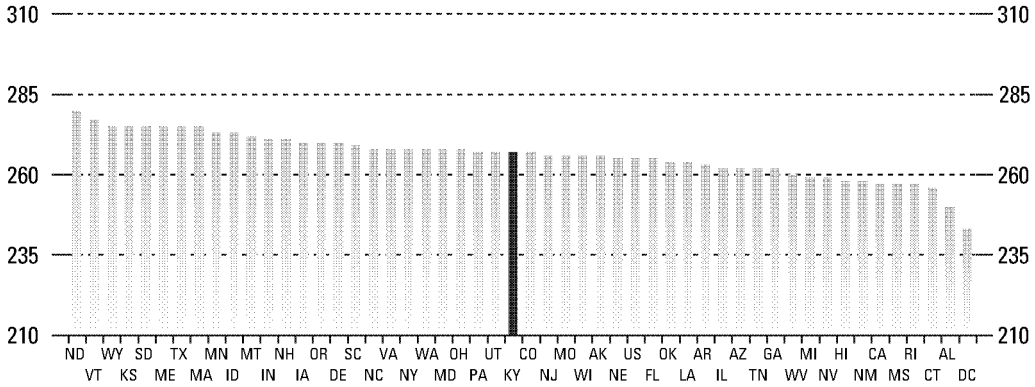
2007 Grade 8 Mathematics Average Scale Score



The next two charts display the states from highest to lowest according to the mathematics achievement of eighth-graders from higher income and lower income families.

How does the mathematics performance of lower income students compare across states?

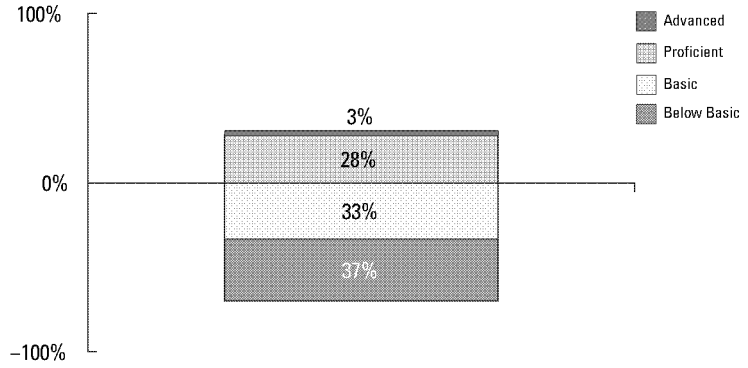
2007 Grade 8 Mathematics Average Scale Score



NAEP remains the most widely available assessment of states' science performance.

Are students proficient in science?

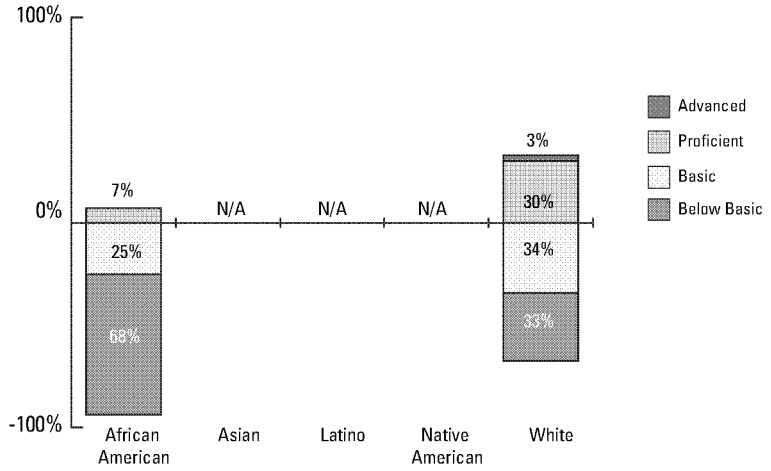
2005 NAEP—Kentucky
Grade 8 Science, All Students



Overall averages mask underlying gaps in achievement. The horizontal line across the middle of the chart represents the "proficient" level on the NAEP science exam. Students falling below this line are below proficient.

Do results vary by group?

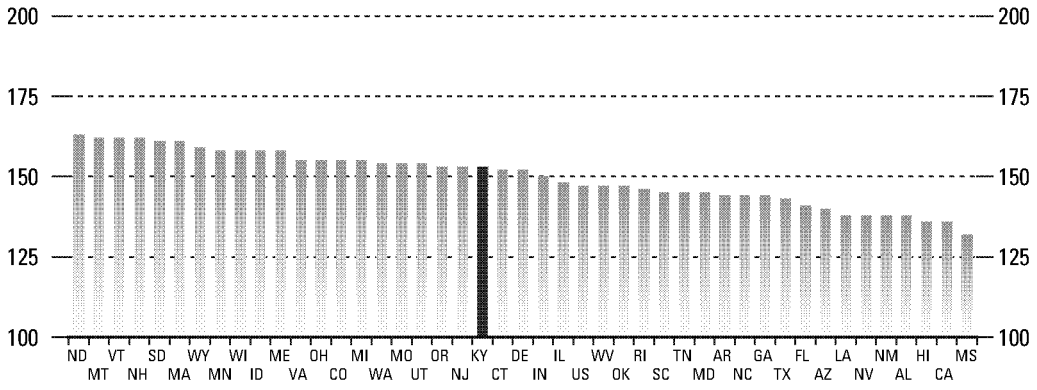
2005 NAEP—Kentucky
Grade 8 Science



Some states are far more successful in teaching science than others. This chart displays science performance in all 44 states for which NAEP data are available, from highest to lowest.

How does science performance compare with that in other states?

Grade 8 Science, All Students



Attainment

Who makes it through high school on time?

Estimated percentage of the freshman class of 2002 that graduated in 2006

	Four-Year High School Grad Rate
African American	N/A
Asian	N/A
Latino	N/A
Native American	N/A
White	N/A
Overall	78%

Many states do not collect or report accurate data on graduation rates. This chart presents the best available estimate of on-time graduation across the states, the Averaged Freshman Graduation Rate.

Who makes it to college?

Comparison of the high school graduating class of 2006 with enrollments in the state's public colleges and universities

	High School Graduates, Spring 2006	Two-Year Public College Enrollment, 2006-07	Four-Year Public College Enrollment, 2006-07
African American	N/A	8%	9%
Asian	N/A	1%	2%
Latino	N/A	1%	1%
Native American	N/A	<1%	<1%
White	N/A	79%	86%
Other	N/A	11%	2%
Total	N/A	100%	100%
Number	38,449	118,505	106,689

This chart shows the distribution of high school graduates and public-college enrollments by race and ethnicity. If enrollments in your state's four-year public colleges are significantly different from the demographics of the high school graduating class, students of color may be getting lost in the transition from high school to college or may be attending two-year colleges more often than four-year colleges.

(Read across the rows to see patterns of underrepresentation in college enrollments.)

Who graduates from public colleges and universities?

Percentage of first-time, full-time college freshmen in 2000 who received a bachelor's degree by 2004 and 2006

	Four-Year Grad Rate, 2004	Six-Year Grad Rate, 2006	Top States' Six-Year Grad Rates, 2006*
African American	14%	35%	52%
Asian	23%	52%	72%
Latino	10%	28%	67%
Native American	19%	27%	60%
White	22%	48%	71%
Overall	21%	46%	66%

*Median of top five performing states

Too few college freshmen, regardless of background, graduate from four-year colleges within four years—or even six years.

What proportion of adults has earned a bachelor's degree?

Percentage of adults 25 and older with a bachelor's degree or higher in 2006

	Kentucky	Top States' Degree Attainment*
African American	13%	33%
Asian	54%	68%
Latino	16%	29%
Native American	9%	24%
White	20%	40%
Overall	20%	35%

*Median of top five performing states

This chart compares degree attainment rates for different groups in your state with those in the top states.

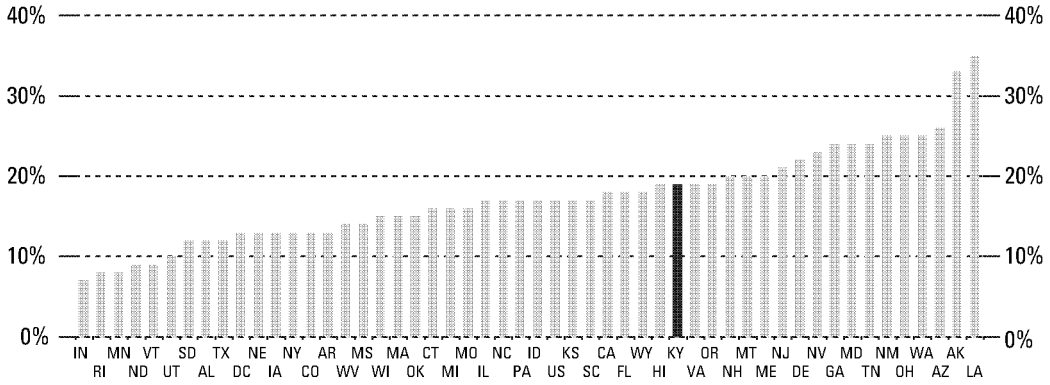
Opportunity

One important measure of educational opportunity is the degree to which students are taught by teachers with knowledge of the subject they are teaching. This chart shows the percentage of core academic classes taught by out-of-field teachers in every state.

Access to Qualified Teachers

How does Kentucky compare?

Percentage of core academic classes, grades 7-12, taught by teachers with neither a major nor certification in the subject taught, 2003-04



Students do not have equal access to a challenging curriculum. One curriculum recognized nationwide for its rigor is the Advanced Placement (AP) program. AP students take college-level courses that culminate in challenging tests.

(Read this chart horizontally. If the percentage in the first column is higher than the percentages in the second, third, or fourth columns, this student group is underrepresented among AP test takers.)

Access to a Rigorous Curriculum

Who takes Advanced Placement tests?

	Public 11th & 12th Grade Enrollment	Calculus AB	English Language and Composition	Biology
African American	10%	3%	5%	3%
Asian	1%	5%	3%	6%
Latino	1%	1%	2%	1%
Native American	<1%	<1%	<1%	<1%
White	88%	88%	87%	86%
Other	N/A	3%	4%	4%
Number	82,918	2,318	2,304	1,502

Example: Of all AP test takers, this proportion was African American.

AP tests are scored on a five-point scale, with scores of 3, 4, or 5 qualifying students for credit at many colleges.

(Read this chart vertically. If schools were teaching all students to the same high levels, we would expect to see similar pass rates across groups.)

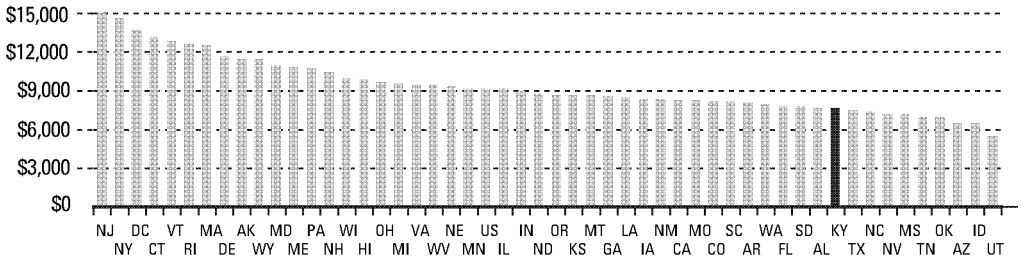
Who earns passing grades on Advanced Placement tests?

	Calculus AB	English Language and Composition	Biology
African American	22%	36%	34%
Asian	56%	68%	69%
Latino	59%	62%	50%
Native American	N/A	N/A	N/A
White	49%	58%	45%
Overall	49%	57%	46%

Example: Of all African-American students who took the AP Calculus exam, this percentage scored a 3, 4, or 5.

K-12 Funding

Total federal, state, and local spending per pupil, 2005-06



Per-pupil state and local funding gaps between districts, 2005-06

	Average Per-Pupil Funding	Differences in Funding Per Pupil*	Percent Differences in Funding**
High-poverty districts	$7,404	+$906	+14%
Low-poverty districts	$6,498		
High-minority districts	$7,468	+$234	Difference <5%
Low-minority districts	$7,233		

* A negative number indicates that high-poverty or high-minority districts receive fewer state and local dollars per student than low-poverty or low-minority districts.

** For example, -10% indicates that high-poverty or high-minority districts receive 10% less in state and local funding per student than high-poverty or high-minority districts.

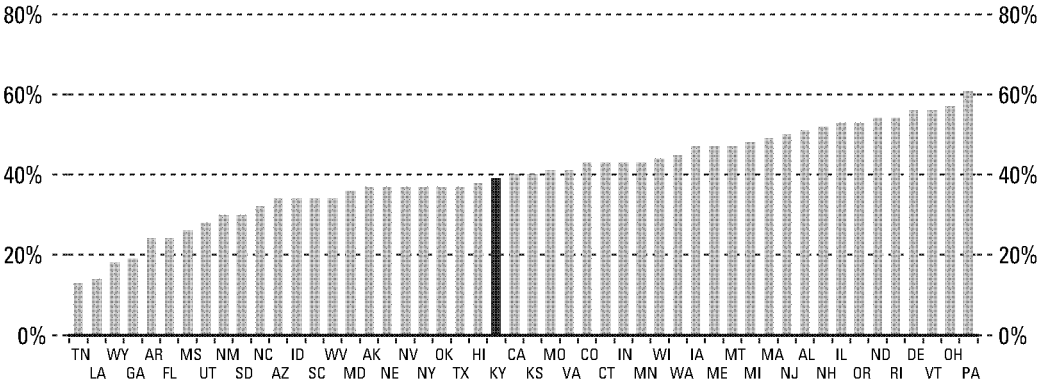
The first chart shows total unadjusted federal, state, and local education spending across the states. Overall spending levels vary widely, but this does not tell the whole story. It is important to look within states to see whether revenues are equitably distributed to all districts.

The second chart examines state and local revenues and how those funds are allocated to districts based on the percentage of low-income and minority students they serve. Federal education dollars are excluded, as these monies typically constitute less than 10 percent of total education revenues and are intended to supplement, rather than supplant, revenues from state and local sources. In many states and in the nation overall, the highest poverty or the highest minority districts receive fewer state and local dollars per student than the lowest poverty or lowest minority districts.

College Affordability

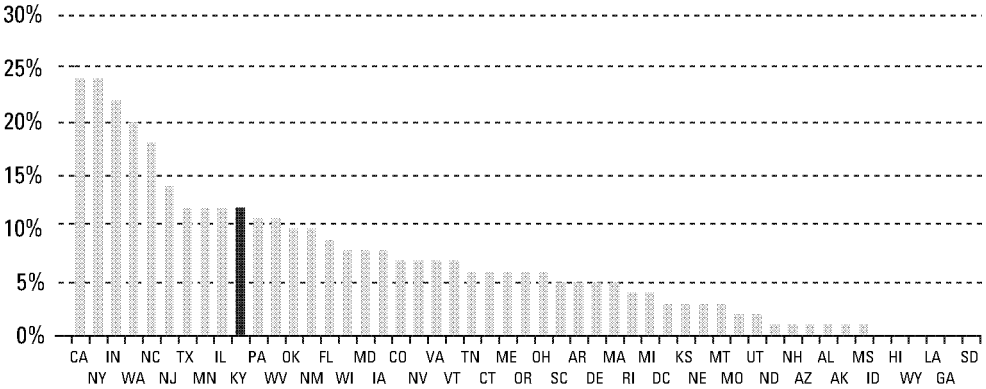
How expensive is college for low-income families?

Share of income poor families pay for tuition at four-year public institutions



How does your state help low-income families pay for college?

Need-based state aid as a percentage of average tuition, 2006



Paying for college can be a struggle, especially for low-income families. The first chart compares the ability of students from low-income families in each state to pay the average tuition at the state's four-year public colleges and universities. In states on the left side of the chart, students from low-income families may have less difficulty paying tuition.

The next chart shows how states compare in providing financial aid to offset the costs of tuition for students from low-income families. States on the left side of the chart provide higher proportions of tuition aid to financially needy students.

Notes

Vital Statistics
Page 1

Public K-12 Enrollment, 2005-06
U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Build a Table, *http://nces.ed.gov/ccd/*.

Notes:
- K-12 enrollment percentages do not include pre-K or ungraded enrollment.
- The National Center for Education Statistics does not report a separate "other" category for ethnicity.

Reading—Fourth-Grade Students Scoring Proficient or Higher; Math—Eighth-Grade Students Scoring Proficient or Higher, 2007
U.S. Department of Education, National Center for Education Statistics, NAEP Data Explorer, National Assessment of Educational Progress (NAEP) 2007, *http://nces.ed.gov/nationsreportcard/nde/*.

Note: NAEP data are not reported for racial/ethnic groups when the sample size is too small for a reliable estimate.

On-Time High School Graduation Rates
Robert Stillwell and Lee Hoffman, "Public School Graduates and Dropouts From the Common Core of Data: School Year 2005-06" (NCES 2008-353), Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences, 2008.

Notes:
- The Averaged Freshman Graduation Rate is based on the number of graduates in a state in 2006 divided by the averaged freshman population in 2002. Averaged freshman population is equal to the average of the eighth-grade population in 2001, the ninth-grade population in 2002, and the tenth-grade population in 2003.
- Rapid shifts in state population can distort graduation rate estimates.
- Graduation rates are not shown for racial/ethnic groups when the averaged freshman population is less than 200 students.

Public College Graduation Rates
The Education Trust calculations from the U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Graduation Rate Survey, *http://nces.ed.gov/ipeds/*.

Notes:
- Six-year percentages represent the proportion of students who enrolled as first-time, full-time bachelor's degree-seeking freshmen in fall 2000 and received a bachelor's degree from the same institution before the end of the 2005-06 school year.
- Graduation rate calculations do not include nonresident aliens.
- Graduation rates are not shown when the cohort size is less than ten students.
- For each state, The Education Trust includes only public, four-year degree-granting institutions in calculating the college graduation rate.

Demographics
Page 3

Low-Income Students, 2005-06
U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Build a Table, *http://nces.ed.gov/ccd/*.

Students With Disabilities, 2005-06; English-Language Learners, 2005-06
U.S. Department of Education, Office of Civil Rights, Civil Rights Data Collection, 2006, *http://ocrdata.ed.gov/ocr2006rv30/xls/2006Projected.html*.

A Shifting Population
The Education Trust calculations from the U.S. Census Bureau, State Population Projections, State Projections 1995-2025 based on 1990 Census (released 1996), *www.census.gov/population/www/projections/stproj.html*.

Achievement
Pages 4-9: Reading and Mathematics

State Assessments, 2007
Data collected from state department of education Web sites, except for Hawaii and Vermont. Data for Hawaii and Vermont are from the *Consolidated State Performance Reports for 2006-07*, submitted to the U.S. Department of Education, *www.ed.gov/admins/lead/account/consolidated/sy06-07part1/index.html*.

Notes:
- Data reflect spring 2007 assessment results for most states. For states that assess students in the fall (Indiana, Michigan, New Hampshire, North Dakota, Rhode Island, Vermont, and Wisconsin), data reflect fall 2007 assessment results.
- State assessment scores for mathematics are reported for eighth grade for all states except California. We report California's seventh-grade state assessment scores because the state's eighth-graders take end-of-course exams in math, and a single, statewide eighth-grade math score is not available.
- Some states report data for additional ethnic groups beyond those required by No Child Left Behind. When available, such data have been reported for these states.

NAEP, 2007
U.S. Department of Education, National Center for Education Statistics, NAEP Data Explorer, National Assessment of Educational Progress (NAEP) 2007, *http://nces.ed.gov/nationsreportcard/nde/*.

Notes:
- NAEP data are not reported for racial and ethnic groups when the sample size is too small for a reliable estimate.
- NAEP scale score changes may not be statistically significant.
- NAEP racial and ethnic data over time and multiple-state comparison graphs include the largest populations of color within the state's 2005-06 public K-12 enrollment.
- Low-income status is defined as eligibility for the free or reduced-price lunch program.

Page 10: Science

NAEP, 2005
U.S. Department of Education, National Center for Education Statistics, NAEP Data Explorer, National Assessment of Educational Progress (NAEP) 2005, *http://nces.ed.gov/nationsreportcard/nde/*.

Attainment
Page 11

Who makes it through high school on time?
Robert Stillwell and Lee Hoffman, "Public School Graduates and Dropouts From the Common Core of Data: School Year 2005-06" (NCES 2008-353), Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences, 2008.

Notes:
- The Averaged Freshman Graduation Rate is based on the number of graduates in a state in 2006 divided by the averaged freshman population in 2002. Averaged freshman population is equal to the average of the eighth-grade population in 2001, ninth-grade population in 2002, and tenth-grade population in 2003.
- Rapid shifts in state population can distort graduation rate estimates.
- Graduation rates are not shown for racial/ethnic groups when the averaged freshman population is less than 200 students.

Who makes it to college?
High School Graduates, Spring 2006
The Education Trust calculations of state graduate numbers is based on Robert Stillwell and Lee Hoffman, "Public School

Graduates and Dropouts From the Common Core of Data: School Year 2005-06" (NCES 2008-353), Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences, 2008.

Note: The total number of high school graduates represents the sum of graduates from each racial subgroup, except for Kentucky, New Hampshire, and North Carolina. In those states, only the total number of graduates (not the number from each subgroup) was available.

Two-Year Colleges; Four-Year Colleges
The Education Trust calculations from the U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Graduation Rate Survey, *http://nces.ed.gov/ipeds/*.

Notes:

- Enrollment calculations are based on public, degree-granting institutions only and do not include nonresident aliens.
- High school graduate data from the U.S. Department of Education do not include an "other" category for ethnicity.

Who graduates from public colleges and universities?
The Education Trust calculations from the U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Graduation Rate Survey, *http://nces.ed.gov/ipeds/*.

Notes:

- **Four-year grad rate, 2004** represents the proportion of students who enrolled as first-time, full-time bachelor's degree-seeking freshmen in fall 2000 and received a bachelor's degree from the same institution by the end of the 2003-04 school year.
- **Six-year grad rate, 2006** represents the proportion of students who enrolled as first-time, full-time bachelor's degree-seeking freshmen in fall 2000 and received a bachelor's degree from the same institution by the end of the 2005-06 school year.
- Graduation-rate calculations do not include nonresident aliens.
- Graduation rates are not shown when the cohort size is less than ten students.
- In calculating the college graduation rate for each state, The Education Trust includes only public, four-year degree-granting institutions.
- Top states' six-year grad rate, 2006 represents the median of the graduation rates for each ethnic group in the five states with the highest graduation rates for that ethnic group.

What proportion of adults has earned a bachelor's degree?
The Education Trust calculations from the U.S. Census Bureau, American FactFinder, *2006 American Community Survey*, *http://factfinder.census.gov/servlet/DatasetMainPageServlet*.

Notes:

- **White** represents "White alone, not Hispanic or Latino." **Asian** represents a sum of "Asian alone" and "Native Hawaiian and Other Pacific Islander alone" numbers. **Other** represents a sum of "Other race alone" and "Two or more races."
- **Overall** represents a sum of all ethnic groups listed above. Because the U.S. Census Bureau does not classify Hispanic or Latino as a racial group, all groups except for "White alone, not Hispanic or Latino" include some members who also may be classified as both that ethnic group and Latino.
- **Top states** is defined as the median of the adult degree attainment rates for each ethnic group in the five states with the highest such rates for that ethnic group.

Opportunity

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Access to Qualified Teachers
Data from the U.S. Department of Education, National Center for Education Statistics, 2003-04 Schools and Staffing Survey, *http://nces.ed.gov/surveys/sass/*. Calculations by Richard Ingersoll, "Core Problems: Out-of-Field Teaching Persists in Key Academic Courses and High-Poverty Schools," Washington, D.C.: The Education Trust, 2008.

Access to a Rigorous Curriculum
Public 11th and 12th Grade Enrollment, 2005-06
U.S. Department of Education, National Center for Education Statistics, Common Core of Data, Build a Table, *http://nces.ed.gov/ccd/*.

Advanced Placement Tests
The Education Trust calculations from the College Board AP Summary Reports, 2007, *www.collegeboard.com/student/testing/ap/exgrd_sum/2007.html*.

Notes:

- AP performance data is not shown when suppressed by the College Board or when the proportion of test takers was less than 1 percent.
- Data from the U.S. Department of Education do not include an "other" category for ethnicity.

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K-12 Funding
Total federal, state, local spending per pupil, 2005-06
U.S. Department of Education, National Center for Education Statistics, "Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2005-06 (Fiscal Year 2006)" (NCES 2008-328), Table 3, pp. 9-10, *http://nces.ed.gov/ pubsearch/pubsinfo/asp?pubid=2008328*.

Per pupil state and local funding gaps between districts, 2005-06
The Education Trust analyses are based on U.S. Department of Education and U.S. Census Bureau data for the 2005-06 school year. To calculate the difference in state and local revenues provided to highest poverty and lowest poverty districts, districts are ranked within each state by poverty rate, then divided into four groups with approximately the same number of students. Average state and local revenues per student are calculated and compared between the highest and lowest poverty groups. The same process is used to compare districts with the highest and lowest percentages of minority students.

U.S. Department of Education School and District Enrollment and Cost Adjustment Data, *http://nces.ed.gov/ccd/*. U.S. Census Bureau, Education Finance and School District Poverty Data, *www.census.gov/govs/www/school.html*.

Notes:

- Dollar figures have been adjusted to reflect geographic cost differences and the additional cost of educating students with disabilities.
- New York State is an exception, as New York City accounts for almost half of the students in the state, so only two groups are in the analysis.
- Alaska's low-poverty quartile contains approximately half the students in the state.
- Nevada is excluded from the analysis because the distribution of students in districts does not allow for a quartile or two-group analysis.
- Hawaii and the District of Columbia are excluded from the analysis because each represents a single school district.
- Louisiana and Mississippi are excluded from the analysis due to changes in school enrollment and funding following Hurricane Katrina.

College Affordability
National Center for Public Policy and Higher Education, "Measuring Up, 2008: The National Report Card on Higher Education," San Jose, Calif.: 2008, *http://measuringup2008.highereducation.org/index.php*.

Note: Data are for the 40 percent of the population with the lowest income.

Financial Aid Availability
Prepared by Daniela Pineda, Karen Moronski, and Edward P. St. John for the Promoting Equity in Higher Education project funded by the Ford Foundation based at the National Center for Institutional Diversity at the University of Michigan-Ann Arbor.

The Education Trust

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160.345 Definitions -- Required adoption of school councils for school-based decision making -- Composition -- Responsibilities -- Professional development -- Exemption -- Formula for allocation of school district funds -- Intentionally engaging in conduct detrimental to school-based decision making by board member, superintendent, district employee, or school council member -- Complaint procedure -- Disciplinary action -- Rescission of right to establish and powers of council -- Wellness policy.

(1) For the purpose of this section:

(a) "Minority" means American Indian; Alaskan native; African-American; Hispanic, including persons of Mexican, Puerto Rican, Cuban, and Central or South American origin; Pacific islander; or other ethnic group underrepresented in the school;

(b) "School" means an elementary or secondary educational institution that is under the administrative control of a principal and is not a program or part of another school. The term "school" does not include district-operated schools that are:

1. Exclusively vocational-technical, special education, or preschool programs;

2. Instructional programs operated in institutions or schools outside of the district; or

3. Alternative schools designed to provide services to at-risk populations with unique needs;

(c) "Teacher" means any person for whom certification is required as a basis of employment in the public schools of the state, with the exception of principals and assistant principals; and

(d) "Parent" means:

1. A parent, stepparent, or foster parent of a student; or

2. A person who has legal custody of a student pursuant to a court order and with whom the student resides.

(2) Each local board of education shall adopt a policy for implementing school-based decision making in the district which shall include, but not be limited to, a description of how the district's policies, including those developed pursuant to KRS 160.340, have been amended to allow the professional staff members of a school to be involved in the decision making process as they work to meet educational goals established in KRS 158.645 and 158.6451. The policy may include a requirement that each school council make an annual report at a public meeting of the board describing the school's progress in meeting the educational goals set forth in KRS 158.6451 and district goals established by the board. The policy shall also address and comply with the following:

(a) Except as provided in paragraph (b)2. of this subsection, each participating school shall form a school council composed of two (2) parents, three (3) teachers, and the principal or administrator. The membership of the council may be increased, but it may only be increased proportionately. A parent

representative on the council shall not be an employee or a relative of an employee of the school in which that parent serves, nor shall the parent representative be an employee or a relative of an employee in the district administrative offices. A parent representative shall not be a local board member or a board member's spouse. None of the members shall have a conflict of interest pursuant to KRS Chapter 45A, except the salary paid to district employees;

(b) 1. The teacher representatives shall be elected for one (1) year terms by a majority of the teachers. A teacher elected to a school council shall not be involuntarily transferred during his or her term of office. The parent representatives shall be elected for one (1) year terms. The parent members shall be elected by the parents of students preregistered to attend the school during the term of office in an election conducted by the parent and teacher organization of the school or, if none exists, the largest organization of parents formed for this purpose. A school council, once elected, may adopt a policy setting different terms of office for parent and teacher members subsequently elected. The principal shall be the chair of the school council.

2. School councils in schools having eight percent (8%) or more minority students enrolled, as determined by the enrollment on the preceding October 1, shall have at least one (1) minority member. If the council formed under paragraph (a) of this subsection does not have a minority member, the principal, in a timely manner, shall be responsible for carrying out the following:

a. Organizing a special election to elect an additional member. The principal shall call for nominations and shall notify the parents of the students of the date, time, and location of the election to elect a minority parent to the council by ballot; and

b. Allowing the teachers in the building to select one (1) minority teacher to serve as a teacher member on the council. If there are no minority teachers who are members of the faculty, an additional teacher member shall be elected by a majority of all teachers. Term limitations shall not apply for a minority teacher member who is the only minority on faculty;

(c) 1. The school council shall have the responsibility to set school policy consistent with district board policy which shall provide an environment to enhance the students' achievement and help the school meet the goals established by KRS 158.645 and 158.6451. The principal shall be the primary administrator and the instructional leader of the school, and with the assistance of the total school staff shall administer the policies established by the school council and the local board.

2. If a school council establishes committees, it shall adopt a policy to facilitate the participation of interested persons, including, but not limited to, classified employees and parents. The policy shall include the

number of committees, their jurisdiction, composition, and the process for membership selection;

(d) The school council and each of its committees shall determine the frequency of and agenda for their meetings. Matters relating to formation of school councils that are not provided for by this section shall be addressed by local board policy;

(e) The meetings of the school council shall be open to the public and all interested persons may attend. However, the exceptions to open meetings provided in KRS 61.810 shall apply;

(f) After receiving notification of the funds available for the school from the local board, the school council shall determine, within the parameters of the total available funds, the number of persons to be employed in each job classification at the school. The council may make personnel decisions on vacancies occurring after the school council is formed but shall not have the authority to recommend transfers or dismissals;

(g) The school council shall determine which textbooks, instructional materials, and student support services shall be provided in the school. Subject to available resources, the local board shall allocate an appropriation to each school that is adequate to meet the school's needs related to instructional materials and school-based student support services, as determined by the school council. The school council shall consult with the school media librarian on the maintenance of the school library media center, including the purchase of instructional materials, information technology, and equipment;

(h) Personnel decisions at the school level shall be as follows:

1. From a list of applicants submitted by the local superintendent, the principal at the participating school shall select personnel to fill vacancies, after consultation with the school council, consistent with subsection (2)(i)10. of this section. The superintendent may forward to the school council the names of qualified applicants who have pending certification from the Education Professional Standards Board based on recent completion of preparation requirements, out-of-state preparation, or alternative routes to certification pursuant to KRS 161.028 and 161.048. Requests for transfer shall conform to any employer-employee bargained contract which is in effect.

2. If the vacancy to be filled is the position of principal, the school council shall select the new principal from among those persons recommended by the local superintendent, except as provided in subparagraph 4. of this paragraph. The superintendent shall provide additional applicants upon request when qualified applicants are available. The school council shall receive training in recruitment and interviewing techniques prior to carrying out the process of selecting a principal. The council shall select the trainer to deliver the training.

3. Personnel decisions made at the school level under the authority of subparagraphs 1., 2., and 4. of this paragraph shall be binding on the superintendent who completes the hiring process.
4. If the vacancy for the position of principal occurs in a school that has an index score that places it in the lowest one-third (1/3) of all schools below the assistance line and the school has completed a scholastic audit under KRS 158.6455 that includes findings of lack of effectiveness of the principal and school council, the superintendent shall appoint the principal after consulting with the school council.
5. Applicants subsequently employed shall provide evidence that they are certified prior to assuming the duties of a position in accordance with KRS 161.020. The superintendent shall provide additional applicants upon request when qualified applicants are available;

(i) The school council shall adopt a policy to be implemented by the principal in the following additional areas:
1. Determination of curriculum, including needs assessment, curriculum development and responsibilities under KRS 158.6453(7);
2. Assignment of all instructional and noninstructional staff time;
3. Assignment of students to classes and programs within the school;
4. Determination of the schedule of the school day and week, subject to the beginning and ending times of the school day and school calendar year as established by the local board;
5. Determination of use of school space during the school day;
6. Planning and resolution of issues regarding instructional practices;
7. Selection and implementation of discipline and classroom management techniques as a part of a comprehensive school safety plan, including responsibilities of the student, parent, teacher, counselor, and principal;
8. Selection of extracurricular programs and determination of policies relating to student participation based on academic qualifications and attendance requirements, program evaluation, and supervision;
9. Procedures, consistent with local school board policy, for determining alignment with state standards, technology utilization, and program appraisal; and
10. Procedures to assist the council with consultation in the selection of personnel by the principal, including, but not limited to, meetings, timelines, interviews, review of written applications, and review of references. Procedures shall address situations in which members of the council are not available for consultation; and

(j) Each school council shall annually review data as shown on state and local student assessments and program assessments required under KRS 158.6453. The data shall include but not be limited to information on performance levels of all students tested, and information on the performance of students

disaggregated by race, gender, disability, and participation in the federal free and reduced price lunch program. After completing the review of data, each school council, with the involvement of parents, faculty, and staff, shall develop and adopt a plan to ensure that each student makes progress toward meeting the goals set forth in KRS 158.645 and 158.6451(1)(b) by April 1 of each year and submit the plan to the superintendent and local board of education for review as described in KRS 160.340. The Kentucky Department of Education shall provide each school council the data needed to complete the review required by this paragraph no later than November 1 of each year. If a school does not have a council, the review shall be completed by the principal with the involvement of parents, faculty, and staff.

(3) The policies adopted by the local board to implement school-based decision making shall also address the following:

(a) School budget and administration, including: discretionary funds; activity and other school funds; funds for maintenance, supplies, and equipment; and procedures for authorizing reimbursement for training and other expenses;

(b) Assessment of individual student progress, including testing and reporting of student progress to students, parents, the school district, the community, and the state;

(c) School improvement plans, including the form and function of strategic planning and its relationship to district planning, as well as the school safety plan and requests for funding from the Center for School Safety under KRS 158.446;

(d) Professional development plans developed pursuant to KRS 156.095;

(e) Parent, citizen, and community participation including the relationship of the council with other groups;

(f) Cooperation and collaboration within the district, with other districts, and with other public and private agencies;

(g) Requirements for waiver of district policies;

(h) Requirements for record keeping by the school council; and

(i) A process for appealing a decision made by a school council.

(4) In addition to the authority granted to the school council in this section, the local board may grant to the school council any other authority permitted by law. The board shall make available liability insurance coverage for the protection of all members of the school council from liability arising in the course of pursuing their duties as members of the council.

(5) After July 13, 1990, any school in which two-thirds (2/3) of the faculty vote to implement school-based decision making shall do so. All schools shall implement school-based decision making by July 1, 1996, in accordance with this section and with the policy adopted by the local board pursuant to this section. Upon favorable vote of a majority of the faculty at the school and a majority of at least twenty-five (25) voting parents of students enrolled in the school, a school meeting its goal as determined by the Department of Education pursuant to KRS 158.6455 may apply

to the Kentucky Board of Education for exemption from the requirement to implement school-based decision making, and the state board shall grant the exemption. The voting by the parents on the matter of exemption from implementing school-based decision making shall be in an election conducted by the parent and teacher organization of the school or, if none exists, the largest organization of parents formed for this purpose. Notwithstanding the provisions of this section, a local school district shall not be required to implement school-based decision making if the local school district contains only one (1) school.

(6) The Department of Education shall provide professional development activities to assist schools in implementing school-based decision making. School council members elected for the first time shall complete a minimum of six (6) clock hours of training in the process of school-based decision making, no later than thirty (30) days after the beginning of the service year for which they are elected to serve. School council members who have served on a school council at least one (1) year shall complete a minimum of three (3) clock hours of training in the process of school-based decision making no later than one hundred twenty (120) days after the beginning of the service year for which they are elected to serve. Experienced members may participate in the training for new members to fulfill their training requirement. School council training required under this subsection shall be conducted by trainers endorsed by the Department of Education. By November 1 of each year, the principal through the local superintendent shall forward to the Department of Education the names and addresses of each council member and verify that the required training has been completed. School council members elected to fill a vacancy shall complete the applicable training within thirty (30) days of their election.

(7) A school that chooses to have school-based decision making but would like to be exempt from the administrative structure set forth by this section may develop a model for implementing school-based decision making, including but not limited to a description of the membership, organization, duties, and responsibilities of a school council. The school shall submit the model through the local board of education to the commissioner of education and the Kentucky Board of Education, which shall have final authority for approval. The application for approval of the model shall show evidence that it has been developed by representatives of the parents, students, certified personnel, and the administrators of the school and that two-thirds (2/3) of the faculty have agreed to the model.

(8) The Kentucky Board of Education, upon recommendation of the commissioner of education, shall adopt by administrative regulation a formula by which school district funds shall be allocated to each school council. Included in the school council formula shall be an allocation for professional development that is at least sixty-five percent (65%) of the district's per pupil state allocation for professional development for each student in average daily attendance in the school. The school council shall plan professional development in compliance with requirements specified in KRS 156.095, except as provided in KRS 158.649. School councils of small schools shall be encouraged to work with other school councils to maximize professional development opportunities.

(9) (a) No board member, superintendent of schools, district employee, or member of a school council shall intentionally engage in a pattern of practice which is detrimental to the successful implementation of or circumvents the intent of school-based decision making to allow the professional staff members of a school and parents to be involved in the decision making process in working toward meeting the educational goals established in KRS 158.645 and 158.6451 or to make decisions in areas of policy assigned to a school council pursuant to paragraph (i) of subsection (2) of this section.

(b) An affected party who believes a violation of this subsection has occurred may file a written complaint with the Office of Education Accountability. The office shall investigate the complaint and resolve the conflict, if possible, or forward the matter to the Kentucky Board of Education.

(c) The Kentucky Board of Education shall conduct a hearing in accordance with KRS Chapter 13B for complaints referred by the Office of Education Accountability.

(d) If the state board determines a violation has occurred, the party shall be subject to reprimand. A second violation of this subsection may be grounds for removing a superintendent, a member of a school council, or school board member from office or grounds for dismissal of an employee for misconduct in office or willful neglect of duty.

(10) Notwithstanding subsections (1) to (9) of this section, a school's right to establish or maintain a school-based decision making council and the powers, duties, and authority granted to a school council may be rescinded or the school council's role may be advisory if the commissioner of education or the Kentucky Board of Education takes action under KRS 160.346.

(11) Each school council of a school containing grades K-5 or any combination thereof, or if there is no school council, the principal, shall develop and implement a wellness policy that includes moderate to vigorous physical activity each day and encourages healthy choices among students. The policy may permit physical activity to be considered part of the instructional day, not to exceed thirty (30) minutes per day, or one hundred and fifty (150) minutes per week. Each school council, or if there is no school council, the principal, shall adopt an assessment tool to determine each child's level of physical activity on an annual basis. The council or principal may utilize an existing assessment program. The Kentucky Department of Education shall make available a list of available resources to carry out the provisions of this subsection. The department shall report to the Legislative Research Commission no later than November 1 of each year on how the schools are providing physical activity under this subsection and on the types of physical activity being provided. The policy developed by the school council or principal shall comply with provisions required by federal law, state law, or local board policy.

Effective: March 25, 2009

History: Amended 2009 Ky. Acts ch. 101, sec. 12, effective March 25, 2009. -- Amended 2008 Ky. Acts ch. 105, sec. 1, effective July 15, 2008. -- Amended 2005

Ky. Acts ch. 84, sec. 6, effective June 20, 2005. -- Amended 2004 Ky. Acts ch. 188, sec. 4, effective July 13, 2004. -- Amended 2003 Ky. Acts ch. 81, sec. 1, effective June 24, 2003. -- Amended 2002 Ky. Acts ch. 152, sec. 1, effective July 15, 2002; and ch. 302, sec. 5, effective July 15, 2002. -- Amended 2000 Ky. Acts ch. 212, sec. 1, effective July 14, 2000; ch. 339, sec. 2, effective July 14, 2000; ch. 418, sec. 1, effective July 14, 2000; and ch. 527, sec. 14, effective July 14, 2000. -- Amended 1998 Ky. Acts ch. 493, sec. 14, effective April 10, 1998; and ch. 609, sec. 3, effective July 15, 1998. -- Amended 1996 Ky. Acts ch. 34, sec. 1, effective July 15, 1996; ch. 74, sec. 1, effective July 15, 1996; ch. 146, sec. 1, effective July 15, 1996; ch. 318, sec. 52, effective July 15, 1996; and ch. 362, secs. 1 and 6, effective July 15, 1996. -- Amended 1994 Ky. Acts ch. 103, sec. 3, effective July 15, 1994; ch. 187, sec. 1, effective July 15, 1994; ch. 247, sec. 1, effective July 15, 1994; ch. 411, sec. 1, effective July 15, 1994; and ch. 484, sec. 1, effective July 15, 1994. -- Amended 1992 Ky. Acts ch. 376, sec. 3, effective July 14, 1992; and ch. 393, sec. 3, July 14, 1992. -- Created 1990 Ky. Acts ch. 476, Pt. I, sec. 14, effective July 13, 1990.

Legislative Research Commission Note (7/15/96). This section was amended by 1996 Ky. Acts chs. 34, 74, 146, 318, and 362. Where these Acts are not in conflict, they have been codified together. A conflict exists between Acts chs. 34 and 362. Under KRS 446.250, Acts ch. 362, which was last enacted by the General Assembly, prevails.

2008-2010 Budget Reference. See State/Executive Branch Budget, 2008 Ky. Acts ch. 127, Pt. I, D, 3, (7) at 503; and State/Executive Branch Budget Memorandum, 2008 Ky. Acts ch. 188, at 1346 and 1352 (Final Budget Memorandum, Vol. III, at D-21, and D-23).

KENTUCKY'S

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KENTUCKY Council on Postsecondary Education

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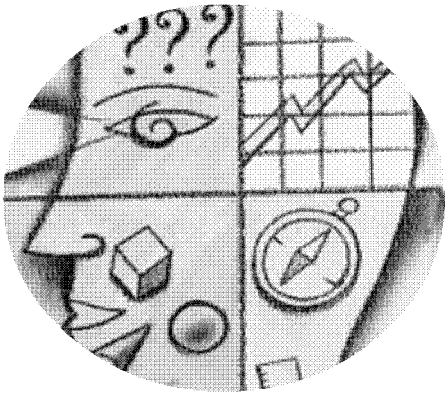

COMPETING IN THE GLOBAL ECONOMY

The Final Report of the
Council on Postsecondary Education
STEM Task Force

The CPE STEM Task Force is generously co-sponsored
by the University of Kentucky

March 2007

Dear Fellow Kentuckians:

We are pleased to share with you the Council on Postsecondary Education's (CPE) Science, Technology, Engineering, and Mathematics (STEM) Task Force Report. At its November 6, 2006, meeting, the CPE charged the STEM Task Force with "developing a statewide P-20 strategic action plan to accelerate Kentucky's performance within the STEM disciplines."

The 110 members of the STEM Task Force are leaders within the government, business, and education sectors from across the Commonwealth. During the past three months, the STEM Task Force reviewed data, heard testimony, and examined a wide variety of national reports that identify the scope and seriousness of the STEM crisis in America.

These discussions have persuaded us that there is a national and state-level crisis in the STEM pipeline that must be addressed immediately. The future of the Commonwealth depends on how we respond and what actions we take to ensure that our citizens are actively engaged in solutions to this unprecedented crisis.

For too long, Kentucky has been content to wait and watch as other states make tough choices that result in progress for them and leftovers for us. Kentucky has the potential to be the state that others follow to remedy the STEM crisis. We believe that collaborative and coordinated strategies to resolve the STEM crisis must engage all sectors and all citizens.

We hope that you will review these recommendations and share your views on how we might proceed to ensure that our children have every opportunity to effectively compete in the increasingly global economy. This task force will continue to meet and discuss Kentucky's challenges and potential solutions because STEM disciplines hold the key to our future economic prosperity, including critical areas such as health care and sustainable energy.

The consequences are dire and far-reaching if we fail to take action. Thoughtful, bold, and timely action regarding the STEM disciplines will position Kentucky to succeed in the global competition for 21st century innovation, careers, and economic development. Finally, we invite you to join our collective efforts to secure Kentucky's future through the implementation and funding of these recommendations.

Lee T. Todd, Jr.
President
University of Kentucky

Thomas D. Layzell
President
Council on Postsecondary Education

John R. Hall
Retired Chairman & CEO
Ashland, Inc.

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> "The United States takes deserved pride in the vitality of its economy, which forms the foundation of our high quality of life, our national security, and our hope that our children and grandchildren will inherit ever-greater opportunities. That vitality is derived in large part from the productivity of well-trained people and the steady stream of scientific and technical innovations they produce. Without high-quality, knowledge-intensive jobs and innovative enterprises that lead to discovery and new technology, our economy will suffer and our people will face a lower standard of living."
>
> *-Rising Above the Gathering Storm, 2006*

EXECUTIVE SUMMARY

During the past four months (December 2006 – March 2007), the 110 members of the Council on Postsecondary Education (CPE) Science, Technology, Engineering, and Mathematics (STEM) Task Force have deliberated on the STEM crisis that Kentucky and the nation are currently experiencing. The STEM Task Force was charged by the Council with developing "a statewide P-20 strategic action plan to accelerate Kentucky's performance within the STEM disciplines." Task force members encourage the adoption of the following interrelated recommendations that create a bold and comprehensive plan for change. The approach to STEM education, STEM attainment, and the creation of knowledge economy jobs in the Commonwealth must change.

The CPE STEM Task Force echoes the urgent concerns voiced in almost 20 recent national reports that America's scientific, technological, and innovation capacity and leadership are seriously eroding. Diverse STEM stakeholders agree that fundamental change is necessary among:

> "…the entire community of stakeholders: those responsible for budgets, policies, and programs that affect research and education in STEM fields at the national, state, and local level; those responsible for the quality of STEM research in America's educational institutions; those potential employers of STEM graduates; and all citizens in a society in which science and technology have a significant impact on most aspects of our lives."
>
> *-Project Kaleidoscope Report on Reports II, 2006*

STEM TASK FORCE RECOMMENDATIONS

1. Energize and fund a statewide public awareness campaign to help Kentuckians understand the critical importance of STEM to their own economic competitiveness and to that of the Commonwealth.

2. Create incentives and a supportive environment for students, teachers, and institutions that pursue, succeed, and excel in STEM disciplines throughout the P-20 pipeline.

3. Implement international best practices in professional development programs for P-16 STEM teachers to increase the intensity, duration, and rigor of professional development.

4. Improve teacher preparation programs and encourage people with undergraduate and graduate STEM degrees to enter the teaching profession.

5. Revolutionize how STEM subjects are taught, learned, and assessed and implement a statewide research-based STEM curriculum that is aligned with global workforce and academic standards.

6. Engage business, industry, and civic leaders to improve STEM education and skills in the Commonwealth and create incentives for Kentucky businesses that employ and invest in STEM educated students.

7. Develop an ongoing, coordinated, statewide STEM initiative that maximizes the impact of resources among state agencies, schools, colleges and universities, and businesses and is focused on developing and attracting STEM-related jobs to Kentucky.

8. Target energy sustainability problems and opportunities in Kentucky and the nation as a primary objective of statewide STEM enhancements.

INTRODUCTION

The creation of the CPE STEM Task Force emerged from the CPE Research, Economic Development, and Commercialization Policy Group, chaired by Mr. John R. Hall, retired chairman and CEO of Ashland, Inc. At its August 2006 retreat, CPE focused its attention on the importance of the STEM disciplines to the development of Kentucky's "talentforce" and the creation of knowledge economy jobs. STEM disciplines provide the foundation for future statewide advancements in commercialization and innovation and support existing businesses and enterprises that rely on mathematics, science, technology, and engineering expertise.

In November 2006, the Council took formal action to approve the convening of a STEM Task Force comprised of leaders from government, business, P-12, and higher education sectors within the Commonwealth of Kentucky.

> "The CPE STEM Task Force is charged with developing a statewide strategic action plan to accelerate Kentucky's performance within the STEM disciplines. Recommendations and accountability measures also need to explore the relationship between STEM production and the creation of knowledge economy or "talentforce" jobs, the commercialization of intellectual property, and innovation within Kentucky."
>
> *CPE Meeting Minutes, November 6, 2006*

The long-term, overarching goal of the *Kentucky Postsecondary Education Improvement Act of 1997* is to significantly improve the quality of life and standard of living for all Kentuckians. Question 5 of the CPE Public Agenda for Postsecondary and Adult Education reads: "Are Kentucky's people, communities, and economy benefiting?" In order to improve the economy of Kentucky, we must increase the educational attainment of Kentucky's citizens and prepare Kentuckians for the 21st century workplace. The STEM disciplines hold the key to the future prosperity of the Commonwealth.

The STEM disciplines hold the key to the future prosperity of the Commonwealth.

(b)(6)

CPE STEM TASK FORCE PROCESS AND TIMELINE

The CPE STEM Task Force is comprised of 110 leaders from the executive and legislative branches of state government, P-12 and higher education, and the business, nonprofit, professional, and organizational sectors of the Commonwealth of Kentucky.

- August – October 2006 – John Hall, Chair of the Research, Economic Development, and Commercialization Policy Group, recommended formation of CPE STEM Task Force
- November 2006 – CPE approved establishment of STEM Task Force; UK President Lee Todd appointed as chair
- December 2006 – First meeting of the CPE STEM Task Force
- January 2007 – Second meeting of the CPE STEM Task Force
- February 2007 – Third meeting of the CPE STEM Task Force
- March 2007 – CPE STEM Task Force report and recommendations released
- April – August 2007 – STEM Task Force study groups meet to develop implementation action plans for the STEM Task Force recommendations
- September 2007 – Implementation action plans released
- September – December 2007 – Budget planning processes incorporate STEM Task Force recommendations

"It is easy to be complacent about U.S. competitiveness and preeminence in science and technology. We have led the world for decades, and we continue to do so in many research fields today. But the world is changing rapidly, and our advantages are no longer unique. Some will argue that this is a problem for market forces to resolve—but that is exactly the concern. Market forces are already at work moving jobs to countries with less costly, often better educated, highly motivated work forces and more friendly tax policies."
-Rising Above the Gathering Storm, 2006

BACKGROUND

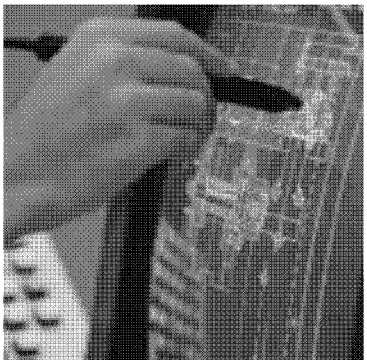
In 1989, the American Association for the Advancement of Science (AAAS) published a report entitled *Science for All Americans* that examined the challenges inherent in educating science literate K-12 students. Experts in science, mathematics, and technology collaborated to define science literacy and provide recommendations on effective science learning and teaching. The report also called for the establishment of national standards for science education and provided resources and recommendations regarding science education reform within K-12 and higher education settings.

Almost 20 years later, the call for science and technology literacy has been replaced by an increasingly urgent message regarding the national crisis in mathematics and science in the United States. Beginning at the turn of the century with *The Glenn Commission* (September 2000), the economic impact of America's eroding supremacy in the STEM disciplines has been studied and documented.

> "We as a nation must take immediate action to improve the quality of math and science teaching in every classroom in the country. If we delay, we put at risk our continued economic growth and future scientific discovery."
> *-The Glenn Commission, 2000*

The United States is facing a national STEM crisis reflected in the declining number of American students who receive science degrees. Thirty years ago the United States ranked third worldwide in the number of science graduates; now we rank 17th. Additionally, Asian universities produce eight times more engineering bachelor's degrees than the United States. Of the 2.8 million university degrees in science and engineering granted worldwide in 2003, 1.2 million were earned in Asian universities, 830,000 in European institutions, and 40,000 in American universities and colleges.

Thirty years ago the United States ranked third worldwide in the number of science graduates; now we rank 17th.



Other states and regions of the United States and other countries are aggressively pursuing attainment within the STEM disciplines.

Other states and regions of the United States and other countries are aggressively pursuing attainment within the STEM disciplines. A new term, "Chindia," has been coined to describe the regional combined efforts of China and India to advance knowledge economy opportunities through vigorous support for advanced graduate education in the STEM disciplines.

> "Neither China nor India has yet produced many important breakthroughs in science or technology. But it is only a matter of time before India and China are at the forefront in technological innovation. They boast the world's greatest numbers of new scientists and engineering graduates, mounting R & D expenditures, and deepening ties with top foreign tech companies and schools."
>
> *-Chindia, 2007*

American authors such as Thomas Friedman in *The World is Flat* and Richard Florida in *The Flight of the Creative Class* have documented the current and future impact of an increasingly global economy that threatens the socio-economic welfare of American citizens.

> "For most of the post-WWII period, the U.S. was in fact unrivaled in its scientific and technological prowess. In the last five to ten years, this once-predominant position has begun to decay, and in some places rapidly. In 1999, the U.S. Council on Competitiveness warned that the U.S. could not rest on its laurels, since "other nations are accelerating their own efforts" as America's "innovation infrastructure" begins to show signs of decay. Since 1999, things have only gotten worse."
>
> *-The Flight of the Creative Class, 2005*

America's Academic Competitiveness. On February 8, 2006, President Bush and Congress implemented two new student grant programs for Pell-eligible (grants awarded to undergraduate students based upon high financial need) American students – the *Academic Competitiveness (AC) Grants* and the *Science and Mathematics Access to Retain Talent (SMART) Grants* which were created within the *2005 Higher Education Reconciliation Act*. Designed to encourage students to pursue more rigorous courses in the STEM disciplines and in critical languages, the grants provide additional funding to base Pell awards. As is illustrated by the chart that follows, the larger awards are reserved for students who major in the STEM or critical language areas.

Year	Base Pell	SMART Grant	Total $ Per Year
Freshman	$400 to $4,000	$750	$1,150 to $4,750
Sophomore	$400 to $4,000	$1300	$1,700 to $5,300
Junior	$400 to $4,000	$4000	$4,400 to $8,000
Senior	$400 to $4,000	$4,000	$4,400 to $8,000
Total- 4 yrs.	$1,600 to $16,000	$10,050	$11,650 to $26,050

SMART grants are awarded on a "first come – first serve" basis to full-time American students who qualify for Pell awards based upon the completion of the Free Application for Federal Student Aid (FAFSA). States that currently require a more rigorous high school curriculum (four years of mathematics and four years of science to graduate) are better positioned than Kentucky to have students receive the SMART grants. It is important to note that the 2006 adoption by the Kentucky Board of Education of a more rigorous high school curriculum within the Commonwealth is well aligned with national efforts to strengthen the STEM pipeline.

Kentucky's STEM Performance. The STEM disciplines are essential to the economic prosperity of Kentucky's citizens and communities. STEM disciplines fuel innovation, per capita income, and the creation of 21st century jobs. Yet, Kentucky continues to perform poorly compared with other states, according to the Progressive Policy Institute.

- Kentucky is 47th in workforce education.
- Kentucky is 47th in the number of scientists and engineers.
- Kentucky is 45th in the number of patents issued.
- Kentucky is 42nd in the number of high tech jobs.
- Kentucky is 39th in industry investment in R & D.
- Kentucky is 33rd in the number of fastest growing companies.

Not surprisingly, Kentucky also ranks low in the percentage of STEM economy jobs. Kentucky ranks 41st in the U.S. in the number of science and engineering occupations and 44th in the number of high tech businesses in the state.

In September 2006, the Kentucky Science and Technology Corporation released a report entitled *Kentucky Per Capita Income Analysis* based upon research completed by SRI International.

While Kentucky's per capita income has grown steadily over the past three decades, its ranking nationally has remained virtually unchanged.

Dramatic acceleration of performance within the STEM disciplines is critical to the improvement of Kentucky's per capita income as we strive to compete in the increasingly global economy.

"While Kentucky's per capita income (PCI) has grown steadily over the past three decades, its ranking nationally has remained virtually unchanged. For example, in 1970, Kentucky ranked 44th among all U.S. states in per capita income. Nearly 35 years later, in 2004, Kentucky was still ranked 44th. Kentucky's average per capita income ($27,151) in 2004 was 82.2 percent of the U.S. average ($33,041).

-Kentucky Per Capita Income Analysis Final Report, 2006

Dramatic acceleration of performance within the STEM disciplines is critical to the improvement of Kentucky's per capita income as we strive to compete in the increasingly global economy. The international marketplace includes cheaper labor and less restrictive immigration and taxation laws than the United States. The global economy already is having an impact on the profile of American jobs and professions.

The U.S. Bureau of Labor Statistics provides national indicators of job growth and decline, such as these figures for the ten-year period between 2004 and 2014.

Growth of 27 percent or more:

- computer science
- database administration
- software engineering
- biomedical engineering
- environmental engineering
- healthcare
- medical research
- internet publishing

The following jobs are predicted to decline significantly during the same time period:

- agriculture
- manufacturing
- textile and apparel production

Manufacturing, which represents 260,000 well-paying jobs and 20 percent of the Kentucky gross product, is by a 2:1 margin the largest contributor to the Kentucky economy. While the Kentucky manufacturing sector is losing jobs, those jobs are primarily "low-skill" jobs. They are being replaced by "high-tech" or advanced manufacturing jobs that require workers who, at a minimum, graduate from high school and preferably attend a Kentucky Technical College System (KCTCS) institution and /or a university/ college offering a four-year degree program. Advanced manufacturing jobs, like those created by the presence of Toyota and its supplier network, will require a steady stream of workers educated in STEM disciplines.

In order to adequately prepare Kentuckians to compete for the new and expanding jobs of the 21st century, we must enhance the P-20 STEM pipeline.

Kentucky's P-12 STEM Performance. According to the National Science Foundation, Kentucky is lagging behind many states on P-12 measures of mathematics and science.

- Fourth grade performance (2005)
  mathematics: ranked 40th in the nation
  science: ranked 16th in the nation
- Eighth grade performance
  mathematics: ranked 35th in the nation
  science: ranked 18th in the nation
- Public high school students taking AP exams
  U.S. Average: 20.9%
  Kentucky: 15.5% (Ranked 29th in the nation)
- Percentage of students who scored 3 or higher on at least one AP exam
  U.S. Average: 13.2%
  Kentucky: 7.7% (ranked 38th in the nation)

The Kentucky pipeline in the STEM disciplines is leaking. In fall 2004, 16,003 Kentucky high school graduates entered Kentucky's public colleges and universities underprepared in mathematics. Statistically, unless these students receive developmental assistance during their first year, more than half of them will not return for their second year. By contrast, about 80 percent of mathematically prepared students return for a second year of college.

Kentucky's Higher Education STEM Performance. Kentucky continues to rank very low in national comparisons of the number of STEM degrees awarded, according to the National Science Foundation.

- Bachelor's degrees conferred in science and engineering (2003)
  U.S. average: 7.82 per 1,000
  Kentucky: 4.75 per 1,000 (ranked 49th in the nation)
- Science and engineering degrees as share of degrees conferred (2003)
  U.S. Average: 29.7%
  Kentucky: 22.7% (ranked 48th in the nation)

Analysis of the actual number of STEM degrees awarded by Kentucky's public and independent universities underscores the crisis even more clearly. During the eight years between 1997/98 and 2004/05, only 923 additional STEM degrees (baccalaureate, master's, and doctoral degrees combined) were awarded by Kentucky's eight public and 19 independent institutions.

THE DEFINITION OF THE PROBLEMS

***Problem Statement 1*: Kentucky currently is producing inadequate numbers of STEM literate students throughout the P-20 pipeline. Kentucky needs to strengthen the STEM pipeline from kindergarten through doctoral level preparation.**

> "In 2000, nearly 40 percent of U.S. high school students had not taken any course work in science more challenging than general biology."
> -*Math and Science Education in a Global Age: What the U.S. Can Learn From China, 2006*

The number of students graduating from STEM programs at American universities has remained largely flat during the past 20 years. The demand for science and engineering workers has quadrupled in the U.S. during the same time period.

National Science Foundation data indicate that Kentucky elementary students rank 40th in fourth grade mathematics performance and that eighth grade students rank 35th compared to other states.

According to the Council's recent Developmental Education Task Force Report, "the proportion of undergraduates underprepared in mathematics who received developmental education services ranged by institution from 64 percent to 96 percent." (*A Plan for Improving College Readiness and Success, page 10*)

Kentucky is producing inadequate numbers of middle and high school teachers within the STEM disciplines. The need for adequately prepared P-12 STEM teachers has increased with the recent adoption of more rigorous standards for students completing high school, including four years of mathematics and four years of science. Rural schools and schools with high percentages of students from low socioeconomic backgrounds face additional challenges in hiring highly qualified STEM teachers.

At the postsecondary level, Kentucky needs to produce greater numbers of highly educated students with doctoral degrees. According to the National Science Foundation (NSF), in 2005, Kentucky ranked 28th in the number of doctoral degrees awarded (462 in all disciplines) compared with #1 ranked California that produced 5,225 doctorates across all academic disciplines. NSF data for STEM doctorates conferred indicate that, in 1997, 214 doctoral degrees were awarded in science and engineering by Kentucky institutions compared with 185 doctoral degrees awarded in the same areas in 2003.

The need for adequately prepared P-12 STEM teachers has increased with the recent adoption of more rigorous standards for students completing high school, including four years of mathematics and four years of science.

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***Problem Statement 2*: Kentucky's P-8 teachers face unique challenges in acquiring and maintaining expertise in mathematics and science. Teacher preparation programs as well as professional development opportunities for STEM teachers need to be strengthened dramatically.**

STEM-related fields are dynamic. They evolve rapidly as new discoveries are made and as research challenges established assumptions. Professional opinions differ regarding the efficacy of teacher preparation models that range from four-year education degrees to programs that require a teacher to have a degree in a content discipline before taking a fifth year dedicated to educational pedagogy and practice. Different higher education institutions have different requirements for elementary education certification, especially in mathematics. This varies from one course in mathematics education (methods) to three higher level mathematics content courses.

However, in the areas of mathematics and science, it is imperative that teachers possess in-depth understanding and currency in the relevant content area. Teacher preparation programs and degree programs in the STEM disciplines need to be strengthened at our colleges and universities to ensure that P-12 students receive appropriate rigor and content to meet 21st century education and workplace expectations. In addition, there is a critical shortage of university mathematics educators to prepare teachers, especially at the elementary and middle grade levels.

Beginning in the fourth and fifth grades, students are introduced to increasingly complex mathematical and scientific material that requires educators to have mastered STEM-related content. In addition, a classroom teacher's enthusiasm for mathematics and science has been found to influence a child's interest in these areas. Teachers must have ready access to quality, ongoing professional development in order to stay current in their fields and to teach at the highest levels.

> "Far higher proportions of science and math teachers in East Asia have degrees in their disciplines than their U.S. counterparts. Fewer than 60 percent of U.S. eighth grade science teachers have majors in a science discipline and only 48 percent of eighth grade math teachers have a math major. Chinese schools do not expect a single elementary school teacher to teach all subjects; specialist science teachers are employed as early as third grade. A tradition of mentoring by master teachers and weekly professional development in schools continually improves teacher performance."
>
> -*Math and Science Education in a Global Age: What the U.S. Can Learn from China, 2006*

Despite some notable progress in P-20 curricular alignment, much work remains to be done to better align high school programs and college expectations.

***Problem Statement 3*: Collaboration among STEM professionals within P-20 education is not currently sufficient to produce widespread improvement in Kentucky's STEM performance. Improved collaboration between P-12 and higher education is critical to the creation of an adequate STEM pipeline within Kentucky.**

Despite some notable progress in P-20 curricular alignment, much work remains to be done to better align high school programs and college expectations. Several local and national collaborative projects between P-12 and higher education demonstrate encouraging progress and can serve as models of "best practice."

The Appalachian Mathematics and Science Partnership (AMSP) Model for Institutional Collaboration with School Districts is a National Science Foundation model program currently housed at the University of Kentucky and involves six other Kentucky colleges and universities. The principal goal of the AMSP is to reform the nation's mathematics and science education system through the establishment of effective collaborations between school districts and institutions of higher education. One of the most effective AMSP programs is the Partnership Enhancement Project (PEP), a mini-grant ($30,000) program that enables direct and specific collaboration between school districts and postsecondary institutions. Preliminary research findings support the value of individualized interventions that reflect the unique perceived needs of the respective school districts. AMSP is particularly focused on the social impact of improved educational attainment to advance knowledge-based workforce development within Appalachia.

At the national level, the Meyerhoff Scholarship program at the University of Maryland, Baltimore County, is dedicated specifically to improving the pipeline of minority students who pursue graduate degrees in the STEM disciplines. The program targets high-achieving minority high school students who must be nominated by their high school administrators, counselors, or teachers. Meyerhoff Scholars receive full tuition, room, and board scholarships, have regular academic and career mentoring, attend an intensive Summer Bridge program, and conduct research early in their postsecondary careers. In addition, family involvement is stressed and required. The Meyerhoff Scholarship program develops strong ties with the secondary schools in Maryland and participates actively in the redesign of science teaching in high schools and at the undergraduate level.

High schools in Kentucky also are implementing the national Project Lead the Way (PLTW) pre-engineering curriculum to prepare students for advanced education and careers in engineering and engineering technology. Academic assessment results from the Kentucky PLTW schools demonstrate students' enhanced mathematics and science achievement compared to students who are not taking the program.

<u>Problem Statement 4</u>: Salaries for P-12 STEM teachers are not sufficiently competitive to attract STEM graduates to the teaching profession. A variety of incentives for P-12 STEM teachers need to be explored to encourage STEM degree holders to enter the teaching profession.

> "When the salaries of college graduates are compared, education majors in the U.S. come out at the very bottom. Despite recent increases in teacher salaries the gap between teachers and other college graduates has remained large. University graduates who majored in physical science earned 78 percent more and economics majors earned 92 percent more than education majors over the course of their working lifetime. Majors in social sciences other than economics earned 27 percent more than education majors and humanities majors earned 5 percent more. Relative to those with graduate degrees in education, those with MBAs earned 65 percent more, those with law degrees earned 104 percent more, and those with advanced degrees in physical science earned 75 percent more."
>
> *-Secondary Education in the United States: What Can Others Learn From Our Mistakes?*

On March 7, 2007, Bill Gates, chairman of Microsoft, testified before the U.S. Senate committee hearing on strengthening American competitiveness.

> "Our goal should be to double the number of science, technology, engineering, and mathematics graduates in the United States by 2015. This will require both funding and innovative ideas. We must renew and reinvigorate math and science curricula with engaging, relevant content. For high schools, we should aim to recruit 10,000 new teachers and strengthen the skills of existing teachers. To expand enrollment in postsecondary math and science programs, each year we should provide 25,000 new undergraduate scholarships and 5,000 new graduate fellowships. America's young people must come to see science and math degrees as key to opportunity. If we fail at this, we won't be able to compete in the global economy. Even as we need to improve our schools and universities, we cannot lose sight of the need to upgrade the skills of people already in the workforce."
>
> *-Testimony of Bill Gates at U.S. Senate, March 7, 2007*

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America's young people must come to see science and math degrees as key to opportunity.

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<u>Problem Statement 5</u>: Kentucky's economy as reflected by comparative per capita income (PCI) rankings has not significantly changed in the past 35 years while many of our surrounding competitor states have increased their relative rankings. Kentucky needs to consider strategies and policies that could rapidly accelerate the state's economic development as reflected by PCI.

Various national studies and reports have established the link between the STEM disciplines and economic prosperity.

> "The committee identified two key challenges that are tightly coupled to scientific and engineering prowess: creating high quality jobs for Americans and responding to the nation's need for clean, affordable and reliable energy."
>
> *-Project Kaleidoscope Report on Reports, 2006*

On an international level, perhaps the tiny country of Ireland best represents the dramatic positive changes that can result from an aggressive and strategic approach to improved economic prosperity.

> "Today, we see in the example of Ireland how quickly a determined nation can rise from relative hunger to burgeoning prosperity. In the 1980's, Ireland's unemployment rate was 18 percent and during that decade 1 percent of the population – mostly young people – left the country, largely to find jobs. In response, a coalition of government, academic institutions, labor unions, farmers, and others forged an ambitious and sometimes painful plan of tax and spending cuts, and aggressively courted foreign investors and skilled scientists and engineers. Today, Ireland is, on a per capita basis, one of Europe's wealthiest countries. In 1990, Ireland's per capita GDP of $12,891 (in current U.S. dollars) ranked it 23rd of the 30 member countries of the Organisation for Economic Co-operation and Development (OCED). By 2002, Ireland's per capita GDP had grown to $32,646, making it 4th highest among OECD member countries."
>
> *-Rising Above the Gathering Storm, 2006*

The Kentucky Science and Technology Corporation's PCI study concluded that

> "...despite Kentucky's 20-year average rate of PCI growth that is slightly higher than the national average, it is projected to take 154 years for Kentucky's PCI to converge with the U.S. average PCI – assuming national trends stay the same and with no major changes in Kentucky's economic landscape."
>
> *-Kentucky Per Capita Income Analysis, 2006*

***Problem Statement # 6*: The United States needs to create sustainable energy sources to eliminate our dependence on foreign energy resources. Kentucky's history, natural resources, and expertise and innovative research within the energy sector represents an opportunity for the Commonwealth to provide leadership in solving a serious national problem.**

> "Kentucky's natural resources and America's need for energy independence create the opportunity for us to be an international leader in energy diversification. We can lead the development of businesses and jobs that provide alternatives to imported oil. America has a problem and Kentucky can provide the solution. Energy independence is good for national security and for Kentucky's economy."
>
> *-Lee T. Todd, Jr., Lexington Herald-Leader Editorial, March 5, 2007*

As one important facet of Kentucky's knowledge-based economic development strategy, innovative renewable energy research and commercialization holds great promise. Kentucky's universities are already engaged in collaborative energy research, commercialization ventures are emerging, and the existing energy sector provides current and future STEM-related employment.

As one important facet of Kentucky's knowledge-based economic development strategy, innovative renewable energy research and commercialization holds great promise.

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RECOMMENDATIONS

1. **Energize and fund a statewide public awareness campaign to help Kentuckians understand the critical importance of STEM to their own economic competitiveness and to that of the Commonwealth.**

   Potential strategies include:

   - Build public ownership of the problem and its solutions, especially among educators, parents, and community leaders.
   - Publicize Kentucky's need to cultivate our STEM intellectual capital to create a 21st century "talentforce" and grow knowledge economy jobs within the Commonwealth.
   - Increase student awareness of STEM career possibilities, particularly those within the Kentucky energy sector, through the development of future sustainable energy solutions.
   - Encourage students to excel in STEM classes and pursue careers in STEM fields. For example, summer workshops, K-12 involvement with college/university level research, and interactions with scientists, engineers and researchers could be utilized to motivate students in the STEM pipeline.
   - Engage P-8 parents to ensure their understanding of the importance of STEM achievement to their children's academic career and success.

2. **Create incentives and a supportive environment for students, teachers and institutions that pursue, succeed, and excel in STEM disciplines throughout the P-20 pipeline.**

   Potential strategies include:

   - Investigate differential investment for STEM subjects, including but not limited to differential compensation, technology infrastructure, laboratory equipment, discretionary funding, supplies, field trips, professional travel allowances, and mathematics and science coaches and mentors.
   - Provide or expand instructional laboratory space and opportunities for hands-on experiments in every school, college, and university.
   - Increase opportunities for students to gain exposure to STEM careers through the Individual Learning Plans (ILPs) process, Gifted Student Services Plans (GSSPs), mathematics and science competitions and clubs,

internships, research assistantships, and other practical experiences outside the classroom.

- Create new college scholarships for STEM majors, including pre-service elementary as well as middle grades and secondary teachers with a minor or area of concentration in mathematics or science.
- Maximize existing opportunities (e.g., financial rewards for STEM course taking and achievement, federal SMART grants) for students in the STEM pipeline.
- Reduce student disincentives to take rigorous STEM courses through such strategies as revising Kentucky Educational Excellence Scholarships and Governor's Scholarships.
- Work with middle and high school guidance counselors to encourage students to pursue STEM subjects and STEM-related careers.
- Collaborate with the Kentucky Community and Technical College System (KCTCS) to encourage STEM certificate students to pursue STEM degrees.

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3. **Implement international best practices in professional development programs for P-16 STEM teachers to increase the intensity, duration, and rigor of professional development.**

Potential strategies include:

- Expand professional development resources statewide, such as additional days of paid professional development in the school year.
- Provide teachers and faculty with job-embedded mentoring and support and opportunities for practical application of knowledge outside the classroom, including exchange programs with business, industry, and higher education.
- Ensure access to content-specific professional development for STEM subjects regionally and at the state level.
- Provide opportunities and incentives to enable K-12 educators to remain current in the STEM disciplines.
- Consider the addition of a certification or endorsement for P-12 coaches, mentors, or other teacher leaders in mathematics and science.
- Base all professional development activities on research and proven best practice.

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4. **Improve teacher preparation programs and encourage people with undergraduate and graduate STEM degrees to enter the teaching profession.**

Potential strategies include:

- Reward postsecondary STEM faculty for involvement in K-12 classrooms.
- Encourage, support, and reward the development of college and university mathematics education and science education faculty.
- Raise educator standards and credentialing requirements to ensure adequate STEM knowledge across the elementary, middle, and secondary panels.
- Require education majors in STEM disciplines to take more coursework in their content area, including mathematics and science education, and ensure that these courses are offered by all teacher preparation programs, including those in elementary education.
- Create more flexible alternate routes to teacher certification for STEM professionals in the private sector and remove barriers to second careers in teaching.
- Require and encourage universities to provide more career-friendly programs for teacher preparation and advancement, including evening and weekend classes that are geographically or electronically accessible throughout the state.
- Extend the Kentucky Higher Education Assistance Authority Best in Class loan forgiveness program to elementary teachers with a minor or area of concentration in mathematics or science. (See http://www.studentloanpeople.com/what_best_in_class.html.)

5. **Revolutionize how STEM subjects are taught, learned, and assessed and implement a statewide research-based STEM curriculum that is aligned with global workforce and academic standards.**

Potential strategies include:

- Integrate a comprehensive, standardized, internationally benchmarked P-16 STEM curriculum to make use of the latest instructional techniques and technologies such as the GE STEM curriculum implemented in Jefferson County.
- Emphasize depth of learning as well as breadth of learning in STEM subjects.

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- Encourage universities to partner with industry to provide professional science master's degrees tied to industry needs.
- Upgrade assessment strategies for student learning in the STEM disciplines, such as standardized end-of-course exams and full use of the ACT Educational Planning and Assessment System (EPAS).
- Create curricular, research, and innovation opportunities in sustainable energy for STEM students throughout the pipeline.
- Improve the quality of teaching in STEM disciplines at colleges and universities, including support for the development of mathematics education and science education faculty.
- Incorporate innovative and interactive technology-based STEM learning tools and methodologies throughout P-20 education.
- Establish a statewide STEM competition at the elementary, middle, and high school levels to recognize and celebrate accomplishment in STEM learning and application.

6. **Engage business, industry, and civic leaders to improve STEM education and skills in the Commonwealth and create incentives for Kentucky businesses that employ and invest in STEM educated students.**

Potential strategies include:

- Develop vertical teams such as expanded P-16 Councils to facilitate the local collaboration of P-16 educators, businesses, and government and to facilitate collaborative learning such as Advanced Placement and International Baccalaureate programs, the Academy of Mathematics and Science in Kentucky, and informal educational opportunities.
- Create opportunities for STEM educators and students to apply classroom knowledge to real-world applications in the workplace.
- Create opportunities for P-16 students to participate in STEM clubs and competitions such as science fairs, robotics competitions, American Math Competitions, and Math Counts.
- Contribute leadership expertise and support for the STEM public awareness campaign.
- Expand and improve STEM workforce development and training programs so they teach the skills needed in today's knowledge economy, especially at the Area Technology Centers.

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- Provide leadership in developing a statewide strategy for energy sustainability and independence.
- Increase corporate grant and in-kind funding of STEM education and expand the reach of programs statewide.
- Explore incentive programs for businesses that commit to hiring STEM graduates from Kentucky institutions and invest in Kentucky STEM research and education.
- Explore corporate education partnerships that enable co-teaching of STEM courses, internships for teachers, professional development for teachers by corporate practitioners of STEM, and possible technology assistance and technology donations.

7. **Develop an ongoing, coordinated statewide STEM initiative that maximizes the impact of resources among state agencies, schools, colleges and universities and businesses and is focused on developing and attracting STEM-related jobs to Kentucky.**

Potential strategies include:

- Propose a concurrent or simple resolution calling for continued study of the state's STEM crisis to result in enabling legislation and potential funding recommendations for the 2008 legislative session.
- Create a standing body of education, business, economic development, government, and nonprofit professionals to oversee and coordinate STEM initiatives at the statewide level.
- Coordinate initiatives with the Kentucky Center for Mathematics (see http://www.kymath.org) and the Committee for Mathematics Achievement.
- Create a designated STEM leadership position within state government to ensure sustained progress and statewide collaboration for STEM-related initiatives.
- Advocate and raise funds for STEM education resources from government and the private sector.
- Develop a report card that uses rigorous program assessment to measure Kentucky's progress in implementing STEM initiatives.
- Collect and disseminate global best practices focused on STEM instruction.
- Provide incentives for faculty and students to help catalyze STEM company formation or growth in the Commonwealth according to the "Statewide Strategy for Economic Development."

8. **Target energy sustainability problems and opportunities in Kentucky and the nation as a primary objective of statewide STEM enhancements.**

Potential strategies include:

- Explore the development of P-12 curricular offerings related to energy sustainability.
- Increase funded research for sustainable energy-related innovation and commercialization.
- Create a monetary prize to be awarded to Kentucky innovators who solve important energy sustainability problems similar to the X Prize for scientific innovations that benefit society.

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The Commonwealth's future prosperity and ability to compete in a global economy depend on a statewide pipeline of STEM educated workers in combination with the creation of 21st century "talentforce" jobs.

CONCLUSION

The CPE STEM Task Force report outlines the national crisis that America is facing with respect to the STEM pipeline. Education is the primary driver of economic development in Kentucky. The Commonwealth's future prosperity and ability to compete in a global economy depend on a statewide pipeline of STEM educated workers in combination with the creation of 21st century "talentforce" jobs.

The CPE STEM Task Force recommendations are designed to create a starting point for future action that involves leveraging current human and fiscal assets and developing new opportunities for Kentucky's citizens. The STEM Task Force invites your comment and your participation in securing Kentucky's future.

MEMBERS OF THE STEM TASK FORCE

Biographical information for task force members is available on the Council Web site at http://cpe.ky.gov/news/reports/cpe_reports/stem.

Name	Affiliation	City
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Dave Adkisson	Kentucky Chamber of Commerce	Frankfort
Rich Alloo	Toyota Engineering and Manufacturing North America, Inc.	Erlanger
Jim Applegate	Council on Postsecondary Education	Frankfort
Dan Ash	Jefferson Community and Technical College	Louisville
Ann Bartosh	Kentucky Department of Education	Frankfort
Gail Becker	Louisville Science Center	Louisville
Gary Bello	Atera Partners LLC	Lexington
Jamie Bewley Byrd	Kentucky Transportation Cabinet	Frankfort
Fariba Bigdeli-Jahed	Kentucky State University	Frankfort
George Binder	Kentucky Society of Professional Engineers	Frankfort
Keith Bird	Kentucky Community and Technical College System	Versailles
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Ivory Griskell	Kentucky State University	Frankfort
Cathy Gunn	Morehead State University	Morehead
John Hall	Former Chair and CEO, Ashland, Inc.	Lexington
Sally Hamilton	Kentucky Education Cabinet	Frankfort
Allyson Handley	Council on Postsecondary Education	Frankfort
Elaine Harrison	Kentucky Department of Education	Frankfort
Blake Haselton	Kentucky Association of School Superintendents	LaGrange
Steve Henderson	Kentucky Science & Technology Corporation	Lexington
Jeff Hoover	Kentucky House of Representatives	Jamestown

Name	Affiliation	City
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Darrell Ishmael	East Kentucky Power Cooperative	Winchester
Brenda C. Jackson	Kentucky School Boards Association	Shelbyville
Diane Johnson	Lewis County Schools	Vanceburg
Michael Karpf	University of Kentucky	Lexington
Dan Kelly	Kentucky Senate	Springfield
Rodney Kelly	Kentucky Department of Education	Frankfort
Elizabeth Kennan	Former President, Mount Holyoke College	Danville
Robert W. Kingsolver	Bellarmine University	Louisville
William J. Kovacic	U.S. Department of the Interior	Lexington
Joanne Lang	Kentucky Science and Technology Corporation	Lexington
Sarah Laws	Midway College	Midway
Tom Layzell	Council on Postsecondary Education	Frankfort
Brian LeClaire	Humana, Inc.	Louisville
Tom Lester	University of Kentucky	Lexington
Benny Lile	Barren County Board of Education	Glasgow
G.T. Lineberry	University of Kentucky	Lexington
Fran Lockwood	Valvoline Corporation	Lexington
Sylvia Lovely	Kentucky League of Cities	Lexington
Amy Lowen	Louisville Science Center	Louisville
Phyllis Maclin	Council on Postsecondary Education	Paducah
David Magrane	Morehead State University	Morehead
Delanor Manson	Kentucky Cabinet for Health and Family Services	Louisville
Tom Martin	Business Lexington	Lexington
Andy Meko	Kentucky Association of Manufacturers	Louisville
Billy Joe Miles	Miles Farm Supply, Inc.	Owensboro
Lindsey Miller	GE College Bound Program	Louisville
Deb Moessner	Anthem Blue Cross Blue Shield of Kentucky	Louisville
Cissy Musselman	Risk Management Services Corporation	Louisville
Jan Muto	Kentucky Community and Technical College System	Versailles
Gerald Neal	Kentucky Senate	Louisville
Laura Owens	Kentucky Education Cabinet	Frankfort
Steve Penrod	United States Enrichment Corporation	Paducah
Bill Phillips	Eastern Kentucky University	Richmond
Jennifer Wells Phipps	Corbin Middle School	Corbin
William M. Pierce	University of Louisville	Louisville
Jerry Pogatshnik	Eastern Kentucky University	Richmond
Larry Prichard	NSB Commission	Grayson
Tanya Pullin	Kentucky House of Representatives	South Shore
Bob Quick	Commerce Lexington, Inc.	Lexington
Joe Reagan	Greater Louisville, Inc.	Louisville
Eddy Roberts	BellSouth Telecommunications, Inc.	Louisville
Julia Roberts	Western Kentucky University	Bowling Green
Melanie Roberts	Bullitt County Judge Executive	Shepherdsville
Phillip S. Rogers	Education Professional Standards Board	Frankfort

Name	Affiliation	City
Wimberly Royster	University of Kentucky	Lexington
Owens Saylor	Jessamine County Schools	Nicholasville
Phillip Schmidt	Northern Kentucky University	Highland Heights
Kathy Schroerlucke	Kentucky Dataseam Initiative	Louisville
Robert Sexton	Prichard Committee for Academic Excellence	Lexington
Linda Sheffield	Kentucky Center for Mathematics	Fort Thomas
Stu Silberman	Fayette County Public Schools	Lexington
Charley Simpson	The Center for Rural Development	Somerset
Lydia Wells Sledge	Retired Director, Instructional Technology	Frankfort
Scott Smith	University of Kentucky	Lexington
Suzanne Soled	Northern Kentucky University	Highland Heights
Ben Streepey	Lexmark International, Inc.	Lexington
Lee Todd	University of Kentucky	Lexington
Billie Travis	Royal Spring Middle School, Scott County	Georgetown
Darrell Treece	Adair County Schools	Columbia
John Turner	Angell Demmell North America	Lebanon
Barbara Veazey	West Kentucky Community and Technical College	Paducah
Caryn Walker	J. Graham Brown School	Louisville
Neil Weber	Murray State University	Murray
Susan Weiss	Net Tango	Louisville
Tom Welch	T Welch Consulting, Inc.	Lexington
Connie White	White, Scott, Jonah and Associates	Frankfort
LaJuana Wilcher	English, Lucas, Priest, and Owsley, LLP	Bowling Green
Mickey Wilhelm	University of Louisville	Louisville
Bill Wilson	Kentucky Educational Television	Lexington
Frank Wiseman	Georgetown College	Georgetown
John Yopp	University of Kentucky	Lexington
James Zanewicz	University of Louisville	Louisville

ONLINE RESOURCES

The following report resources are available on the Council Web site at http://cpe.ky.gov/news/reports/cpe_reports/stem:

- Biographies of STEM Task Force Members
- Institutional STEM Reports
- Summaries of Sector Recommendations
- Full STEM Task Force Report

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