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Appendix A1.1

Detailed Table for (A)(1)

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
1. District of Columbia Public Schools	126	45,772	31,574	Y	NA	N	Yes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Achievement Preparatory Academy	1	100	79	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
3. Apple Tree PCS	3	180	134	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
4. The Arts and Technology Academy	1	606	522	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
5. Capital City PCS	2	425	231	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
6. Center City PCS	6	1,221	765	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
7. Cesar Chavez PCS	3	1,400	1,050	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
8. Community Academy PCS	5	1,599	1,273	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
9. DC Bilingual PCS	1	349	290	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
10. DC Preparatory Academy	3	850	569	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
11. Early Childhood PCS	2	225	174	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
12. E.L. Haynes PCS	1	460	281	Y	Y	NA	Yes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
13. Elsie Whitlow Stokes PCS	1	326	285	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
14. Excel Academy PCS	1	209	178	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
15. Friendship PCS	5	3,686	2,616	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y

16. Hope Community PCS	2	664	389	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
17. Hospitality PCS	1	174	144	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
18. Hyde Leadership PCS	1	741	527	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
19. IDEA PCS	1	469	356	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
20. Imagine Southeast PCS	1	311	298	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
21. KIPP DC	7	1,589	1,314	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
22. Maya Angelou PCS	3	554	372	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
23. National Collegiate Preparatory	1	88	80	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
24. Paul PCS	1	666	469	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
25. Potomac Lighthouse PCS	1	300	164	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
26. SAIL PCS	1	166	123	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
27. Septima Clark PCS	1	133	111	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
28. Thurgood Marshall Academy	1	389	280	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
29. Tree of Life Community PCS	1	266	257	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
30. Washington Yu Ying PCS	1	198	37	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
31. William E Doar Jr. PCS	2	650	515	Y	Y	NA	Yes	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y

Appendix A1.2

Reform Goals and Performance Measures

Race to the Top Goals and Performance Measures

Overall

- Increase statewide DC Comprehensive Assessment System (DC-CAS) performance by 5 percentage points per year;
- Close the minority achievement gap by 5 percentage points per year
- Close the poverty achievement gap by 3.5 percentage points per year over the next four years
- Increase National Assessment of Educational Progress (NAEP) scores by 10 points over four years, an improvement that will surpass the highest four-year student achievement gains made by any urban district in the 2009 Trial Urban District Assessment (TUDA) report
- Raise high school graduation rates by 3 percentage points per year
- Increase college enrollment by five percentage points per year and develop a baseline set of college-focused data from which DC will soon measure the college-readiness, college credit accumulation, and college completion rates of its students

Standards and Assessments

GOAL 1: Successfully transition to and implement common internationally benchmarked K-12 standards in English Language Arts and Mathematics through clear guidance to all relevant stakeholders (e.g., staff, parents, students, business community, higher education, etc.) and high-quality professional development for teachers and school staff

GOAL 2: Successfully transition to high-quality assessments, both interim and summative, aligned to these standards

PERFORMANCE MEASURE 1: *By School Year 2011-12, 100% of participating LEAs will implement interim and summative assessments*

PERFORMANCE MEASURE 2: *Prior to the rollout of the Common Core Standards in School Year 2011-12, every teacher/principal/administrator statewide (in both participating and non-participating LEAs) will be provided with at least one professional development opportunity on implementing the Common Core Standards. These employees will also receive multiple PD opportunities during School Year 2011-12.*

PERFORMANCE MEASURE 3: *All participating LEAs will participate in the Common Core Standards Working Group*

PERFORMANCE MEASURE 4: *By Fall 2012, the Special Education Data System (SEDS) will be aligned with the Common Core Standard.*

Data Systems

GOAL 1: Inform and engage key stakeholders (e.g., parents, students, teachers, principals, LEA leaders, community members, unions, researchers and policymakers) through an improved, interactive, user-friendly, online database

GOAL 2: Provide data to decision-makers for the continuous improvement of reform efforts related to policy, instruction, operations, management, resource allocation, and overall effectiveness

GOAL 3: Develop instructional improvement systems aligned to data systems

GOAL 4: Provide professional development necessary to foster a data-driven culture within all schools

GOAL 5: Make data from instructional improvement systems and the SLED available/accessible to researchers for the evaluation of the effectiveness of various reform models, instructional materials, strategies, and approaches for educating different types of students

PERFORMANCE MEASURE 1: *By Fall 2011, OSSE will have created a more user-friendly website from which users will be able to download aggregate-level data*

spreadsheets with statistics about students, teachers, and schools that are relevant to decision-making

PERFORMANCE MEASURE 2: *By Fall 2012, OSSE will provide additional data on its website, including teacher data, data on teacher preparation programs, SAT and NAEP scores*

PERFORMANCE MEASURE 3: *By Fall 2012, 100% of participating LEAs will have developed instructional improvement systems according to application-defined criteria*

PERFORMANCE MEASURE 4: *By Fall 2011, 100% of participating LEAs will have an in-school data coach or analyst who devotes a significant portion of his/her time to fostering a school-level data-driven culture*

PERFORMANCE MEASURE 5: *By Fall 2010, processes for external researchers to work with state-level data will be streamlined and efficient*

Great Teachers and Leaders

Overarching Goal: By Spring 2014, teacher and principal effectiveness will have improved an average of 15% over baseline measures in participating LEAs.

GOAL 1: Develop a student growth measure for all LEAs, with robust teacher and principal evaluations tied to this measure for use in informing human capital decisions

GOAL 2: Improve the proportion of effective and highly effective teachers in the neediest schools and hardest-to-staff subject areas

GOAL 3: Improve the quality of information available about teacher and principal preparation

GOAL 4: Increase the proportion of teachers and principals who are prepared through programs that equip them to be highly effective

GOAL 5: Create customized professional development experiences based on individual needs and leverage pockets of effectiveness within DC to improve overall educator effectiveness

PERFORMANCE MEASURE 1: *By Spring 2011, a common growth measure will be in place for all participating LEAs for grades 4-8*

PERFORMANCE MEASURE 2: *By Fall 2011, 100% of participating LEAs will have robust systems for evaluating teachers and principals, using the growth measure where applicable, and will use evaluations to inform human capital decisions*

PERFORMANCE MEASURE 3: *By Summer 2014, the percentage of effective and highly effective teachers in the District's high-poverty schools will have increased by 15% over the 2011 baseline*

PERFORMANCE MEASURE 4: *By Summer 2014, the percentage of effective and highly effective teachers in identified hard-to-staff areas will have increased by 15% over the 2011 baseline*

PERFORMANCE MEASURE 5: *By Fall of 2012, aggregated information on effectiveness of graduates of teaching programs will be publicly available.*

PERFORMANCE MEASURE 6: *By Fall of 2015, any credentialing program with more than 25% of its second-year participants deemed "ineffective" (i.e., the lowest of four tiers) by LEAs may have their program approval subject to revocation by the State.*

Turning Around the Lowest-Achieving Schools

GOAL: Intervene with DC's persistently lowest-achieving schools through closure or another turnaround model that puts them on a trajectory for dramatically improved student achievement by creating conditions of support and attracting high-quality human capital to turnaround schools

PERFORMANCE MEASURE 1: *By 2014, all the schools that have undergone at least two years of a turnaround model will have demonstrated a rate of growth in student academic proficiency that exceeds the average statewide rate of growth by 1.5 to 2 times in year two, and by 2 to 3 times in years three and four.*

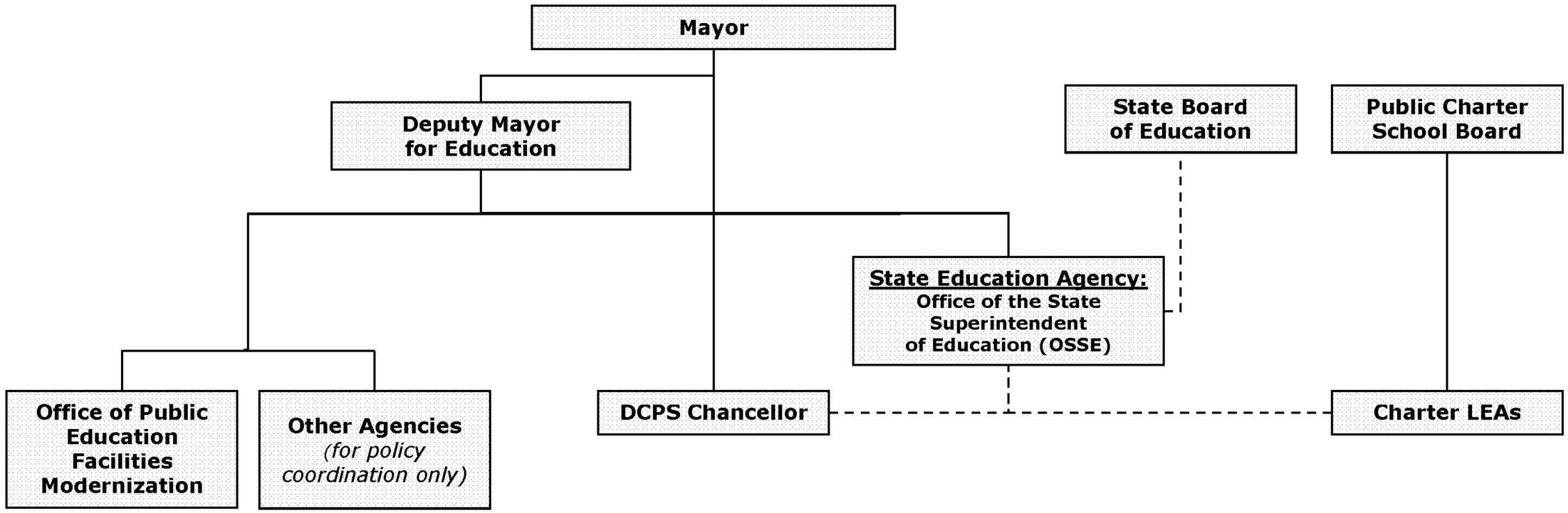
PERFORMANCE MEASURE 2: *By 2014, all the DCPS schools that have undergone at least one year of a turnaround model will be showing gains on leading indicators to be identified by the Office of School Innovation, such as attendance and credit recovery in secondary schools.*

Appendix A1.3

Organizational Chart

District of Columbia Race to the Top

District of Columbia Education Governance Structure



Governance Roles and Responsibilities

Mayor
Mayor sets overall DC education agenda. Deputy Mayor for Education, DCPS Chancellor, and all agencies report to the Mayor. Appoints members to the PCSB.

Deputy Mayor for Education
Provide high-level leadership and support for an aligned and unified DC educational mission. Responsible for District-wide education strategy, oversight of the SEA (OSSE) and OPEFM, and interagency coordination.

State Board of Education
Responsible for advising the State Superintendent of Education on educational matters, including: state standards; state education policies (incl. for special, academic, vocational, charter and other schools); state objectives; and state regulations proposed by the Mayor or the State Superintendent of Education.

Public Charter School Board
An independent agency and the District's sole authorizer of charter schools, PCSB evaluates public charter schools for academic results, compliance with applicable local and federal laws and fiscal management, and holds schools accountable for results.

Office of the State Superintendent of Education (SEA)
Sets proactive policies, exercises vigilant oversight, and directs resources that guarantee residents educated in the District of Columbia are among the highest performers in the U.S.

DCPS / Chancellor
DC's only traditional public schools system, led by a Chancellor who reports to the Mayor.

Charter Schools
Independent and autonomous LEAs that report to the PCSB.

Appendix A1.4

Memorandum of Understanding - DCPS

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

I. SCOPE OF WORK

Exhibit I, the Preliminary Scope of Work, indicates which portions of the State's proposed reform plans ("State Plan") the Participating LEA is agreeing to implement. (Note that, in order to participate, the LEA must agree to implement all required elements of the State Reform Plan.)

II. PROJECT ADMINISTRATION

A. PARTICIPATING LEA RESPONSIBILITIES

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

1) As a condition for participating in – and receiving an allocation of funds under – the State's Race to the Top program, enter into an agreement with the State that will describe more specifically the mutual responsibilities of the State and LEA for planning and implementing provisions of the State's plan. The agreement will be incorporated in or attached to the final scope of work, which must be provided to the state no later than 90 days after the Race to the Top ("RTTT") award to the OSSE and must be approved by the State.

The agreement will include a detailed work plan, prepared by the LEA and approved by the State, describing specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures, and addressing how the LEA will use funds under other federal programs and from state and local sources to support the plan. The work plan must be consistent with the LEA's preliminary scope of work in this Memorandum of Understanding, with the approved State plan, and with further guidance that the State may provide. The State will approve the LEA for funding based on the scope and quality of the work plan, including the coherence of the LEA's reform agenda across the four education areas described in the law and the LEA's capacity to implement the plan and address at the local level significant elements of the State's approved plan in a meaningful and high quality way. The agreement between the State and the LEA will also detail the State's responsibilities for providing or coordinating technical assistance, professional development, and other support for the LEA in carrying out these functions, and how State and LEA activities will be sequenced.

2) Implement the LEA plan as identified in Exhibits I and II of this agreement;

3) Over the course of the project, work in good faith with the State to identify needs for modifications to the project and to make appropriate modifications in order to achieve the core goals of the project;

4) Post to any website specified by the State or the U.S. Department of Education, in a timely manner, all non-proprietary products and lessons learned that were developed using funds under the Race to the Top grant;

5) Participate, as requested, in any evaluations of this grant conducted by the State or the U.S. Department of Education;

6) Be responsive to State or ED requests for information on the status of the project, including project implementation, outcomes, and any problems anticipated or encountered;

7) Participate in meetings and telephone conferences with the State to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Race to the Top grant period, and (d) other matters related to the Race to the Top grant and associated plans.

B. STATE RESPONSIBILITIES

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

1) Work collaboratively with the Participating LEA in carrying out the LEA Plan as identified in Exhibit I and in the agreement to be developed under Section II-A-1 above;

2) Timely distribute the LEA's portion of Race to the Top grant funds during the course of the project period and in accordance with the LEA's approved work plan described in Section II-A-1 above;

3) Review the LEA's status updates, annual reports, any interim reports, and project plans and products; and

4) Provide or coordinate technical assistance, professional development, and support consistent with Section II-A-1 above.

C. JOINT RESPONSIBILITIES

1) The State and the Participating LEA will collaborate in good faith to ensure alignment and coordination of State and local planning and implementation activities in order to achieve effectively and efficiently the core goals of the State's plan, consistent with their respective roles under State law and policy.

2) The State and each Participating LEA will appoint a key contact person for the Race to the Top grant.

3) These key contacts from the State and the Participating LEA will maintain frequent communication to facilitate cooperation under this MOU.

4) Prior to receipt of grant awards, State and Participating LEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.

5) State and Participating LEA grant personnel will negotiate in good faith to continue to achieve the overall goals of the State's Race to the Top grant, even when the State Plan requires modifications that affect the Participating LEA, or when the LEA Plan requires modifications.

D. STATE RECOURSE FOR LEA NON-PERFORMANCE

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

III. ASSURANCES

The Participating LEA hereby certifies and represents that it:

1) Has all requisite power and authority to execute this MOU;

2) Has reviewed the State's Race to the Top grant application and will implement all required elements of the State Reform Plan, as defined by the State, and consistent with Exhibit I;

3) Will provide a Final Scope of Work and detailed work plans consistent with Section II-A-1 above if the State's application is funded; will do so in a timely manner but no later than 90 days after a grant is awarded; and will enter into an agreement with the State consistent with Section II-A-1 above; and

4) Will comply with all of the terms of the Grant, the State's subgrant, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

IV. MODIFICATIONS

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

V. DURATION/TERMINATION

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

VI. SIGNATURES

LEA Superintendent – required**:**

_____

Signature/Date

_____

Print Name/Title

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

_____

Signature/Date

_____

Print Name/Title

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

_____
Signature/Date

_____
Print Name/Title

EXHIBIT I – PRELIMINARY SCOPE OF WORK

Consistent with federal requirements and criteria, the State's plan addresses education reforms in each of the areas of standards and assessments; data systems and fuller use of data; great teachers and leaders; and supports for the persistently lowest achieving schools. The plan articulates State policies and goals in each of these areas and an overall strategy for accomplishing and monitoring the goals. Many of the goals relate to what happens in school districts, schools, and classrooms. The goals can only be accomplished if local educational agencies work in coordination with the State educational agency to plan and implement reforms at the local level in ways that are aligned with the State plan.

In signing this MOU, the local educational agency signifies its intent to be bound to the State plan, to collaborate with the State in modifying state and local plans over the course of the project as appropriate to achieve core goals, and to act in good faith in implementing the State plan in each of the following areas. If the State receives a grant, allocation of funds to the local educational agency will be contingent on the development of a detailed local work plan and a State-LEA agreement that will spell out local and State responsibilities in these areas in greater detail.

Elements of State Reform Plans	**LEA Participation (Y/N)**	**Comments from LEA (optional)**
B. Standards and Assessments – The LEA will participate in implementing appropriate aspects of the State Plan to develop and implement high-quality standards and assessment systems, including but not limited to:		
(1) Create a plan for aligning curriculum with common standards and assessments (B3)	REQUIRED	
(2) Implement interim assessments in 3rd through 10th grades that meet OSSE-specified criteria and are aligned to common standards (B3)	REQUIRED	
(3) Provide in-school training and professional development on common standards alignment (B3)	REQUIRED	
(4) Organize school community meetings to explain common standards and assessments (B3)	REQUIRED	
C. Data Systems to Support Instruction – The LEA will participate in implementing all aspects of the State Plan to develop, implement, and use a statewide longitudinal data system, including but not limited to:		
(1) Support the state in fully implementing a statewide longitudinal data system by providing data to OSSE as needed (C1)	REQUIRED	

Elements of State Reform Plans	LEA Participation (Y/N)	Comments from LEA (optional)
(2) Develop a local instructional improvement system to collect, analyze, and use data to improve instruction (C2)	REQUIRED	
(3) Use data to improve instruction (C3):		
(i) Use of local instructional improvement systems (C3(i))	REQUIRED	
(ii) Professional development on use of data to improve instruction (C3(ii))	REQUIRED	
(iii) Availability and accessibility of data to researchers (C3(iii))		
(4) Provide teachers with regularly scheduled planning time for using data from interim assessments to inform instruction (C3)	REQUIRED	
D. Great Teachers and Leaders – The LEA will participate in implementing all aspects of the State Plan to develop and implement systems to enhance teacher and leader effectiveness, including but not limited to:		
(1) Partner with high-quality pathways for aspiring teachers and principals (D1)		
(2) Improve teacher and principal effectiveness based on performance (D2):		
(i) Measure student growth with common growth measure developed by a Student Growth Task Force, comprised of representatives of OSSE, PCSB, and LEAs, and approved by OSSE (D2(i))	REQUIRED	
(ii) Design and implement evaluation systems that meet OSSE-defined criteria, including 50% tied to student growth (D2(ii))*	REQUIRED	
(iii) Conduct annual evaluations (D2(iii))	REQUIRED	
(iv)(a) Use evaluations to support individualized professional development (D2(iii))	REQUIRED	
(iv)(b) Use evaluations to inform compensation, promotion, and retention (D2(iv))	REQUIRED	
(iv)(c) Use evaluations to inform tenure and/or	REQUIRED	

Elements of State Reform Plans	LEA Participation (Y/N)	Comments from LEA (optional)
full certification (D2(iv))	AS APPLICABLE	
(iv)(d) Use evaluations to inform removal (D2(iv))	REQUIRED	
(3) Analyze and develop a plan to improve equitable distribution of effective teachers and principals at (D3):		
(i) High-poverty and/or high-minority schools	REQUIRED AS APPLICABLE	
(ii) Hard-to-staff subjects and specialty areas	REQUIRED AS APPLICABLE	
(4) Provide effective support to teachers and principals (D5):		
(i) Quality professional development (D5(i))		
(ii) Measure effectiveness of professional development (D5(ii))		
(5) Report teacher effectiveness to OSSE (D2,3,5)*	REQUIRED	
E. Turning Around the Lowest-Achieving Schools – The LEA will participate in implementing all aspects of the State Plan to intervene and turn around the lowest-achieving schools, including but not limited to:		
(E)(1) Agree to implement one of four approved turnaround models for schools that match the OSSE definition of lowest-achieving schools (E2(ii))	REQUIRED AS APPLICABLE	

*Student growth will be measured using the DC CAS for 3rd through 8th grades. In 2012, the Student Growth Task Force will identify additional assessments that can be used for human capital decisions.

For the Participating LEA

Authorized LEA Signature/Date

Print Name/Title

For the State

Authorized State Signature/Date

Print Name/Title

Appendix A1.5

Memorandum of Understanding – Charter LEAs

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

I. SCOPE OF WORK

Exhibit I, the Preliminary Scope of Work, indicates which portions of the State's proposed reform plans ("State Plan") the Participating LEA is agreeing to implement. (Note that, in order to participate, the LEA must agree to implement all required elements of the State Reform Plan.)

II. PROJECT ADMINISTRATION

A. PARTICIPATING LEA RESPONSIBILITIES

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

1) As a condition for participating in – and receiving an allocation of funds under – the State's Race to the Top program, enter into an agreement with the State that will describe more specifically the mutual responsibilities of the State and LEA for planning and implementing provisions of the State's plan. The agreement will be incorporated in or attached to the final scope of work, which must be provided to the state no later than 90 days after the Race to the Top ("RTTT") award to the OSSE and must be approved by the State.

The agreement will include a detailed work plan, prepared by the LEA and approved by the State, describing specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures, and addressing how the LEA will use funds under other federal programs and from state and local sources to support the plan. The work plan must be consistent with the LEA's preliminary scope of work in this Memorandum of Understanding, with the approved State plan, and with further guidance that the State may provide. The State will approve the LEA for funding based on the scope and quality of the work plan, including the coherence of the LEA's reform agenda across the four education areas described in the law and the LEA's capacity to implement the plan and address at the local level significant elements of the State's approved plan in a meaningful and high quality way. The agreement between the State and the LEA will also detail the State's responsibilities for providing or coordinating technical assistance, professional development, and other support for the LEA in carrying out these functions, and how State and LEA activities will be sequenced.

2) Implement the LEA plan as identified in Exhibits I and II of this agreement;

3) Over the course of the project, work in good faith with the State to identify needs for modifications to the project and to make appropriate modifications in order to achieve the core goals of the project;

4) Post to any website specified by the State or the U.S. Department of Education, in a timely manner, all non-proprietary products and lessons learned that were developed using funds under the Race to the Top grant;

5) Participate, as requested, in any evaluations of this grant conducted by the State or the U.S. Department of Education;

6) Be responsive to State or ED requests for information on the status of the project, including project implementation, outcomes, and any problems anticipated or encountered;

7) Participate in meetings and telephone conferences with the State to discuss (a) progress of the project, (b) potential dissemination of resulting non-proprietary products and lessons learned, (c) plans for subsequent years of the Race to the Top grant period, and (d) other matters related to the Race to the Top grant and associated plans.

B. STATE RESPONSIBILITIES

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

1) Work collaboratively with the Participating LEA in carrying out the LEA Plan as identified in Exhibit I and in the agreement to be developed under Section II-A-1 above;

2) Timely distribute the LEA's portion of Race to the Top grant funds during the course of the project period and in accordance with the LEA's approved work plan described in Section II-A-1 above;

3) Review the LEA's status updates, annual reports, any interim reports, and project plans and products; and

4) Provide or coordinate technical assistance, professional development, and support consistent with Section II-A-1 above.

C. JOINT RESPONSIBILITIES

1) The State and the Participating LEA will collaborate in good faith to ensure alignment and coordination of State and local planning and implementation activities in order to achieve effectively and efficiently the core goals of the State's plan, consistent with their respective roles under State law and policy.

2) The State and each Participating LEA will appoint a key contact person for the Race to the Top grant.

3) These key contacts from the State and the Participating LEA will maintain frequent communication to facilitate cooperation under this MOU.

4) Prior to receipt of grant awards, State and Participating LEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.

5) State and Participating LEA grant personnel will negotiate in good faith to continue to achieve the overall goals of the State's Race to the Top grant, even when the State Plan requires modifications that affect the Participating LEA, or when the LEA Plan requires modifications.

D. STATE RECOURSE FOR LEA NON-PERFORMANCE

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

III. ASSURANCES

The Participating LEA hereby certifies and represents that it:

1) Has all requisite power and authority to execute this MOU;

2) Has reviewed the State's Race to the Top grant application and will implement all required elements of the State Reform Plan, as defined by the State, and consistent with Exhibit I;

3) Will provide a Final Scope of Work and detailed work plans consistent with Section II-A-1 above if the State's application is funded; will do so in a timely manner but no later than 90 days after a grant is awarded; and will enter into an agreement with the State consistent with Section II-A-1 above; and

4) Will comply with all of the terms of the Grant, the State's subgrant, and all applicable Federal and State laws and regulations, including laws and regulations applicable to the Program, and the applicable provisions of EDGAR (34 CFR Parts 75, 77, 79, 80, 82, 84, 85, 86, 97, 98 and 99).

IV. MODIFICATIONS

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

V. DURATION/TERMINATION

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

VI. SIGNATURES

LEA Superintendent – required**:**

_____

Signature/Date

_____

Print Name/Title

President of Board of Trustees:

_____

Signature/Date

_____

Print Name/Title

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

_____
Signature/Date

_____
Print Name/Title

EXHIBIT I – PRELIMINARY SCOPE OF WORK

Consistent with federal requirements and criteria, the State's plan addresses education reforms in each of the areas of standards and assessments; data systems and fuller use of data; great teachers and leaders; and supports for the persistently lowest achieving schools. The plan articulates State policies and goals in each of these areas and an overall strategy for accomplishing and monitoring the goals. Many of the goals relate to what happens in school districts, schools, and classrooms. The goals can only be accomplished if local educational agencies work in coordination with the State educational agency to plan and implement reforms at the local level in ways that are aligned with the State plan.

In signing this MOU, the local educational agency signifies its intent to be bound to the State plan, to collaborate with the State in modifying state and local plans over the course of the project as appropriate to achieve core goals, and to act in good faith in implementing the State plan in each of the following areas. If the State receives a grant, allocation of funds to the local educational agency will be contingent on the development of a detailed local work plan and a State-LEA agreement that will spell out local and State responsibilities in these areas in greater detail.

Elements of State Reform Plans	**LEA Participation (Y/N)**	**Comments from LEA (optional)**
B. Standards and Assessments – The LEA will participate in implementing appropriate aspects of the State Plan to develop and implement high-quality standards and assessment systems, including but not limited to:		
(1) Create a plan for aligning curriculum with common standards and assessments (B3)	REQUIRED	
(2) Implement interim assessments in 3rd through 10th grades that meet OSSE-specified criteria and are aligned to common standards (B3)	REQUIRED	
(3) Provide in-school training and professional development on common standards alignment (B3)	REQUIRED	
(4) Organize school community meetings to explain common standards and assessments (B3)	REQUIRED	
C. Data Systems to Support Instruction – The LEA will participate in implementing all aspects of the State Plan to develop, implement, and use a statewide longitudinal data system, including but not limited to:		
(1) Support the state in fully implementing a statewide longitudinal data system by providing data to OSSE as needed (C1)	REQUIRED	

Elements of State Reform Plans	LEA Participation (Y/N)	Comments from LEA (optional)
(2) Develop a local instructional improvement system to collect, analyze, and use data to improve instruction (C2)	REQUIRED	
(3) Use data to improve instruction (C3):		
(i) Use of local instructional improvement systems (C3(i))	REQUIRED	
(ii) Professional development on use of data to improve instruction (C3(ii))	REQUIRED	
(iii) Availability and accessibility of data to researchers (C3(iii))		
(4) Provide teachers with regularly scheduled planning time for using data from interim assessments to inform instruction (C3)	REQUIRED	
D. Great Teachers and Leaders – The LEA will participate in implementing all aspects of the State Plan to develop and implement systems to enhance teacher and leader effectiveness, including but not limited to:		
(1) Partner with high-quality pathways for aspiring teachers and principals (D1)		
(2) Improve teacher and principal effectiveness based on performance (D2):		
(i) Measure student growth with common growth measure developed by a Student Growth Task Force, comprised of representatives of OSSE, PCSB, and LEAs, and approved by OSSE (D2(i))	REQUIRED	
(ii) Design and implement evaluation systems that meet OSSE-defined criteria, including 50% tied to student growth (D2(ii))*	REQUIRED	
(iii) Conduct annual evaluations (D2(iii))	REQUIRED	
(iv)(a) Use evaluations to support individualized professional development (D2(iii))	REQUIRED	
(iv)(b) Use evaluations to inform compensation, promotion, and retention (D2(iv))	REQUIRED	
(iv)(c) Use evaluations to inform tenure and/or	REQUIRED	

Elements of State Reform Plans	LEA Participation (Y/N)	Comments from LEA (optional)
full certification (D2(iv))	AS APPLICABLE	
(iv)(d) Use evaluations to inform removal (D2(iv))	REQUIRED	
(3) Analyze and develop a plan to improve equitable distribution of effective teachers and principals at (D3):		
(i) High-poverty and/or high-minority schools	REQUIRED AS APPLICABLE	
(ii) Hard-to-staff subjects and specialty areas	REQUIRED AS APPLICABLE	
(4) Provide effective support to teachers and principals (D5):		
(i) Quality professional development (D5(i))		
(ii) Measure effectiveness of professional development (D5(ii))		
(5) Report teacher effectiveness to OSSE (D2,3,5)*	REQUIRED	
E. Turning Around the Lowest-Achieving Schools – The LEA will participate in implementing all aspects of the State Plan to intervene and turn around the lowest-achieving schools, including but not limited to:		
(E)(1) Agree to implement one of four approved turnaround models for schools that match the OSSE definition of lowest-achieving schools (E2(ii))	REQUIRED AS APPLICABLE	

*Student growth will be measured using the DC CAS for 3rd through 8th grades. In 2012, the Student Growth Task Force will identify additional assessments that can be used for human capital decisions.

For the Participating LEA

Authorized LEA Signature/Date

Print Name/Title

For the State

Authorized State Signature/Date

Print Name/Title

Appendix A1.6

Tables/Graphs of the State's Goals

A1(iii)(a) – ESEA Goals by Subject and School Level

STATEWIDE ESEA ASSESSMENT GOALS by School Level – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 – '13)**
Elementary Reading	47.80%	**53.46%**	**59.12%**	**64.78%**	**70.44%**	**22.6**
Elementary Math	46.10%	**51.76%**	**57.42%**	**63.08%**	**68.74%**	**22.6**
Secondary Reading	45.40%	**51.06%**	**56.72%**	**62.38%**	**68.04%**	**22.6**
Secondary Math	46.40%	**52.06%**	**57.72%**	**63.38%**	**69.04%**	**22.6**

* Goals are displayed in bold lettering
Source: OSSE: www.nclb.osse.dc.gov

A1(iii)(a) – ESEA Goals by Subgroup

ESEA GOALS by Subgroup – READING – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 –'13)**
Race/Ethnicity						
Asian/Pacific Islanders	74.1%	**75.6%**	**77.1%**	**78.6%**	**80.1%**	**6.0**
Black/Non-Hispanic	41.8%	**47.8%**	**53.8%**	**59.8%**	**65.8%**	**24.0**
Hispanic	48.7%	**54.7%**	**60.7%**	**66.7%**	**72.7%**	**24.0**
White/Non-Hispanic	87.6%	**88.6%**	**89.6%**	**90.6%**	**91.6%**	**4.0**
Gender						
Female	50.7%	**55.4%**	**60.0%**	**64.7%**	**69.3%**	**18.6**
Male	39.9%	**46.6%**	**53.3%**	**59.9%**	**66.6%**	**26.7**
SPED						
Disabled	18.4%	**24.7%**	**31.2%**	**37.7%**	**44.1%**	**25.8**
Non-disabled	51.4%	**56.8%**	**62.3%**	**67.8%**	**73.3%**	**21.9**
English Proficiency						
LEP/NEP	44.7%	**50.3%**	**56.0%**	**61.7%**	**67.3%**	**22.6**
Non-LEP/NEP	45.4%	**51.0%**	**56.7%**	**62.4%**	**68.0%**	**22.6**
Econ. Status						
Econ. Disadvantaged	39.9%	**46.8%**	**53.6%**	**60.5%**	**67.4%**	**27.5**
Non-Econ. Disadvantaged	57.8%	**60.7%**	**63.6%**	**66.4%**	**69.3%**	**11.5**
STATE Total:	**45.3%**	**51.0%**	**56.6%**	**62.3%**	**68.0%**	**22.6**

* Goals are displayed in bold lettering
Source: OSSE: www.nclb.osse.dc.gov

A1(iii)(a) – ESEA Goals by Subgroup

ESEA GOALS by Subgroup – MATH – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 –'13)**
Race/Ethnicity						
Asian/Pacific Islanders	86.5%	**87.5%**	**88.5%**	**89.5%**	**90.5%**	**4.0**
Black/Non-Hispanic	40.5%	**46.4%**	**52.4%**	**58.4%**	**64.4%**	**24.0**
Hispanic	53.4%	**59.4%**	**65.4%**	**71.4%**	**77.4%**	**24.0**
White/Non-Hispanic	86.0%	**87.0%**	**88.0%**	**89.0%**	**90.0%**	**4.0**
Gender						
Female	46.9%	**53.3%**	**58.2%**	**63.1%**	**68.0%**	**21.1**
Male	42.6%	**47.5%**	**53.9%**	**60.3%**	**66.7%**	**24.2**
SPED						
Disabled	16.9%	**23.2%**	**29.7%**	**36.2%**	**42.7%**	**25.7**
Non-disabled	51.0%	**56.5%**	**61.9%**	**67.4%**	**72.9%**	**21.9**
English Proficiency						
LEP/NEP	53.0%	**55.8%**	**60.0%**	**64.1%**	**68.3%**	**15.3**
Non-LEP/NEP	43.9%	**49.8%**	**55.6%**	**61.4%**	**67.3%**	**23.4**
Econ. Status						
Econ. Disadvantaged	40.1%	**46.8%**	**53.5%**	**60.2%**	**66.9%**	**26.9**
Non-Econ. Disadvantaged	55.6%	**58.8%**	**62.0%**	**65.2%**	**68.4%**	**12.9**
STATE Total:	**44.8%**	**50.4%**	**56.1%**	**61.7%**	**67.4%**	**22.6**

* Goals are displayed in bold lettering
Source: OSSE: www.nclb.osse.dc.gov

A1(iii)(a) – NAEP Goals by Subgroup

NAEP SCORE GOALS – 4th Grade Reading (2007 – 2013)						
	2007	2009*	2011	2013	4 Year Gain	6 Year Gain
All students	197	**202**	**208**	**213**	**11**	**16**
Male	194	**200**	**207**	**212**	**12**	**18**
Female	200	**204**	**210**	**214**	**10**	**14**
White	258	**261**	**264**	**267**	**6**	**9**
Black	192	**197**	**203**	**209**	**12**	**17**
Hispanic	206	**210**	**215**	**221**	**11**	**15**
SPED	162	**167**	**173**	**179**	**12**	**27**
Not SPED	199	**204**	**209**	**214**	**10**	**15**
FRL	188	**195**	**202**	**207**	**12**	**19**
Not FRL	216	**219**	**222**	**226**	**7**	**10**
ELL	198	**202**	**208**	**213**	**11**	**15**
Not ELL	197	**202**	**208**	**213**	**11**	**16**

* Reading scores for 2009 are not yet available
* Goals are displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – NAEP Goals by Subgroup

NAEP SCORE GOALS – 8th Grade Reading (2007 – 2013)						
	2007	2009*	2011	2013	4 Year Gain	6 Year Gain
All students	241	244	248	252	8	11
Male	235	240	246	251	11	16
Female	245	247	249	253	6	8
White**	302	303	304	305	2	3
Black	238	241	244	250	9	12
Hispanic	249	250	252	257	7	8
SPED	210	217	224	227	10	17
Not SPED	243	246	251	253	7	10
FRL	234	239	243	248	9	14
Not FRL	253	256	258	261	5	8
ELL**	235	240	246	251	11	16
Not ELL	241	244	248	252	8	11

* Reading scores for 2009 are not yet available

** Data not available for 2007 due to inadequate sample size. Numbers estimated based on historical 2003 and 2005 figures.

Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – NAEP Goals by Subgroup

NAEP SCORE GOALS – 4th Grade Math (2007 – 2013)						
	2007	**2009**	**2011**	**2013**	**4 Year Gain**	**6 Year Gain**
All students	214	219	**224**	**229**	**10**	**15**
Male	213	218	**223**	**229**	**11**	**16**
Female	214	221	**225**	**229**	**8**	**15**
White	262	270	**272**	**274**	**4**	**12**
Black	209	213	**221**	**225**	**12**	**16**
Hispanic	220	227	**230**	**235**	**8**	**15**
SPED	188	193	**199**	**208**	**15**	**20**
Not SPED	216	222	**227**	**230**	**8**	**14**
FRL	207	211	**216**	**222**	**11**	**15**
Not FRL	228	242	**243**	**248**	**6**	**20**
ELL	209	215	**220**	**226**	**11**	**17**
Not ELL	214	220	**224**	**229**	**9**	**15**
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/						

A1(iii)(a) – NAEP Goals by Subgroup

NAEP SCORE GOALS – 8th Grade Math (2007 – 2013)						
	2007	**2009**	**2011**	**2013**	**4 Year Gain**	**6 Year Gain**
All students	248	254	**259**	**265**	**11**	**17**
Male	248	252	**258**	**264**	**12**	**16**
Female	248	255	**260**	**265**	**10**	**17**
White	319*	321*	**323**	**325**	**4**	**6**
Black	245	249	**254**	**261**	**12**	**16**
Hispanic	251	265	**268**	**274**	**9**	**23**
SPED	211	213	**220**	**228**	**15**	**17**
Not SPED	252	259	**263**	**269**	**10**	**17**
FRL	243	247	**252**	**259**	**12**	**16**
Not FRL	259	272	**275**	**279**	**7**	**20**
ELL	226	230*	**237**	**245**	**15**	**19**
Not ELL	249	254	**259**	**265**	**11**	**16**

* Scores for white students in 2007 and 2009 and ELLs in 2009 were not available due to inadequate sample size. 2007 and 2009 figures are estimated using historical scores.
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) – ESEA Goals – Achievement Gap

ESEA Absolute Achievement Gap Goals - Reading - Percent of Students Scoring Proficient or Advanced (2009-2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Decrease in Gap ('09-'13)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)						
Asian/Pacific Islanders	13.5%	**13.0%**	**12.5%**	**12.0%**	**11.5%**	**2.0**
Black/Non-Hispanic	45.8%	**40.8%**	**35.8%**	**30.8%**	**25.8%**	**20.0**
Hispanic	38.9%	**33.8%**	**28.8%**	**23.8%**	**18.8%**	**20.0**
Gender - Calculated as (proficiency for females - proficiency for males)						
Female – Male	10.8%	**8.8%**	**6.8%**	**4.8%**	**2.8%**	**8.0**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)						
Non-disabled – SPED	33.0%	**32.1%**	**31.1%**	**30.1%**	**29.1%**	**3.8**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)						
Non-LEP/NEP - LEP/NEP	0.7%	**0.7%**	**0.7%**	**0.7%**	**0.7%**	**0.0**
Econ. Status - Calculated as (proficiency for non-disadvantaged - proficiency for disadvantaged)						
Econ. Disadvantaged	17.9%	**13.9%**	**9.9%**	**5.9%**	**1.9%**	**16.0**
STATE Total:	**45.3%**	**51.0%**	**56.6%**	**62.3%**	**68.0%**	

* Goals displayed in bold lettering
* The table above gives the absolute difference in percentage points for a given achievement gap.
* Example: For Gender Gap in 2009, the female proficiency equals 51.7% and male equals 39.9% giving an absolute gap of 10.8%
Source: OSSE: www.nclb.osse.dc.gov

A1(iii)(b) – ESEA Goals – Achievement Gap

ESEA Absolute Achievement Gap Goals – Math - Percent of Students Scoring Proficient or Advanced (2009 –2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Decrease in Gap ('09-'13)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)						
Asian/Pacific Islanders	-0.5%	**-0.5%**	**-0.5%**	**-0.5%**	**-0.5%**	**0.0**
Black/Non-Hispanic	45.5%	**40.5%**	**35.5%**	**30.5%**	**25.5%**	**20.0**
Hispanic	32.5%	**27.5%**	**22.5%**	**17.5%**	**12.5%**	**20.0**
Gender - Calculated as (proficiency for females - proficiency for males)						
Female – Male	4.4%	**5.8%**	**4.3%**	**2.8%**	**1.3%**	**3.1**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)						
Non-disabled – SPED	34.1%	**33.2%**	**32.2%**	**31.2%**	**30.2%**	**3.8**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)						
Non-LEP/NEP - LEP/NEP	-9.0%	**-6.0%**	**-4.4%**	**-2.7%**	**-1.0%**	**8.0**
Econ. Status - Calculated a s (proficiency for non-disadvantaged - proficiency for disadvantaged)						
Econ. Disadvantaged	15.5%	**12.0%**	**8.5%**	**5.0%**	**1.5%**	**14.0**
STATE Total:	**44.8%**	**50.4%**	**56.1%**	**61.7%**	**67.4%**	

* Goals displayed in bold lettering
* The table above gives the absolute difference in percentage points for a given achievement gap.
* Example: For Gender Gap in 2009, the female proficiency equals 47% and male equals 42.6% giving an absolute gap of 4.4%
Source: OSSE website: www.nclb.osse.dc.gov

A1(iii)(b) - NAEP Score Goals - Achievement Gap

NAEP SCORE GOALS – Absolute Achievement Gap – 4th Grade Math (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	214	219	**224**	**229**	
Gender - Calculated as (female score - male score)					
Female – Male	1	3	**2**	**0**	**3**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	53	57	**51**	**49**	**8**
Hispanic	42	43	**42**	**39**	**4**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	28	29	**28**	**22**	**7**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	21	31	**27**	**26**	**5**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	5	5	**4**	**3**	**2**
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/					

A1(iii)(b) - NAEP Score Goals - Achievement Gap

NAEP SCORE GOALS – Absolute Achievement Gap – 8th Grade Math (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	248	254	**259**	**264**	
Gender - Calculated as (female score - male score)					
Female – Male	0	3	**2**	**1**	**2**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black**	74	72	**69**	**64**	**8**
Hispanic	68	56	**55**	**51**	**5**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	41	46	**43**	**41**	**5**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	16	25	**23**	**20**	**5**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	23	24	**22**	**20**	**4**

* Data that is N/A is due to an inadequate sample size of a given subgroup
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) - NAEP Score Goals - Achievement Gap

NAEP SCORE GOALS – Absolute Achievement Gap – 4th Grade Reading (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	197	**202**	**208**	**213**	
Gender - Calculated as (female score - male score)					
Female – Male	6	**4**	**3**	**2**	**2**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	66	**64**	**61**	**58**	**6**
Hispanic	52	**51**	**49**	**46**	**5**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	37	**37**	**36**	**35**	**2**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	28	**24**	**20**	**19**	**5**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	-1	**0**	**0**	**0**	**0**

* Reading scores for 2009 are not yet available
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) - NAEP Score Goals - Achievement Gap

NAEP SCORE GOALS – Absolute Achievement Gap – 8th Grade Reading (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	241	**244**	**248**	**252**	
Gender - Calculated as (female score - male score)					
Female – Male	10	**7**	**3**	**2**	**5**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	64	**62**	**60**	**55**	**7**
Hispanic	53	**53**	**52**	**48**	**5**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	33	**29**	**27**	**26**	**3**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	19	**17**	**15**	**13**	**4**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	6	**4**	**2**	**1**	**3**

* Reading scores for 2009 are not yet available
* Data that is N/A is due to an inadequate sample size of a given subgroup
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(d) College Enrollment and Credit Attainment Goals

College Enrollment Goals (2009 – 2013)					
	2009	**2010**	**2011**	**2012**	**2013**
STATEWIDE	39.2%	**44.2%**	**49.2%**	**54.2%**	**59.2%**
DCPS	38.7%	**43.7%**	**48.7%**	**53.7%**	**58.7%**
PCSB	40.4%	**45.4%**	**50.4%**	**55.4%**	**60.4%**

* College enrollment based on DCTAG enrollment data, which from the latest report referencing 2006 is estimated to capture 80-85% of seniors.
Source: OSSE: www.nclb.osse.dc.gov, District of Columbia Public Charter School Board

For D.C. Graduates – Percent of College Freshman Returning for a Second Year – Goals (2007 – 2013)						
	2007	**2008**	**2009**	**2010**	**2011**	**2012**
% of Freshman Returning for 2nd Year	83.0%	78.4%	**80.9%**	**83.4%**	**85.9%**	**88.4%**

* 2009 data is not available because the senior graduates of 2009 have not yet finished their first year of college.
* College enrollment based on DCTAG enrollment data, which from the latest report referencing 2006 is estimated to capture 80-85% of seniors.
Source: OSSE: www.nclb.osse.dc.gov, District of Columbia Public Charter School Board

Appendix A1.7

State Projections without RTTT funding

A1(iii)(a) – Statewide Goals – w/o RTTT Funding

Without RTTT Funding						
STATEWIDE ESEA ASSESSMENT GOALS – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 – '13)**
Reading	45%	**48%**	**50%**	**53%**	**55%**	**10.0**
Math	45%	**47%**	**50%**	**52%**	**55%**	**10.0**

* Goals are displayed in bold lettering
Source: OSSE website: www.nclb.osse.dc.gov

Without RTTT Funding						
STATEWIDE NAEP SCORE GOALS (2007 – 2013)						
	2007	2009	**2011**	**2013**	**4 Year Gain**	**6 Year Gain**
4th Grade Reading	197	**199***	**202**	**205**	**6**	**8**
4th Grade Math	214	219	**221**	**224**	**5**	**10**
8th Grade Reading	241	**242***	**244**	**246**	**4**	**5**
8th Grade Math	248	254	**256**	**259**	**5**	**11**

* Reading scores for 2009 are not yet available and are forecasted in projections, goals are displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – ESEA Goals by Subgroup – w/o RTTT

Without RTTT Funding						
ESEA GOALS by Subgroup – READING – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 –'13)**
Race/Ethnicity						
Asian/Pacific Islanders	74.1%	**75.6%**	**77.1%**	**78.6%**	**80.1%**	**6.0**
Black/Non-Hispanic	41.8%	**44.4%**	**47.0%**	**49.7%**	**52.3%**	**10.5**
Hispanic	48.7%	**51.4%**	**54.0%**	**56.6%**	**59.2%**	**10.5**
White/Non-Hispanic	87.6%	**88.2%**	**88.8%**	**89.5%**	**90.1%**	**2.5**
Gender						
Female	50.7%	**52.7%**	**54.7%**	**56.7%**	**58.7%**	**8.0**
Male	39.9%	**42.9%**	**45.9%**	**48.9%**	**51.9%**	**12.0**
SPED						
Disabled	18.4%	**21.5%**	**24.9%**	**28.2%**	**31.5%**	**13.1**
Non-disabled	51.4%	**53.7%**	**56.0%**	**58.3%**	**60.6%**	**9.3**
English Proficiency						
LEP/NEP	44.7%	**47.3%**	**49.8%**	**52.3%**	**54.8%**	**10.1**
Non-LEP/NEP	45.4%	**47.9%**	**50.4%**	**52.9%**	**55.4%**	**10.0**
Econ. Status						
Econ. Disadvantaged	39.9%	**43.0%**	**46.1%**	**49.2%**	**52.3%**	**12.4**
Non-Econ. Disadvantaged	57.8%	**58.9%**	**60.0%**	**61.1%**	**62.2%**	**4.4**
STATE Total:	45.3%	**47.8%**	**50.3%**	**52.8%**	**55.3%**	**10.0**
* Goals are displayed in bold lettering Source: OSSE: www.nclb.osse.dc.gov						

A1(iii)(a) – ESEA Goals by Subgroup – w/o RTTT

Without RTTT Funding						
ESEA GOALS by Subgroup – MATH – Percent of Students Scoring Proficient or Advanced (2009 – 2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Proficiency Gain ('09 –'13)**
Race/Ethnicity						
Asian/Pacific Islanders	86.5%	**87.5%**	**88.5%**	**89.5%**	**90.5%**	**4.0**
Black/Non-Hispanic	40.5%	**43.1%**	**45.7%**	**48.3%**	**51.0%**	**10.5**
Hispanic	53.4%	**56.1%**	**58.7%**	**61.3%**	**64.0%**	**10.5**
White/Non-Hispanic	86.0%	**86.6%**	**87.2%**	**87.8%**	**88.5%**	**2.5**
Gender						
Female	46.9%	**50.6%**	**52.9%**	**55.1%**	**57.4%**	**10.5**
Male	42.6%	**43.9%**	**46.6%**	**49.4%**	**52.1%**	**9.5**
SPED						
Disabled	16.9%	**20.1%**	**23.4%**	**26.7%**	**30.0%**	**13.1**
Non-disabled	51.0%	**53.3%**	**55.6%**	**57.9%**	**60.3%**	**9.3**
English Proficiency						
LEP/NEP	53.0%	**54.4%**	**57.2%**	**60.0%**	**62.8%**	**9.8**
Non-LEP/NEP	43.9%	**46.4%**	**48.9%**	**51.3%**	**53.8%**	**9.9**
Econ. Status						
Econ. Disadvantaged	40.1%	**43.0%**	**46.0%**	**48.9%**	**51.9%**	**11.8**
Non-Econ. Disadvantaged	55.6%	**57.0%**	**58.5%**	**59.9%**	**61.4%**	**5.8**
STATE Total:	44.8%	**47.3%**	**49.8%**	**52.3%**	**54.8%**	**10.0**

* Goals are displayed in bold lettering
Source: OSSE: www.nclb.osse.dc.gov

A1(iii)(a) – NAEP Goals by Subgroup – w/o RTTT

Without RTTT Funding						
NAEP SCORE GOALS – 4th Grade Reading (2007 – 2013)						
	2007	2009	2011	2013	4 Year Gain	6 Year Gain
All students	197	**199**	**202**	**205**	**6**	**8**
Male	194	**197**	**201**	**204**	**7**	**10**
Female	200	**202**	**204**	**205**	**3**	**5**
White	258	**258**	**260**	**262**	**4**	**4**
Black	192	**195**	**197**	**201**	**6**	**9**
Hispanic	206	**207**	**210**	**213**	**6**	**7**
SPED	162	**168**	**174**	**182**	**14**	**20**
Not SPED	199	**203**	**205**	**208**	**5**	**9**
FRL	188	**191**	**196**	**200**	**9**	**12**
Not FRL	216	**217**	**217**	**219**	**2**	**3**
ELL	198	**200**	**201**	**205**	**5**	**7**
Not ELL	197	**199**	**202**	**205**	**6**	**8**

* Reading scores for 2009 are not yet available
* Goals are displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – NAEP Goals by Subgroup – w/o RTTT

Without RTTT Funding						
NAEP SCORE GOALS - 8th Grade Reading (2007 – 2013)						
	2007	2009	2011	2013	4 Year Gain	6 Year Gain
All students	241	**242**	**244**	**246**	**4**	**5**
Male	235	**238**	**241**	**245**	**7**	**10**
Female	245	**246**	**247**	**248**	**2**	**3**
White**	**303**	**303**	**303**	**304**	**1**	**1**
Black	238	**238**	**240**	**243**	**5**	**5**
Hispanic	249	**250**	**251**	**254**	**4**	**5**
SPED	210	**215**	**220**	**225**	**10**	**15**
Not SPED	243	**245**	**247**	**248**	**3**	**5**
FRL	234	**237**	**239**	**242**	**5**	**8**
Not FRL	253	**254**	**255**	**256**	**2**	**3**
ELL**	**235**	**237**	**240**	**243**	**6**	**8**
Not ELL	241	**242**	**245**	**246**	**4**	**5**

* Reading scores for 2009 are not yet available, Goals displayed in bold lettering
** Data not available due to inadequate sample size; line item projected from 2005 data
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – NAEP Goals by Subgroup – w/o RTTT

Without RTTT Funding						
NAEP SCORE GOALS- 4th Grade Math (2007 – 2013)						
	2007	2009	2011	2013	4 Year Gain	6 Year Gain
All students	214	219	**221**	**224**	**5**	**10**
Male	213	218	**221**	**224**	**6**	**11**
Female	214	221	**222**	**224**	**3**	**10**
White	262	270	**271**	**272**	**2**	**10**
Black	209	213	**216**	**219**	**6**	**10**
Hispanic	220	227	**228**	**232**	**5**	**12**
SPED	188	193	**197**	**202**	**9**	**14**
Not SPED	216	222	**224**	**226**	**4**	**10**
FRL	207	211	**213**	**217**	**6**	**10**
Not FRL	228	242	**244**	**245**	**3**	**17**
ELL	209	215	**218**	**224**	**9**	**15**
Not ELL	214	220	**221**	**224**	**4**	**10**

* Goals displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(a) – NAEP Goals by Subgroup – w/o RTTT

Without RTTT Funding						
NAEP SCORE GOALS - 8th Grade Math (2007 – 2013)						
	2007	**2009**	**2011**	**2013**	**4 Year Gain**	**6 Year Gain**
All students	248	254	**256**	**259**	**5**	**11**
Male	248	252	**255**	**259**	**7**	**11**
Female	248	255	**257**	**259**	**4**	**11**
White*	319	321	**320**	**322**	**1**	**3**
Black	245	249	**251**	**254**	**5**	**9**
Hispanic	251	265	**267**	**270**	**5**	**19**
SPED	211	213	**217**	**223**	**10**	**12**
Not SPED	252	259	**261**	**263**	**4**	**11**
FRL	243	247	**249**	**252**	**5**	**9**
Not FRL	259	272	**273**	**275**	**3**	**16**
ELL	**226**	230*	**236**	**242**	**12**	**16**
Not ELL	249	254	**256**	**259**	**5**	**10**

* Scores for white students in 2007 and 2009 and ELL in 2009 were not available due to inadequate sample size. 2007 and 2009 figures are estimated using historical scores.
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) – ESEA Goals – Achievement Gap – w/o RTTT

Without RTTT Funding						
ESEA Absolute Achievement Gap Goals - Reading - Percent of Students Scoring Proficient or Advanced (2009-2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Decrease in Gap ('09-'13)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)						
Asian/Pacific Islanders	13.5%	**12.6%**	**11.8%**	**10.9%**	**10.0%**	**3.5**
Black/Non-Hispanic	45.8%	**43.8%**	**41.8%**	**39.8%**	**37.8%**	**8.0**
Hispanic	38.9%	**36.8%**	**34.8%**	**32.8%**	**30.8%**	**8.0**
Gender - Calculated as (proficiency for females - proficiency for males)						
Female – Male	10.8%	**9.8%**	**8.8%**	**7.8%**	**6.8%**	**4.0**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)						
Non-disabled – SPED	33.0%	**31.1%**	**29.1%**	**27.1%**	**25.1%**	**7.8**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)						
Non-LEP/NEP - LEP/NEP	0.7%	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.1**
Econ. Status - Calculated as (proficiency for non-disadvantaged - proficiency for disadvantaged)						
Econ. Disadvantaged	17.9%	**15.9%**	**13.9%**	**11.9%**	**9.9%**	**8.0**
STATE Total:	45.3%	**47.8%**	**50.3%**	**52.8%**	**55.3%**	

* Goals displayed in bold lettering
* The table above gives the absolute difference in percentage points for a given achievement gap.
* Example: For Gender Gap in 2009, the female proficiency equals 50.7% and male equals 39.9% giving an absolute gap of 10.8%
Source: OSSE website: www.nclb.osse.dc.gov

A1(iii)(b) – ESEA Goals – Achievement Gap – w/o RTTT

Without RTTT Funding						
ESEA Absolute Achievement Gap Goals - Math - Percent of Students Scoring Proficient or Advanced (2009-2013)						
	2009	**2010**	**2011**	**2012**	**2013**	**Percentage Point Decrease in Gap ('09-'13)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)						
Asian/Pacific Islanders	-0.5%	**-0.9%**	**-1.3%**	**-1.6%**	**-2.0%**	**1.5**
Black/Non-Hispanic	45.5%	**43.5%**	**41.5%**	**39.5%**	**37.5%**	**8.0**
Hispanic	32.5%	**30.5%**	**28.5%**	**26.5%**	**24.5%**	**8.0**
Gender - Calculated as (proficiency for females - proficiency for males)						
Female – Male	4.4%	**6.8%**	**6.3%**	**5.8%**	**5.3%**	**-0.9**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)						
Non-disabled – SPED	34.1%	**32.2%**	**30.2%**	**28.2%**	**26.2%**	**7.8**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)						
Non-LEP/NEP - LEP/NEP	-9.0%	**-8.0%**	**-8.4%**	**-8.7%**	**-9.0%**	**0.0**
Econ. Status - Calculated as (proficiency for non-disadvantaged - proficiency for disadvantaged)						
Econ. Disadvantaged	15.5%	**14.0%**	**12.5%**	**11.0%**	**9.5%**	**6.0**
STATE Total:	44.8%	**47.3%**	**49.8%**	**52.3%**	**54.8%**	

* Goals displayed in bold lettering
* The table above gives the absolute difference in percentage points for a given achievement gap.
* Example: For Gender Gap in 2009, the female proficiency equals 47% and male equals 42.6% giving an absolute gap of 4.4%
Source: OSSE website: www.nclb.osse.dc.gov

A1(iii)(b) - NAEP Score Goals - Achievement Gap – w/o RTTT

Without RTTT Funding					
NAEP SCORE GOALS – Absolute Achievement Gap – 4th Grade Reading (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	197	**199**	**202**	**205**	
Gender - Calculated as (female score - male score)					
Female – Male	6	**5**	**3**	**1**	**4**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	66	**63**	**63**	**61**	**2**
Hispanic	52	**51**	**50**	**49**	**2**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	37	**35**	**31**	**26**	**9**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	28	**26**	**21**	**19**	**7**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	-1	**-1**	**1**	**0**	**-1**

* Reading scores for 2009 are not yet available, goals displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) - NAEP Score Goals - Achievement Gap – w/o RTTT

Without RTTT Funding					
NAEP SCORE GOALS – Absolute Achievement Gap – 8th Grade Reading (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 – '13)**
All students	241	**242**	**244**	**246**	
Gender - Calculated as (female score - male score)					
Female – Male	10	**8**	**6**	**3**	**5**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	65	**65**	**63**	**61**	**4**
Hispanic	54	**53**	**52**	**50**	**3**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	33	**30**	**27**	**23**	**7**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	19	**17**	**16**	**14**	**3**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	7	**6**	**5**	**4**	**2**

* Reading scores for 2009 are not yet available, goals displayed in bold lettering
* Data that is N/A is due to an inadequate sample size of a given subgroup
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) - NAEP Score Goals - Achievement Gap – w/o RTTT

Without RTTT Funding					
NAEP SCORE GOALS – Absolute Achievement Gap – 4th Grade Math (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 – '13)**
All students	214	219	**221**	**224**	
Gender - Calculated as (female score - male score)					
Female – Male	1	3	**1**	**0**	**3**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	53	57	**55**	**53**	**4**
Hispanic	42	43	**43**	**40**	**3**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	28	29	**27**	**24**	**5**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	21	31	**31**	**28**	**3**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	5	5	**3**	**0**	**5**

* Goals displayed in bold lettering
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A1(iii)(b) - NAEP Score Goals - Achievement Gap – w/o RTTT

Without RTTT Funding					
NAEP SCORE GOALS – Absolute Achievement Gap – 8th Grade Math (2007 – 2013)					
	2007	**2009**	**2011**	**2013**	**Decrease in Gap ('09 - '13)**
All students	248	254	**256**	**259**	
Gender - Calculated as (female score - male score)					
Female – Male	0	3	**2**	**0**	**3**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	74	72	**69**	**68**	**4**
Hispanic	68	56	**53**	**52**	**4**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	41	46	**44**	**40**	**6**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	16	25	**24**	**23**	**2**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	23	24	**20**	**17**	**7**
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/					

A1(iii)(d) – College Enrollment and Credit Attainment Goals – w/o RTTT

Without RTTT Funding					
College Enrollment Goals (2009 – 2013)					
	2009	**2010**	**2011**	**2012**	**2013**
STATEWIDE	39.2%	**41.2%**	**43.2%**	**45.2%**	**47.2%**
DCPS	38.7%	**40.7%**	**42.7%**	**44.7%**	**46.7%**
PCSB	40.4%	**42.4%**	**44.4%**	**46.4%**	**48.4%**

* College enrollment based on DCTAG enrollment data, which from the latest report referencing 2006 is estimated to capture 80-85% of seniors. Enrollment data above is for the class graduating in the Spring of 2009.
Source: OSSE: www.nclb.osse.dc.gov, District of Columbia Public Charter School Board

Without RTTT Funding						
For D.C. Graduates – Percent of College Freshman Returning for a Second Year – Goals (2007 – 2013)						
	2007	**2008**	**2009**	**2010**	**2011**	**2012**
% of Freshman Returning for 2nd Year	83.0%	78.4%	**79.4%**	**80.4%**	**81.4%**	**82.4%**

* College enrollment based on DCTAG enrollment data, which from the latest report referencing 2006 is estimated to capture 80-85% of seniors.
Source: OSSE: www.nclb.osse.dc.gov, District of Columbia Public Charter School Board

Appendix A2.1

Implementation Plan

	RTTT Project Plan	Responsible Party	Apr-Jun 2010	July-Sept 2010	Oct-Dec 2010	Jan-Mar 2011	Apr-Jun 2011	July-Sept 2011	Oct-Dec 2011	Jan-Mar 2012	Apr-Jun 2012	July-Sept 2012	Oct-Dec 2012	Jan-Mar 2013	Apr-Jun 2013	July-Sept 2013	Oct-Dec 2013	Jan-Mar 2014	Apr-Jun 2014	July-Sept 2014	Oct-Dec 2014
SECTION B (3) – Supporting the Transition to Enhanced Standards and High-Quality Assessments																					
A	***Implement a Fast, Aggressive Rollout Plan for Common Core Standards***																				
1	*Adopt Standards*	*State Board of Education*	X																		
2	*Hold Community Meetings to inform parents and community members*	*OSSE, LEAs*	X	X																	
3	*Design and Develop Core Standards Website*	*OSSE*		X																	
4	*Contract with vendor to align DC-CAS with Common Core Standards*			X																	
5	*Develop and implement interim assessments*			X																	
i.	*Identify vendors capable of meeting the State requirements for interim assessments and publish list*	*OSSE*		X																	
ii.	*Organize meetings for LEAs to meet and discuss interim assessment purchasing partnerships*	*OSSE*		X	X																
iii.	*Sign contract with vendor (LEAs may also write their own interim assessments)*	*LEAs*			X	X															
iv.	*Implement interim assessments*	*LEAs*			X																
B	***Create, Organize, and Fund a Common Core Standards Working Group***							X	X	X	X	X									
1	*Hold Common Core Standards Working Group Meetings*	*OSSE*		X	X	X	X	X													
2	*Conduct information sessions with parents and other community members*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	*Provide school-level professional development on Common Core Standards*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
C	***Create Entry Points for Differentiated Learning***																				
1	Partner with a state Department of Education to create *Standards Entry Points for Differentiated Learning*	OSSE		X	X	X	X														
2	Contract with a vendor to provide teacher training on the *Standards Entry Points*: Fall 2011 and ongoing	*OSSE*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	Fund a vendor to align the Special Education Data System (SEDS) with the Common Core Standards	*OSSE*		X																	
D	***Align High School Exit Criteria and College Entrance Requirements***																				
1	*Convene a P-20 Consortium*	*OSSE*		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	*Work with local IHEs to collect data on the level of preparation of students graduating from DC high schools*	*OSSE*					X														
Section C (2) – Accessing and Using State Data																					
A	***Expand Capacity and Systems for Data Access***																				
1	*Create website that allows key stakeholders easy-to-use access to data through interactive web functions*	*OSSE*						X	X												
2	*Hold community meetings with parents and other community members to discuss how data can be made more useful to them: Fall 2011, OSSE*	*OSSE*						X	X												
B	***Enhance Availability of Statewide Data to Key Stakeholders***																				
1	*Publish additional data to key stakeholders including parents, decision-makers, and researchers*	*OSSE*										X	X								
Section C (3) – Use Data to Improve Instruction																					
A	***Develop Instructional Improvement Systems Aligned to Data Systems***																				
1	*Identify preferred vendors capable of meeting the needs of LEAs for data-driven instruction and submit list to LEAs*	*OSSE*	X	X																	
2	*Submit a plan for using RTTT funds to adopt or expand an instructional improvement system*	*Charter LEAs*		X	X																
3	*Award grants to LEAs*	*OSSE*				X	X														
4	*Sign a contract with an OSSE-approved vendor*	*Charter LEAs*				X	X														
5	*Implement instructional improvement systems*	*Charter LEAs*										X	X								
B	***Support Participating LEAs in Providing Effective Professional Development on Data-Driven Instruction***																				
1	*Provide formula funding for on-site data leads*																				
i.	*Submit plan to hire a school-based Instructional Data Analyst/Coach*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
ii.	*Submit plan to train and offer stipends to data leads in schools*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
iii.	*Submit plan for ongoing, job-embedded professional development on data-driven instruction*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	*Submit best practices/collaborate on uses of data-driven instruction to My PD Platform*	*LEAs*														X	X	X	X	X	X
4	*Provide teachers with regular planning time for using data to inform instruction*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X

	RTTT Project Plan	Responsible Party	Apr-Jun 2010	July-Sept 2010	Oct-Dec 2010	Jan-Mar 2011	Apr-Jun 2011	July-Sept 2011	Oct-Dec 2011	Jan-Mar 2012	Apr-Jun 2012	July-Sept 2012	Oct-Dec 2012	Jan-Mar 2013	Apr-Jun 2013	July-Sept 2013	Oct-Dec 2013	Jan-Mar 2014	Apr-Jun 2014	July-Sept 2014	Oct-Dec 2014
C	***Increase the Availability and Access of Data to Researchers***																				
1	*Publish a list of research priorities for DC, and encourage submission of research findings related to these priorities*	*OSSE*		X	X		X				X				X				X		
2	*Develop an online research request tool that allows researchers or outside organizations to easily apply for access to data*	*OSSE*		X	X																
3	*Identify/create research-ready data sets, including assessment, enrollment, teacher and financial data*	*OSSE*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
Section D (2) - Improving Teacher & Principal Effectiveness Based on Performance																					
A	***Ensure That All LEAs Have Access to Student Growth Data for Tested Grades***																				
1	*Select members of a Student Growth Measure Task Force responsible for overseeing implementation of a measure for all LEAs*	*OSSE*	X																		
2	*Determine the statewide growth measure and draft a concrete plan*	*Student Growth Measure Task Force*		X																	
4	*Build relevant data systems*	*Student Growth Measure Task Force*		X	X	X	X														
5	*Use the student growth measure for DC-Cas tested grades and subjects for educator evaluations*	*LEAs*						X	X	X	X	X	X	X	X	X	X	X	X	X	X
B	***Pilot Value-Added Growth Measure to Expanded Grades/Subjects***																				
1	*Convene the Student Growth Measure Task Force to: a) develop priority list of grades and content areas for expanded coverage, b) develop specifications for assessments that may be used to identify growth measures that are appropriate for the purposes of teacher evaluation*	*OSSE*		X																	
2	*Identify growth assessments that cover priority grades and content areas to use for a two-year trial*	*LEAs*			X																
3	*Based on two-year trial, confirm the menu of assessments appropriate for measuring priority non-tested grades and subjects*	*Student Growth Measure Task Force*									X	X									
4	*Adopt new assessments to be aligned with evaluations*	*LEAs*										X	X								
5	*Devise other methods for expanding the grades and subject areas for which a growth measure may be calculated*	*LEAs*										X	X	X	X	X	X				
6	*Share best practices among LEAs related to expanding the growth measure across grades and subject areas and using new assessments for the purposes of teacher evaluation*	*Student Growth Measure Task Force*											X	X	X	X	X	X	X	X	X
C	***Develop a Robust Teacher and Principal Evaluation System***																				
1	*Publish requirements for teacher an principal evaluation systems*	*OSSE*	X																		
2	*Review Plans for LEA Evaluation Systems to ensure they meet the requirements*	*OSSE*						X													
3	*Expand and refine IMPACT*	*DCPS*		X	X	X	X	X	X	X	X	X	X								
i.	*Submit a plan to OSSE for expansion and refinement of IMPACT*	*DCPS*		X																	
ii.	*Involve teachers and principals in plans for expansion and refinement of IMPACT*	*DCPS*		X																	
4	*Submit a plan to OSSE for how DCPS will approach principal evaluation*	*DCPS*		X																	
5	*Submit plans to OSSE for how charter LEAs will approach teacher and principal evaluation*	*Charter LEAs*		X																	
6	*Leverage lessons from DCPS and other charters in developing human capital evaluation systems*	*Human Capital Task Force*			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D	***Use Evaluations to Make Human Capital Decisions (Refer to Application Table D2.1)***																				
1	*Use evaluation to support human capital decisions*	*LEAs*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	*Work with LEAs to ensure human capital decisions are being made based on evaluations*	*OSSE*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E	***Collaborate Across Sectors to Support Best Practices in Human Capital***																				
1	*Select members of a Human Capital Task Force*	*OSSE*	X																		
2	*Engage in discussions about the implementation of RTTT and other statewide human capital initiatives*	*Human Capital Task Force*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Section D (3) - Ensuring Equitable Distribution of Effective Teachers & Principals																					
A	***Improve Process for Analyzing Equitable Distribution of Effectiveness***																				
1	*Build capacity into evaluation systems to determine effectiveness of teachers by / within schools*	*LEAs*						X	X												
2	*Submit percentages of effective and highly effective teachers and administrators by school to OSSE*	*LEAs*										X				X				X	
3	*Develop state-wide picture of effectiveness distribution based on the correlation of high-poverty and high-minority schools to teacher effectiveness*	*OSSE*										X				X				X	

	RTTT Project Plan	Responsible Party	Apr-Jun 2010	July-Sept 2010	Oct-Dec 2010	Jan-Mar 2011	Apr-Jun 2011	July-Sept 2011	Oct-Dec 2011	Jan-Mar 2012	Apr-Jun 2012	July-Sept 2012	Oct-Dec 2012	Jan-Mar 2013	Apr-Jun 2013	July-Sept 2013	Oct-Dec 2013	Jan-Mar 2014	Apr-Jun 2014	July-Sept 2014	Oct-Dec 2014
4	*Submit a plan to increase teacher effectiveness in the 25% of schools for which high-poverty/high-minority and low effectiveness are most highly correlated*	*LEAs*										X				X				X	
B	***Engage in "Smart Targeting"***																				
1	*Engage in recruitment, selection, and retention strategies to increase the effectiveness of teachers in high-needs schools*	*LEAs*	X	X	X	X	X	X	X	X	X			X	X			X	X		
C	***Improve Process for Analyzing Effectiveness of Teachers in Hard-to-Staff Areas***																				
1	*Build capacity into evaluation systems to sort effectiveness of teachers by content area and grade level*	*LEAs*						X													
2	*Submit percentages of effective and highly effective teachers and administrators by content area and grade level to OSSE, as well as a list of areas identified as "high needs" by LEA*	*LEAs*										X				X				X	
3	*Develop state-wide picture of effectiveness in high needs content areas*	*OSSE*										X				X				X	
4	*Require LEAs to submit a plan to increase teacher effectiveness in the bottom 5 "high needs" content areas*	*OSSE*										X				X				X	
D	***Support Effective Teacher Pipelines for Hard-to-Staff Areas***	*See D4*																			
E	***Support Professional Development for Teachers of Hard-to-Staff Areas***	*See D5*																			
Section D (4) - Improving the Effectiveness of Teacher & Principal Preparation Programs																					
A	***Evaluate Preparatory Programs Based on Effectiveness***																				
1	*Develop a list of information required from LEAs for creating Prep Program Scorecard*	*OSSE*	X	X																	
2	*Design Prep Program Scorecards*	*OSSE*					X	X													
3	*Submit required information to OSSE*	*LEAs*									X	X			X	X			X	X	
4	*Match teachers to their teacher certification programs*	*OSSE*									X	X			X	X			X	X	
5	*Create Prep Program Scorecards*	*OSSE*										X	X			X	X			X	X
6	*Share Prep Program Scorecards with programs (one week prior to making public)*	*OSSE*										X	X			X	X			X	X
7	*PublishPrep Program Scorecards to OSSE website*	*OSSE*										X	X			X	X			X	X
8	*Establish minimum threshold for performance & process for reapproval*	*OSSE*										X	X								
9	*Provide guidance to deans and directors of IHEs regarding new quality guidelines*	*OSSE*										X	X								
B	***Develop an Education Leadership Degree Program***																				
1	*Engage DC education reform, charter school, and higher education community in proposal design*	*DCPS*	X	X	X	X	X														
2	*Submit proposal to OSSE*	*DCPS*				X	X														
3	*Complete program design*	*DCPS*						X	X	X											
4	*Market program, recruit first cohort, hire faculty*	*DCPS*								X	X										
5	*Launch program with first cohort*	*DCPS*									X	X									
C	***Build Pipeline of Effective and Highly Effective Teachers***																				
1	*Issue Request For Proposal for competitive grant process*	*OSSE*		X																	
2	*Hold a competitive grant process (two rounds)*	*OSSE*		X		X															
3	*Award grants*	*OSSE*		X			X														
4	*Launch LEA-sponsored credentialing or certificate programs*	*LEAs*		X				X													
Section D (5) - Providing Effective Support to Teachers & Principals																					
A	***Launch Individualized Platform***																				
1	*Phase I: Build interface and connect IMPACT data to Individualized PD Platform*	*DCPS*			X	X															
2	*Phase II: develop/acquire content, such as video exemplars of effective practice; provide charter schools with access to the system*	*DCPS*				X	X														
3	*Phase III: Add external PD providers such as online courses and higher level content so highly effective teachers go from "good to great"*	*DCPS*								X											
B	***Support Charter Development of Local PD Management Systems***																				
1	*Submit plans to OSSE for developing or purchasing professional development systems or strategies that address and will continue to address teacher and administrator needs based on evaluations*	*Charter LEAs*									X										
2	*Review LEA plans and provide technical assistance*	*OSSE*																			

C	***Launch Learning Communities for Effectiveness (PLaCEs)***										X	X									
1	*Work with OSSE to determine the parameters of an RFP that effectively captures the collaboration needs for reform statewide*	*Human Capital Task Force*	X	X																	
2	*Issue RFP*	*OSSE*	X	X																	
3	*Award grants (3 rounds - Summer 2010, Spring 2011, Spring 2012)*	*OSSE*		X			X	X			X	X									
4	*Implement plans*	*LEA Collaboratives*			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	*Provide guidance to OSSE on how to effectively oversee and administer the PLaCEs*	*Human Capital Task Force*		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	*Review results from PLaCEs clusters*	*OSSE & Human Capital Task Force*																	X	X	X
D	***Develop PD Tracking Capabilities in Individualized PD Platform***																				
1	*Design a process for tracking online and offline PD experiences in Individualized PD Platform*	*DCPS (potentially with vendor)*	X	X	X	X	X	X	X	X	X										
2	*Compile PD data stripped of personal identifiers and make available to researchers*	*OSSE*									X										
Section E (2) - Turning Around Lowest-Achieving Schools																					
A	***Identify and Plan for the Turnaround of Persistently Lowest-Achieving Schools***																				
1	*Finalize list of schools to turn around, including at least the ten schools identified above and others within the bottom 20% to be determined*	*OSSE, DCPS, PCSB*	X																		
2	*Examine ranking of schools and eliminate (1) any schools for which an adequate intervention has occurred in the past two years and (2) any schools that may have been flagged due to the special populations they serve but that are performing effectively*	*OSSE (with DCPS and PCBS, as relevant)*	X																		
3	*Publish list of schools slated for turnaround*	*OSSE*		X				X		X											
4	*Revisit the adequacy and appropriateness of the definition outlined above for identifying the truly persistently lowest-achieving schools*	*OSSE, DCPS, PCSB*		X				X		X											
5	*Establish a detailed turnaround plan and timeline for each school slated for turnaround*	*OSSE/DCPS or PCSB/Charter LEA*	X	X	X	X	X	X	X	X											
6	*Plan for additional turnarounds for schools on the OSSE-reported "persistently lowest-achieving school list" as generated annually with new student achievement data*	*OSSE/DCPS or PCSB/Charter LEA*		X	X			X	X			X	X			X	X			X	X
C	***Provide Preparation Support for Potential Turnaround Teams***																				
1	*Identify schools for turnaround for first three years and line-up administrative teams to manage turnaround efforts*	*DCPS (Office of Innovation)*			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	*Fund planning years for administrative teams who will take on the turnaround of a school in the following school year*	*OSSE*			X				X				X				X				X
D	***Align School Modernization Efforts to Support School Turnaround***																				
1	*Facilitate quarterly discussions between the Mayor's Office responsible for Modernization Plan and the DCPS team responsible for planning and executing turnarounds*	*OSSE*		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E	***Provide Differential Funding for Turnaround Schools***																				
1	*Develop a plan for use of differential funding for each school in turnaround to begin in the upcoming school year*	*DCPS*	X				X				X				X				X		
2	*Provide differential funding for turnaround schools based on number of students served*	*OSSE*			X				X				X				X				X
F	***Ensure Capacity for Strong Management of Turnaround Partnerships***																				
1	*Establish new organization chart and job responsibilities for the Office of School Innovation*	*DCPS*	X																		
2	*Submit these, along with sustainability plan for timeline beyond life of RTTT grant, to OSSE*	*DCPS*		X																	
3	*Hire new team members*	*DCPS*		X	X																

LEGEND	
OSSE	X
LEAs (all)	X
DCPS	X
Charter LEAs	X
Task Forces	X

Appendix A2.2

Implementation Action Items

DC Race to the Top: OSSE Implementation To-Do List

(Implementation activities outlined below include only those to be carried about by OSSE. Activities to be carried out by LEAs are included in the LEA Implementation To-Do List)

Section B3: Supporting the Transition to Enhanced Standards and High-Quality Assessments

(A) Implement a Fast, Aggressive Rollout Plan for Common Core Standards

- Hold Community Meetings to inform parents and community members (Spring-Fall 2010)
- Design and develop Core Standards Website (Fall 2010)
  - i. Create introductory material and develop vendor contract
  - ii. Hire web designer to launch website
  - iii. Manage vendors to completion
- Contract with vendor to align DC-CAS with Common Core Standards (Summer 2010)
  - i. Develop vendor contract for DCCAS
  - ii. Hire vendor to work on revision of DCCAS for administration in 2012 and oversee management of this contract
- Develop and implement interim assessments
  - i. Identify vendors capable of meeting the State requirements for interim assessments and publish list to LEAs (Summer 2010)
  - ii. Organize meetings for LEAs to meet and discuss interim assessment purchasing partnerships (Fall 2010)

(B) Create, Organize, and Fund a New Standards Working Group

- Hold Common Core Standards Working Group meetings (Fall 2010-Summer 2011)
  - i. Invite LEAs to create leadership teams to participate
  - ii. Develop collaboration infrastructure

(C) Create Entry Points for Differentiated Learning

- Partner with a state department of education to create *Standards Entry Points for Differentiated Learning*: Summer 2010 (Spring 2011)
- Contract with a vendor to provide teacher training on the *Standards Entry Points* (Fall 2011, ongoing)
- Fund a vendor to align the Special Education Data System (SEDS) with the Common Core Standards (Vendor hired by Spring 2011 with rollout in Fall 2012)

(D) Align High School Exit Criteria and College Entrance Requirements

- Convene a P-20 Consortium (Fall 2010, ongoing)
  - i. identify and publish research priority
  - ii. solicit researchers
  - iii. contract with a research team
- Work with DTN and local institutions of higher education to collect data on the level of preparation of students graduating from DC high schools. (Spring 2011)

Section C2: Accessing & Using State Data

(A) Expand Capacity and Systems for Data Access

- Create a new, user-friendly website that allows key stakeholders to more easily access data through interactive web functions (Fall 2011)
  - i. Outline required functionality
  - ii. Develop vendor process
  - iii. Roll-out new, interactive, user-friendly OSSE website
- Hold community meetings to discuss with parents and other community members how data can be made more useful to them (Fall 2011)

(B) Enhance Availability of Statewide Data to Key Stakeholders

- Publish additional data to key stakeholders including parents, decision-makers, and researchers (Fall 2012)

Section C3: Use Data to Improve Instruction

(A) Develop Instructional Improvement Systems Aligned to Data Systems

- Identify preferred vendors capable of meeting the needs of LEAs for data-driven instruction and submit list to LEAs (Spring 2010)
- Award grants to LEAs (Winter 2011)

(C) Increase the Availability and Access of Data to Researchers

- Publish a list of research priorities for DC and encourage submission (Fall 2010, ongoing)
- Develop an online research request tool (Fall 2010)
- Identify and create a portfolio of research-ready data sets (Fall 2011)

Section D2: Improving Teacher & Principal Effectiveness Based on Performance

(A) Ensure that All LEAs Have Access to Student Growth Data for Tested Grades

- Select members of a Student Growth Measure Task Force responsible for overseeing implementation of a measure for all LEAs (Spring 2010)
- Determine the statewide growth measure and draft a concrete plan(Summer 2010, Student Growth Measure Task Force, convened by OSSE)
- Build relevant data systems (Fall 2010 – Spring 2011, Student Growth Measure Task Force)

(B) Expand Value-Added Growth Measures to Additional Grades/Subjects for Teacher and Principal Evaluation Purposes

- Convene the Student Growth Measure Task Force to: a) develop priority list of grades and content areas for expanded coverage, b) develop specifications for assessments that may be used to identify growth measures that are appropriate for the purposes of teacher evaluation (Summer 2010, Student Growth Measure Task Force)
- Based on the two-year trial, confirm the menu of assessments appropriate for measuring priority non-tested grades and subjects (Summer 2012, Student Growth Measure Task Force)
- Share best practices among LEAs related to expanding the growth measure across grades and subject areas and using new assessments for the purposes of teacher evaluation (Fall 2012, ongoing, Student Growth Measure Task Force)

(C) Develop a Robust Teacher and Principal Evaluation System

- Publish requirements for teacher and principal evaluation systems (Spring 2010):

Teacher evaluation requirements: student growth counts for at least 50% of a teacher's evaluation, includes multiple measures for performance, divides effectiveness into four (4) tiers (e.g., highly effective, effective, minimally effective, ineffective), is conducted annually, and is used to inform human capital decisions.

Principal evaluation requirements: student outcomes metrics account for a significant proportion of a principal's evaluation (e.g., student growth, student performance); multiple qualitative measures are included (e.g., parent and staff surveys); school-specific goals will be included; effectiveness is divided into tiers (e.g., highly effective, effective, minimally effective, ineffective), is conducted annually, and is used to inform human capital decisions.

- Review plans for LEA evaluation systems to ensure that requirements are met (Fall 2010)

(D) Use Evaluations to Make Human Capital Decisions

- Work with LEAs to ensure human capital decisions are being made based on evaluations (see table D2.2 in application for specifics and timeline)

(E) Collaborate Across Sectors to Support Best Practices in Human Capital

- Select members of a Human Capital Task Force (to include representatives from DCPS, Charter LEAs, and OSSE) responsible for advising and directing the course of statewide human capital initiatives (Spring 2010)
- Engage in brainstorming and problem-solving discussions about the implementation of the RTTT initiatives and other statewide human capital initiatives (Spring 2010 and Ongoing)

Section D(3): Ensuring Equitable Distribution of Effective Teachers & Principals

(A) Improve Process for Analyzing Equitable Distribution of Effectiveness

- Develop statewide picture of the distribution of effectiveness based on the correlation of high-poverty schools (a school in the highest quartile of schools in the State with respect to poverty level) to teacher effectiveness (annually, starting Fall 2012)
- Require LEAs to submit a plan to increase teacher effectiveness in the 25% of schools for which high-poverty and low-effectiveness are most highly correlated (Fall 2012 and each Fall)

(C) Improve Process for Analyzing Effectiveness of Teachers in Hard-to-Staff Areas

- Develop state-wide picture of effectiveness in high needs content areas (Fall 2012 and each Fall)
- Require LEAs that show disproportionate ineffectiveness of teachers in hard-to-staff content areas to submit a plan to increase teacher effectiveness in the bottom 5 "high needs" content areas and grade levels (annually, starting Fall 2012)

Section D4: Improving the Effectiveness of Teacher & Principal Preparation Programs

(A) Evaluate Preparatory Programs (e.g., alternative certification and IHE) Based on Effectiveness

- Develop a list of information required from LEAs for creating Prep Program Scorecard (Fall 2010)
- Design Prep Program Scorecard with input from multiple stakeholders (Spring 2011)
- Match teachers to certification programs from which they came (annually, starting Summer 2012, based on information submitted by LEAs)
- Create Prep Program Scorecards (annually, starting Fall 2012)
- Share Prep Program Scorecards with prep programs one week prior to making the scorecards public in order to ensure data are validated (annually, starting Fall 2012)
- Publish the Scorecards to the OSSE website (annually, starting Fall 2012)
- Establish a threshold for performance such that, in addition to other conditions for non-renewal determined by the state, any credentialing program with more than 25% of second-year teacher graduates deemed ineffective by LEAs in 2015 will warrant review by the State and have program approval subject to revocation (Fall 2012)
- Establish a process by which a program can demonstrate that it should be reconsidered for approval (Fall 2012)
- Provide guidance to deans of IHEs and directors of alternative certification programs regarding new guidelines for quality (Fall 2012)

(B) Develop an Education Leadership Degree Program

- Review DCPS proposal for launching Education Leadership Degree Program (Spring 2011)

(C) Build Pipelines of Effective and Highly Effective Teachers

- Issue RFP according to specifications in grant (Fall 2010)
- Hold a competitive grant process (two rounds, Summer 2010, Winter 2011)
- Award grants (Summer 2010, Spring 2011)

Section D5: Providing Effective Support to Teachers & Principals

(A) Support Charter LEA Professional Development Solutions Tied to Evaluations

- Review LEA plans and provide technical assistance (Summer 2012)

(B) Launch Professional Learning Communities for Effectiveness (PLaCEs)

- Work with Human Capital Task Force to determine the parameters of an RFP that effectively captures the collaboration needs for reform in the district (Spring 2010, Human Capital Task Force)
- Issue RFP (Spring 2010)
- Award grants (three rounds: Spring 2010, Spring 2011, Spring 2012)
- Discuss with Human Capital Task Force best practices for how OSSE can effectively oversee and administer the PLaCEs (Fall 2010, ongoing, Human Capital Task Force)
- Review results from PLaCEs clusters (Spring 2014, Human Capital Task Force & OSSE)

(C) Develop PD Tracking Capabilities in My PD Platform

- Compile PD data stripped of personal identifiers and make available to researchers (Spring 2013)

Section E2: Turning Around Lowest-Achieving Schools

(A) Identify and Plan for the Turnaround of Persistently Lowest-Achieving Schools

- Finalize list of schools to turn around based on current definition and 2009 data, including at least the ten schools identified above and others within the bottom 20% to be determined (Spring 2010, OSSE, DCPS, and PCSB)
- Examine ranking of schools and eliminate (1) any schools for which an adequate intervention has occurred in the past two years and (2) any schools that may have been flagged due to the special populations they serve but that are performing effectively (Spring 2010, OSSE, DCPS, PCSB)
- Publish list of schools slated for turnaround (Summer 2010, OSSE)
- Revisit the adequacy and appropriateness of the definition of persistently lowest achieving schools, identifying the truly persistently lowest-achieving schools (Summer 2010, ongoing, OSSE, DCPS, PCSB)
- Establish a detailed turnaround plan and timeline for each school listed above that is slated for turnaround (beginning Spring 2010, with final plans for above listed schools being announced by January 2012, OSSE/DCPS and OSSE/PCSB)
- Plan for additional turnarounds for schools on the OSSE-reported persistently lowest achieving schools list as generated annually with new student achievement data (beginning Fall 2011 and annually, OSSE/DCPS and OSSE/PCSB)

(B) Provide Preparation Support for Potential Turnaround Teams

- Fund planning years for administrative teams who will take on the turnaround of a school in the following school year (Fall 2010 and ongoing)

(C) Align School Modernization Efforts to Support School Turnaround

- Facilitate quarterly discussions between the Mayor's Office responsible for Modernization Plan and the DCPS team responsible for planning and executing turnarounds (Summer 2010 & quarterly, for life of grant and beyond)

(D) Provide Differential Funding for Turnaround Schools

- Provide differential funding for turnaround schools based on number of students served (annually, starting Fall 2010)

(E) Ensure Capacity for Strong Management of Turnaround Partnerships

- Review DCPS Plan for OSI Expansion (Summer 2010)

DC Race to the Top: LEA Implementation To-Do List

(Implementation activities outlined below include only those to be carried about by LEAs. Activities to be carried out by OSSE are included in the OSSE Implementation To-Do List)

Section B3: Supporting the Transition to Enhanced Standards and High-Quality Assessments

(A) Implement a Fast, Aggressive Rollout Plan for Common Core Standards

- Sign contract with vendor: LEAs may also write their own interim assessments (Winter 2010)
- Implement interim assessments (Fall 2011, ongooing)

(B) Create, Organize, and Fund a New Standards Working Group

- Participate in Common Core Standards Working Group meetings: voluntary (Fall 2010-Summer 2011)
- Deliver information sessions to parents and other community members (Summer 2011, ongoing)
- Provide school-level professional development on Common Core Standards (Summer 2011, ongoing)

Section C3: Use Data to Improve Instruction

(A) Develop Instructional Improvement Systems Aligned to Data Systems

- Sign a contract with an OSSE-approved vendor, LEAs may also design their own systems (Spring 2011)
- Implement new or improved instructional improvement system (Fall 2012)

(B) Support Participating LEAs in Providing Effective Professional Development on Data-Driven Instruction

- LEAs will receive formulas funding for one of the following (Fall 2011, ongoing):
  i. Plan to hire a school-based Instructional Data Analyst/Coach
  ii. Plan to train and offer stipends to data leads in schools
  iii. Plan for ongoing, job-embedded professional development on data-driven instruction
- Submit best practices/collaborate on uses of data-driven instruction to Individualized Platform (Summer 2013, ongoing)
- Provide teachers with regular planning time for using data to inform instruction (Fall 2011, ongoing)

Section D2: Improving Teacher & Principal Effectiveness Based on Performance

(A) Ensure That All LEAs Have Access to Student Growth Data for Tested Grades

- Participate in a Student Growth Measure Task Force to determine the statewide growth measure and draft a concrete plan (selected LEAs, Summer 2010)
- Build relevant data systems (LEAs on the Student Growth Measure Task Force, Fall 2010-Spring 2011)

- Use the student growth measure for DC-CAS tested grades and subjects for educator evaluations (Summer 2011 and ongoing)

(B) Expand Value-Added Growth Measure to Additional Grades/Subjects

- Develop priority list of grade and content areas for expanded coverage and develop specifications for assessments that may be used to identify growth measures that are appropriate for the purposes of teacher evaluation (Summer 2010, LEAs on Student Growth Measure Task Force, convened by OSSE)
- Identify growth assessments that cover priority grades and content areas according to OSSE specifications to use for a two-year trial for informing evaluations (Fall 2010)
- Based on the two-year trial, confirm the menu of assessments appropriate for measuring priority non-tested grades and subjects (Summer 2012, LEAs on Student Growth Measure Task Force, convened by OSSE)
- Adopt new assessments aligned with evaluations (Fall 2012)
- Devise other methods for expanding the grades and subject areas for which a growth measure may be calculated. Measures of student achievement must be statistically rigorous and comparable across classrooms (Fall 2012 - Fall 2013)
- Share best practices among LEAs related to expanding the growth measure across grades and subject areas and using new assessments for the purposes of teacher evaluation (Fall 2012 and ongoing, LEAs on Student Growth Measure Task Force, convened by OSSE)

(C) Develop a Robust Teacher and Principal Evaluation System

Based on the below requirements published by OSSE:

Teacher evaluation requirements: student growth counts for at least 50% of a teacher's evaluation, includes multiple measures for performance, divides effectiveness into four (4) tiers (e.g., highly effective, effective, minimally effective, ineffective), is conducted annually, and is used to inform human capital decisions.

Principal evaluation requirements: student outcomes metrics account for a significant proportion of a principal's evaluation (e.g., student growth, student performance); multiple qualitative measures are included (e.g., parent and staff surveys); school-specific goals will be included; effectiveness is divided into tiers (e.g., highly effective, effective, minimally effective, ineffective), is conducted annually, and is used to inform human capital decisions.

DCPS:

- Expand and refine the IMPACT human capital management system, which meets the above requirements for teachers
  - i. Submit a plan to OSSE for using RTTT funds to expand and refine IMPACT to inform and support human capital decisions (Summer 2010)
  - ii. Involve teachers and principals in the refinement of IMPACT (Summer 2010)

- Submit a plan to OSSE for how DCPS will do the following: (Summer 2010)
  - i. Build a principal evaluation system based on planned scorecards that also meets the requirements for principal evaluation articulated above

ii. Engage principals in the design of this new system
iii. Implement these evaluations such that they are used to provide teachers and principals with timely and constructive feedback, such as data on student growth for their students, classes, and schools

Charter LEAs:

- Submit plans to OSSE for how the LEA will do the following: (Summer 2010)
  i. Build new or align current evaluation systems with the requirements for teacher and principal evaluation systems
  ii. Engage teachers and principals in the design of these new systems
  iii. Incorporate student growth measures into these evaluations when they become available for charter LEAs in Summer 2011
  iv. Implement these evaluations such that they are used to provide teachers and principals with timely and constructive feedback, such as data on student growth for their students, classes, and schools

- In addition to the LEA-specific activities listed above, LEAs will be expected – through the Human Capital Task Force (convened by OSSE) – to leverage lessons from DCPS and charter LEAs in developing human capital evaluation systems (Fall 2010, ongoing)

(D) Use Evaluations to Make Human Capital Decisions (Refer to Application Table D2.1)

(E) Collaborate Across Sectors to Support Best Practices in Human Capital

- Participate in a Human Capital Task Force (selected LEAs, Spring 2010)
- Engage in brainstorming and problem-solving discussions about the implementation of the RTTT initiatives and other statewide human capital initiatives (Spring 2010, ongoing, LEAs on the Human Capital Task Force)

Section D(3): Ensuring Equitable Distribution of Effective Teachers & Principals

(A) Improve Process for Analyzing Equitable Distribution of Effectiveness

- Build capacity into evaluation systems outlined in D2 to sort effectiveness of teachers by school (Fall 2011)
- Submit percentages of effective and highly effective teachers and administrators by school to OSSE (annually, starting Summer 2012)
- Submit a plan to increase teacher effectiveness in the 25% of schools where high-poverty and low-effectiveness are most highly correlated (annually, starting Fall 2012)

(B) Engage in "Smart Targeting"

- Engage in recruitment, selection, and retention strategies to increase the effectiveness of teachers in high-need schools (Spring/Summer 2010, ongoing). Examples include:
  - **Recruitment.** Offering small-scale recruitment fairs where pre-screened talent is routed directly to principals of persistently low-performing and low-performing schools
  - **Selection.** Supporting principals in low-performing schools in implementing rigorous screening processes for new candidates

- **Retention.** Offering end-of-year bonuses for highly effective teachers in high-needs schools (as is planned in pending WTU contract)

(C) Improve Process for Analyzing Effectiveness of Teachers in Hard-to-Staff Areas

- Build capacity into evaluation systems outlined in D2 to sort effectiveness of teachers by content area (Fall 2011)
- Submit to OSSE: (a) percentages of effective and highly effective teachers by content area, and (b) a list of content areas identified as "high needs" by LEA (annually, starting Summer 2012)
- Require LEAs that show disproportionate ineffectiveness of teachers in hard-to-staff content areas to submit a plan to increase teacher effectiveness in the bottom five "high-needs" content areas (annually, starting Fall 2012)

Section D4: Improving the Effectiveness of Teacher & Principal Preparation Programs

(A) Evaluate Preparatory Programs (e.g., alternative certification and IHE) Based on Effectiveness

- Submit required information to OSSE, such that effectiveness data can be linked to graduates (Summer 2012)

(B) Develop an Education Leadership Degree Program (DCPS)

- Engage DC education reform, charter school, and higher education community in proposal design (Summer 2010-Spring 2011)
- Submit proposal to OSSE for launching an Education Leadership Degree Program (Spring 2011, DPCS in conjunction with a University partner)
- Complete program design (Summer 2011-Winter 2011/2, DCPS in conjunction with a University partner)
- Market program, recruit first cohort, hire faculty (Winter 2012-Spring 2012)
- Launch program with first cohort (Summer 2012)

(C) Build Pipelines of Effective and Highly Effective Teachers

- Submit proposal for teacher pipeline funding (Summer 2010 or Winter 2011)
- Launch LEA-sponsored programs (Summer 2010 or Summer 2011)

RTTT Section D5: Providing Effective Support to Teachers & Principals

(A) Launch Individualized PD Platform (DCPS)

- Phase I: Build interface and connect IMPACT data to it (Winter 2010-2011, vendor under DCPS)
- Phase II: develop/acquire content, such as video exemplars of effective practice; provide charter schools with access to the system (Spring 2011, vendor under DCPS)
- Phase III: Add external PD providers such as online courses and higher level content so effective teachers go from "good to great" (Spring 2012, vendor under DCPS)

(B) Support Charter Development of Local PD Management Systems (Charter LEAs)

- Submit plans to OSSE for developing or purchasing professional development systems or strategies that address and will continue to address teacher and administrator needs based

on evaluations. These may including coaching, induction, common planning, and collaboration time that is ongoing and job-embedded (Spring 2012, participating Charter LEAs)

(C) Launch Learning Communities for Effectiveness (PLaCEs)

- Work with OSSE to determine the parameters of an RFP that effectively captures the collaboration needs for reform in the district (Spring 2010, LEAs on the Human Capital Task Force)
- Apply for grant funding (Summer 2010, Winter 2011, Winter 2012, LEA collaboratives)
- Implement Plans (Summer 2010, ongoing, by PLaCEs)
- Provide guidance to OSSE on how to effectively oversee and administer the PLaCEs (Fall 2010, ongoing, LEAs on the Human Capital Task Force)
- Review results from PLaCEs clusters (Spring 2014, Human Capital Task Force & OSSE)

(D) Develop PD Tracking Capabilities in My PD Platform

- Design a process for tracking and analyzing the effectiveness of online and offline PD experiences in My PD Platform (Fall 2010-Spring 2012, vendor under DCPS)

RTTT Section E2: Turning Around Lowest-Achieving Schools

(A) Identify and Plan for the Turnaround of Persistently Lowest-Achieving Schools

- Finalize list of schools to turn around based on current definition and 2009 data, including at least the ten schools identified above and others within the bottom 20% to be determined (Spring 2010, OSSE, DCPS, and PCSB)
- Examine ranking of schools and eliminate (1) any schools for which an adequate intervention has occurred in the past two years and (2) any schools that may have been flagged due to the special populations they serve but that are performing effectively (Spring 2010, OSSE, with DCPS or PCSB, as relevant
- Revisit the adequacy and appropriateness of the definition outlined above for identifying the truly persistently lowest-achieving schools in the state on an annual basis (Summer 2010, ongoing, OSSE, DCPS, PCSB)
- Establish a detailed turnaround plan and timeline for each school listed above that is slated for turnaround (beginning Spring 2010, with final plans for above listed schools being announced by January 2012, OSSE/DCPS and OSSE/PCSB)
- Plan for additional turnarounds for schools on the OSSE-reported "persistently lowest achieving schools list" as generated annually with new student achievement data (Fall 2011 and annually, OSSE/DCPS and OSSE/PCSB)

(B) Provide Preparation Support for Potential Turnaround Teams (DCPS)

- Upon identification of schools for turnaround, decide which schools will be turned around within the next four years and line-up administrative teams to manage turnaround efforts (Fall 2010, ongoing, DCPS Office of Innovation)

(C) Align School Modernization Efforts to Support School Turnaround (DCPS)

- Participate in discussions with the Mayor's Office responsible for Modernization Plans to align plans for modernization with plans for turnaround (Summer 2010, quarterly for life of grant and beyond)

(D) Provide Differential Funding for Turnaround Schools (DCPS)

- Develop a plan for use of differential funding for each school in turnaround to begin in the upcoming 2010-2011 school year (Fall 2010, continued annually each Spring, DCPS)

(E) Ensure capacity for strong management of Turnaround Partnerships (DCPS)

- Establish new organization chart and job responsibilities for Office of School Innovation (Spring 2010, DCPS)
- Submit these, along with sustainability plan for timeline beyond the life of the RTTT grant, to OSSE (Summer 2010, DCPS)
- Hire new team members (Summer/Fall 2010, DCPS)

Appendix A2.3

Budget Summary

APPENDIX A2.3-- Budget Part I: Budget Summary Table

Instructions:
In the Budget Summary Table, the State should include the budget totals for each budget category and each year of the grant. These line items are derived by adding together the line items from each of the Project-Level Budget Tables.

Budget Part I: Summary Budget Table
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
1. Personnel	$637,000	$637,000	$637,000	$637,000	$2,548,000
2. Fringe Benefits	$114,660	$114,660	$114,660	$114,660	$458,640
3. Travel					
4. Equipment	$610,000				$610,000
5. Supplies					
6. Contractual	$4,085,000	$1,750,000	$1,400,000	$1,400,000	$8,635,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$5,446,660	$2,501,660	$2,151,660	$2,151,660	12,251,640
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$5,467,358	$9,314,444	$9,459,668	$12,801,731	$37,043,200
13. Total Costs (lines 9-12)	$10,914,018	$11,816,104	$11,611,328	$14,953,390	$49,294,840
14. Funding Subgranted to Participating LEAs (50% of Total Grant)	$18,600,000	$16,200,000	$14,200,000	$14,200,000	$63,200,000
15. Total Budget (lines 13-14)	**$29,514,018**	**$28,016,104**	**$25,811,328**	**$29,153,390**	**$112,494,840**

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

BUDGET PART I: BUDGET SUMMARY NARRATIVE

Instructions:
Describe, in an Appendix, the overall structure of the State's budget for a Race to the Top grant, including the list of projects for which there is a project-level budget, and a rationale for how these will be organized and managed.

The State should also describe how other Federal (*e.g.* School Improvement Grant, Statewide Longitudinal Data Systems grant, Teacher Incentive Fund grant, Title I), State, and local funds will be leveraged to further support Race to the Top education reform plans.

The State must include, on Line 14 of the Budget Summary Table, the amount of funding to be subgranted to its participating LEAs based on their relative shares of funding under Part A of Title I of the ESEA for the most recent year (that is, FY 2009), as required under section 14006(c) of the ARRA. States are not required to provide budgets for how the participating LEAs would use their funds. However, the Department expects that, as part of the administration and oversight of the grant, States will monitor and track all expenditures to ensure that participating LEAs spend these funds in accordance with the State's plan and the scope of work described in the agreement between the State and the participating LEA.

Overview

The budget outlined above captures the funding structure for how the District of Columbia intends to accelerate its strategy to turn around DC's lowest-achieving schools, improve the effectiveness of all schools, and expand the reach of high-achieving schools through use of Race to the Top funds. Although initial federal guidance indicated a specific funding range for DC, the District's proposed budget is higher than initial US Department of Education (US ED) parameters, based on three factors:

1) The pace and breadth of reform in the District are greater than those of most other states, and LEA participation in Race to the Top covers 85% of public school students in the District. Thus, the District is primed for an infusion of funds such as Race to the Top, and US ED will be able to measure reform implementation and results with greatest accuracy and speed here. The federal government needs models of reform as proof points and beacons of hope. DC, with its reform-ready district and robust community of charter LEAs, offers itself as a potential model to the nation for only 2.6% of the total pot of RTTT funds.

2) In DC, the overall proportion of low achieving schools is still dramatically high, with both DCPS and PCSB indicating that nearly half of their schools need strong support to reach baseline levels of effectiveness. DC believes that the $112.5MM outlined in its RTTT application is commensurate with need.

3) Finally, a minimum level of baseline funding is required to ensure that system-wide reform can occur at scale.

DC's strong track record of innovation occurring at the LEA level allows for much of its proposed RTTT funding – more than 89% – to be directed to LEAs either by formula sub-grant or LEA-specific supplemental funding programs. Although the application does not require budgets that specify how participating LEAs will use RTTT funds, DC's level of deep LEA engagement throughout the application process has allowed for the provision of detail (herein) about how sub-granted LEA funds will be used.

Uses of Sub-Granted Funds

As a state where major change has been driven by LEAs, nearly 57% of the DC budget is comprised of funding that will be sub-granted directly to LEAs. This will ensure that LEAs have the necessary resources to implement initiatives in support of RTTT's four Assurances. In particular, LEAs plan to use the funds for six specific initiatives, outlined below:

Subgranted Fund Priorities	Year 1	Year 2	Year 3	Year 4	TOTAL
Evaluation Systems	$8,750,000	$8,750,000	$8,750,000	$ 8,750,000	$35,000,000
Professional Development Systems	$2,250,000	$2,250,000	$2,250,000	$2,250,000	$9,000,000
Interim Assessments	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$ 6,800,000
Data Professional Development	$1,500,000	$ 1,500,000	$1,500,000	$1,500,000	$6,000,000
Expanded Growth Coverage	$2,000,000	$ 2,000,000			$4,000,000
Standards Professional Development	$2,400,000				$2,400,000
Total	**$18,600,000**	**$16,200,000**	**$14,200,000**	**$14,200,000**	**$63,200,000**

(1) Building out Human Capital Evaluation Systems, $35MM. Participating LEAs will use $35MM over four years to build or improve upon evaluation systems that enable them to make important decisions about teacher and principal training, retention, promotion, and compensation. Within two years, DC's aim is to ensure that all participating LEAs have evaluation systems that match the specifications outlined in the application.

For DCPS, this funding will be deployed to launch versions 2.0 and 3.0 of IMPACT, the revolutionary new human capital management system used to connect information about student growth to teacher evaluations. In particular, DCPS needs funding to ensure that data being generated by the evaluation system is processed in a timely manner, so that interventions in teacher practice can happen in real-time. Funding is also required to train Master Educators on effective coaching strategies so that the evaluation is tied to a system of continuous learning for teachers. Finally, IMPACT requires new functionality, including the ability to sort effectiveness data by school and content area, so that it can report on the distribution of effective teachers by school and content area. Detailed project costs are outlined below.

IMPACT Expansion Costs	Year 1	Year 2	Year 3	Year 4
Operations & Infrastructure				
Personnel	$385,250	$385,250	$385,250	$385,250
Non-Personnel	$10,000	$10,000	$10,000	$10,000
TOTAL	$395,250	$395,250	$395,250	$395,250
Master Educator Program				
Personnel	$4,157,250	$6,261,750	$6,261,750	$6,261,750
Non-Personnel	$ 173,900	$219,900	$219,900	$219,900
TOTAL	$4,331,150	$6,481,650	$6,481,650	$6,481,650
Data Analysis & Research				
Personnel	$143,750	$143,750	$143,750	$143,750
Non-Personnel	$264,000	$124,000	$ 124,000	$124,000
TOTAL	$407,750	$267,750	$267,750	$267,750
Ongoing Design				
Personnel	$310,500	$310,500	$310,500	$310,500
Non-Personnel	$1,133,000	$833,000	$733,000	$733,000
TOTAL	$1,443,500	$1,143,500	$1,043,500	$1,043,500
ANNUAL TOTAL	**$6,577,650**	**$8,288,150**	**$8,188,150**	**$8,188,150**
PROJECT TOTAL				**31,242,100**

Although DCPS will not receive the full cost of the IMPACT expansion– as the $35MM for human capital evaluation systems will be split proportionally between DCPS and charter LEAs through the sub-grant process – RTTT funding will enable DCPS to accelerate deeper reform via IMPACT by funding key components, especially important one-time costs such as infrastructure and early data analysis. In addition, DCPS will develop a sustainability plan for IMPACT, particularly for personnel that are initially funded with RTTT. The district has committed to the strategic deployment of resources and will look to rely primarily on alternative funding sources for line-items that require long-term sustainability (e.g., Master Educators).

In addition to expanding and improving IMPACT, DCPS will deploy funds to the roll-out of a similarly robust principal evaluation system that will be based, in part, on School Scorecards due for launch in the 2010-2011 school year.

Charter LEAs will receive nearly $9MM of the $35MM, and will use the funds to create human capital evaluation systems that align with the requirements outlined in D2. Although charters may deploy the funds as they deem appropriate – either to build new systems or to improve preexisting ones – charters may also opt to leverage economies of scale by pooling funds and hiring an external party to design an evaluation system that can be used across multiple LEAs.

Finally, this particular funding stream also contains many no-cost elements, such as the creation of a Human Capital Task force to support the transfer of knowledge related to building evaluation systems across sectors. This pooled knowledge will be leveraged to ensure that funds are being deployed strategically in pursuit of

RTTT goals. It reflects a positive outgrowth of the collaborative RTTT planning process, as well as an ongoing commitment to harness DC's diverse reform agenda across multiple LEAs.

(2) Building Professional Development Systems Aligned to Evaluations, $9MM. DC's current investments in identifying areas of teacher effectiveness through evaluation leads to a logical next step of creating a platform for linking this information to professional development solutions. The Individualized PD Platform (outlined in section D5) will be designed to serve this precise function. Though it is a DCPS-conceived idea, LEAs across sectors will collaborate on streaming new, high-quality content onto the platform for use by teachers in increasing their effectiveness. Phase I of this project has been funded by a national foundation, but DCPS proposes to use RTTT funds to take plans for this system to the next level and incorporate new content that will allow teachers to focus on improvements in individually identified areas of need. Initial work with the national foundation led DCPS to create a multi-year strategic plan for this project for which cost estimates were generated.

Participating charter LEAs will be able to use their sub-grant components of the $9MM funding stream to build their own systems for aligning professional development to evaluations and match solutions to teacher needs, according to OSSE-specified criteria. In the spirit of collaboration achieved through the DC RTTT application process, charter schools will also have access to the DCPS Individualized PD Platform content, for use in their individual LEAs.

(3) Interim Assessments, $6.8MM. LEAs across DC agree that a transition to new standards and new summative assessments is best maximized by equipping schools with interim assessments that can be used to measure student performance. These will be aligned to the new Common Core standards as well as the new year-end summative test (not to be funded through RTTT funds). Based on discussions with current test-makers and analyzing the costs of current interim assessments, LEAs should be able to purchase interim assessments in Math/ELA for $25 - $30 a student, although they may also create their own. LEAs are to provide interim assessments in grades 3-10, with the option of expanding to other grades with remaining funding. In addition, they are encouraged to contract with high-quality interim assessment providers who are able to offer professional development support around the interim assessments to encourage data-driven instruction. Discussions with principals and interim assessment providers revealed that $25 is more than sufficient for already-created interim assessments; however the creation of new assessments aligned to the Common Core standards will add additional fixed costs. OSSE believes these fixed costs will foster collaboration between LEAs: to save money, LEAs may be enticed to partner together. Additionally, LEAs that create their own assessments will have a financial incentive to share them.

(4) School-level Data Professional Development, $6MM. This funding amounts to approximately $1.5MM a year across all LEAs. Participating LEAs commit to providing regular time for teacher data analysis, and OSSE believes this time will be most effective if each school has a resident data expert who can help craft a school-based data analysis strategy. To this end, LEAs may choose the best way to use the provided funding. DCPS, for instance, is likely to use the money for a stipend for a "data lead"—an educator with strong experience using data and capacity for training others—within the school building. Charter schools may choose to do the same, or they may collaborate across schools to support the salary of a data analyst or consultant who can train school-level staff on how to efficiently and effectively generate and use data for instruction. Given the funding amount and the number of participating LEAs, individual schools should expect to receive between $6,000 to $8,000, depending on their size. This is purposely insufficient funding for a full-time position; any school receiving a full salary would have had difficulty continuing to fund the position after four years. Rather OSSE's goal is for

every school, at a minimum, to free up a teacher or staff member's schedule to begin crafting a long-term, school-wide data analysis strategy. A coherent, focused strategy for using data to improve instruction will have a large impact on a school, long after 2013.

(5) Expanded Student Growth Assessments, $4MM. Although DC has made significant strides in linking student growth results from the DC-CAS to teacher evaluations, the simple fact remains that over 80% of teachers are not covered by DC-CAS grades. As a result, additional work is required in order for evaluations of a broader base of teachers to truly be linked to student performance. DC is therefore providing funding to LEAs to develop or pilot assessments that will demonstrate student growth in non-tested grades and subjects, particularly in early elementary grades and high school, and may be useful for future teacher evaluations. RTTT funding provides substantial resources to LEAs for piloting assessments, and likewise will support the creation of a collaborative structure and process through which LEAs can share knowledge (e.g., about the assessments' utility for evaluation purposes and for selecting the best options for inclusion in evaluations after a two-year pilot period). DC's specific goal through RTTT funding is to ensure that a substantially higher number of teachers will be evaluated based on contributions to student growth.

(6) Common Core Standards Professional Development and Communication, $2.4MM. In recognition of the time and energy it will take at the LEA level to embed new standards into ongoing teacher practice, LEAs will use this funding to equip their teachers with the information they need to make the standards translate into practical classroom use. LEAs will leverage centrally-created materials from OSSE. RTTT funding may be used to pay teachers and instructional leads to align curricula to the new standards as well as professional development workshops on standards using exemplars of student work. This funding is also to be used to share expectations around new standards with students and their families, recognizing that the standards will have the highest impact when they raise the bar and deepen understanding of expectations for student work. OSSE has decided to fund LEAs directly because of the important differences between different school communities. Some schools may find that reaching out to parents is as simple a sending out an e-mail and may choose additional teacher professional development over printing costs. Other schools may decide that the only way to reach out to families is by sending information home with students. LEAs will be able to make the decisions that are best for their communities.

Supplemental Funding for Participating LEAs

Beyond the above initiatives, which will be financed by LEAs out of the discretionary sub-granted funds, DC has identified five initiatives that are specific to one LEA or one set of LEAs. The diverse nature of the DC landscape – with DCPS and a large number of small charter LEAs – means that strengths and gaps vary from one sector or another. To ensure that all LEAs are equipped to support RTTT goals, DC has prioritized the following five initiatives. Project details for each initiative follow in Appendix A2.4.

(1) DCPS: School Turnarounds, $10.3MM. It is the position of the District of Columbia that any charter school that falls within the persistently lowest-achieving 5% of schools (as identified and articulated in Section E2) should be moved to closure through the PCSB Performance Management Framework. Thus, the funding required for executing one of the four specified turnaround models will be directed only to DCPS, where other initiatives besides closure may be appropriate. DCPS' turnaround strategies will center around three initiatives: (1) increasing capacity at the Office of School Innovation, (2) funding "Prep Years" for turnaround teams, and (3) allocating an additional per-student dollar amount for turnaround schools in their first four years of turnaround. This funding stream is considered in concert with School Improvement Grants, as explained later in this Summary.

(2) DCPS & Charter LEAs: Teacher Pipelines, $9MM. DC recognizes the critical importance of effective teachers to ensuring the success of all students. In addition to managing performance of current teachers, DC intends to support LEAs in creating pipelines of effective and highly effective teachers, either by developing in-house training programs or by partnering with outside organizations. This funding will flow to LEAs via competitive grants. Priority will be given to applicant groups that include programs or schools that have a track record of producing effective teachers. Priority will also be given to programs that focus on hard-to-staff content areas. It is estimated that this program will bring in several hundred new, highly effective teachers to DC schools over four years.

(3) DCPS & Charter LEAs: Professional Learning Communities of Effectiveness (PLaCEs), $10MM. The desire to collaborate across DC's diverse and innovative education sectors and to share best practices is one of DC's greatest strengths. Moreover, the presence of both high- and low-achieving schools serving similar student populations within a compact geography creates an opportunity to disseminate best practices and ensure that schools learn from one another. This money will be used to fund a competitive grant process for establishing collaborative groups of schools that will be organized around key reform themes or areas of need, such as support for overage/under-credited (e.g., off-track) students or STEM. Funding will pay for release time for staff to participate in the cross-school collaboration, stipends for in-school staff who play mentoring roles, and professional development and supplies needed to ensure successful collaboration.

(4) Charters: Instructional Improvement Systems, $5MM. The effective use of data to drive instruction requires that LEAs have student-level data management systems that can be easily manipulated to generate information to help improve instruction. While DCPS already uses a functioning structure to support such activities, many charter LEAs do not have the same back-office infrastructure and data-system support. Therefore, OSSE will run a competitive grant process for LEA funding to either build instructional improvement systems or improve preexisting systems. LEAs without an instructional improvement system may submit a plan to develop a system that would allow data to be viewed at the student, classroom, grade, and school levels so that teachers, administrators, and support staff can view the relevant information needed to make critical decisions related to instructional improvement decisions and strategies. LEAs with adequate preexisting systems will be able to submit plans to integrate such systems with the new common standards or to improve the analytical functionality, quality and depth of preexisting systems. With 30 charter LEAs participating in this grant, if each chooses to submit an application for equal-cost projects and all applications are accepted, an estimated $167,000 per LEA would be available for this technology.

(5) DCPS: Education Leadership Degree, $2.8MM. In recognition of the need for strong and rigorously trained school leaders, DC plans to launch a leadership degree with a focus in Education, drawing on principles from leading MBA and MPA programs and training. This funding is designed to be a pass-through to DCPS, given the school district's concrete vision for the project. DCPS has already engaged in preliminary conversations about potential university partnerships to support the Education Leadership Degree. DCPS also plans to involve charter LEAs in the planning process and will make the program available to charter LEAs upon its Summer 2012 launch.

State-Level Projects

Considering that the above projects constitute nearly 90% of DC's proposed budget, the line items captured on the first page of this summary (lines 1-10), which account only for state-level projects, are not significant in financial scope. This is in large part because of the District's belief that LEA innovation will remain a key reform driver and will be energized by the opportunities presented by RTTT projects made possible by sub-

granted or supplemental funding to LEAs. Still, DC's RTTT plan includes five important state-level components. Project details for each initiative follow in Appendix A2.4.

(1) Statewide Growth Measure, $2.5MM. Although DC has a significant amount of raw data on student achievement through DC-CAS scores, there is currently no system for charter LEAs to track student growth against a comparison set of students and to determine teacher contribution to such growth. While the DCPS IMPACT system has a formula for calculating student growth, as well as a system in which to house such data, there remains a need for a system that aggregates such information for charter LEAs and allow for growth calculations. DC's efforts to achieve this goal will require OSSE to contract with a vendor that will aggregate and process data for use in evaluations.

(2) Standards Website, $1.0MM. Ensuring a successful transition to new standards is of critical importance for DC, which has historically maintained a strong commitment to high standards. As the District transitions to new standards, DC plans to seize the opportunity to make standards accessible and ensure that teachers, students, and parents understand the full relevance of such standards. OSSE will contract with a web designer to develop and launch an interactive website that will feature the new core standards and provide a one-stop source for materials and information about the common core standards within DC's specific educational context. This will include, for example, exemplars of student work in areas where the standard may be unclear. DC will also create materials designed to bridge the gap between old and new standards, such that teachers can best understand how to change instructional practices accordingly. Documents contained on the website will also include parent-friendly explanations of standards in multiple languages.

(3) Standards Entry-Points for Differentiated Learning, $700K. An important priority for DC in the Race to the Top application and beyond is ensuring that students with diverse learning profiles and special needs are able to access rigorous content. As DC transitions to a new set of standards, all students must have access to these standards. In pursuit of this goal, DC has already initiated conversations with other states to develop a document that will scaffold entry-points for students of all levels into the new standards. DC also intends to enter into cross-state collaboration in order to build upon preexisting experience in the creation of this entry-point guidance manual. A key function of this manual will be to ensure that DC teachers who serve students at all levels are able to differentiate instruction shortly after the new standards are released. OSSE also plans to work with a vendor to provide appropriate training on the ways the manual can be used to differentiate instruction. Additionally, DC plans to increase the functionality of SEDS, the special education data system, so that teachers can reference the new standards using a dropdown function when writing IEPs.

(4) Improved Online Data about Schools, $500K. DC recognizes the importance of providing accessible and easy to manipulate information about schools to parents, families and community members. OSSE will contract with a vendor to create a more user-friendly website from which users will be able to download aggregate-level data spreadsheets with statistics about students, teachers, and schools that are relevant to decision-making. The website will also allow OSSE to track what types of data users are downloading, as means of informing statewide research priorities and improving OSSE's research-ready data sets.

(5) Statewide Research: Data Sets, Online Request System, $435K. DC recognizes a need to take greater advantage of a broad level of research interest in DC's many reform initiatives. Specifically, DC can play a more important role in the generation of information that could further catalyze reforms through research-based efforts. To this point, streamlining access for researchers is an important DC RTTT initiative. OSSE will identify and create a portfolio of research-ready data sets, including assessment, enrollment, teacher and

financial data. OSSE will provide all state-level data stripped of personal identifiers in a simple, downloadable data format. This will allow local groups and researchers to provide better analysis of educational processes more quickly and more comprehensively than with currently available data. OSSE will also develop an online research request tool that allows researchers or outside organizations to easily apply for access to the portfolio of data sets. OSSE will publish a list of research priorities for DC and encourage submission of research findings related to these priorities. OSSE will provide requested data from local instructional improvement and longitudinal data systems to ensure research is supporting the evaluation of the effectiveness of instructional materials, strategies, and approaches for educating different types of students.

Implementation and Management Approach

Much of what is included in the above summary budget that is not sub-granted funding or supplemental funding for Participating LEAs reflects funding that is required to ensure the effective implementation and management of DC's Race to the Top projects. Details regarding plans for ensuring effective implementation and management are aggregated into a project budget entitled "OSSE Implementation Capacity" in Appendix A2.4. Management of DC's Race to the Top projects will be overseen by a new Race to the Top office within OSSE, headed by a Project Director and staffed with 7 additional people whose responsibilities will include both implementation and program management activities. Implementation oversight will be performed by a Fiscal Manager, a Reporting and Implementation Manager, a Grant & Contract Analyst and a Research & Data Manager. This team will ensure that the state meets RTTT reporting requirements, that LEAs receive adequate support in meeting reporting requirements, and that states and LEAs coordinate with other funding sources (such as SIG, Title I, or other ARRA funds) to ensure that funding is being deployed most strategically. Three Effectiveness Managers will be responsible for the execution and oversight of the RTTT initiatives mentioned above. These individuals will work directly with LEAs on the various initiatives and grant programs, will share best practices across all LEAs, and will provide ongoing updates on LEAs progress towards RTTT goals and performance measures outlined in this application.

Integration with Other Sources of Funding

The DC RTTT funds are one important piece of a comprehensive set of funding streams. District leadership has considered these funding streams within the context of its overall reform agenda. This has allowed DC to determine which funding streams can make significant differences in catalyzing and deepening specific reform priorities, bringing about lasting improvements to system performance. This approach has ensured a thoughtful, rigorous analysis of which priorities should be funded by Race to the Top as opposed to other sources of funding. Complementary funding streams to DC's Race to the Top funds include the following:

School Improvement Grant (SIG). The DCPS turnaround project outlined earlier was developed as an enhancement designed to deepen the impact of the School Improvement Grant funding. DC envisions using SIG funding in to cover costs of the three priority projects in Years 1 through 3: (1) Increased Capacity for the Office of School Improvement, (2) Prep Year Funding for Turnaround Teams, and (3) Differential Funding for Turnaround Schools. DC intends to apply for a waiver to "extend the period of availability of SIG funds until September 30, 2013," as the SIG notice of August 2009 indicated was possible, in order to ensure that funding can be strategically deployed over time. Race to the Top funds will be used to "top off" SIG funds each year and to fund costs in Year 4 so that, in combination, the two sources provide sufficient funding for an aggressive plan of intervention in the lowest-achieving schools. The table below outlines how this joint funding is intended to work together. More detail is available in Appendix A2.4.

Turnaround Funding	Year 1	Year 2	Year 3	Year 4	Total
Project Costs	$4,645,300	$5,585,300	$6,525,300	$6,055,300	$22,811,200
Projected SIG Funds	$4,166,667	$4,166,667	$4,166,667		$12,500,000
RTTT "Top Off"	**$478,633**	**$1,418,633**	**$2,358,633**	**$6,055,300**	**$10,311,200**

Statewide Longitudinal Data Systems grant (SLDS). DC received funding through the 2007 SLDS grant, which it has used to make strides in building a statewide longitudinal data system. Accomplishments include having nearly all DC students coded in the system with unique student identifiers. Despite challenges with its initial SLDS contractor, DCPS has adjusted course and has plans to hire a new partner to help finish the project. While Race to the Top funding will not be used to build the state's longitudinal data system, DC plans to continue to deploy SLDS funds and other state and local funds as necessary to continue building a statewide data system that will support the better use of student data throughout the state.

Teacher Incentive Fund grant (TIF). A TIF grant recipient since 2006, DC has used TIF funds to support rewarding teachers for their effectiveness in raising student achievement. Funds support the school district's Together Everyone Achieves More (TEAM) awards program, which represents a bold DCPS partnership with the Washington Teachers' Union and New Leaders for New Schools, a non-profit, education reform organization committed to strengthening public education.

TEAM offers DCPS school staff the opportunity to receive significant monetary awards and national recognition for helping students achieve dramatic academic gains. In addition to TIF, funding for TEAM is provided by DCPS and the generosity of private philanthropic funders. Since TEAM was launched in September 2007, 10 DCPS schools have won TEAM awards, over $1.5 million has been awarded, and over 400 individuals have received bonuses.

In addition to DCPS, a number of DC charters have received TIF funding through New Leaders for New Schools' Effective Practice Incentive Community (EPIC), an initiative in which principal and teacher incentive pay is linked to the sharing of effective practices. EPIC identifies schools with dramatic student achievement gains and provides school leaders in these schools with financial awards in exchange for sharing practices that have helped lead to such gains.

Though parameters for the TIF grants have not been released for the upcoming fiscal year, DC is well-positioned to make optimal use of these funds when they become available. DC's in-place systems and processes already shed light on teacher effectiveness and can inform measures used to apply TIF monies. Some options for use of TIF funds include intra-district transfer bonuses for effective or highly-effective teachers to work in turnaround schools and funding of performance pay for effective and highly-effective teachers.

Investing in Innovation Funds (I3). DC is one of the nation's most innovative city-states, with a robust community of innovation-oriented LEAs – both charter and traditional – that operate in close partnership with many leading education non-profits, many of which are based in DC. As a state with a penchant for innovative ideas and a non-profit sector committed to increasing student achievement, conversations about I3 grants occurred throughout the Race to the Top application process. The projects included above reflect the careful prioritization of the DC team with I3 in mind. Though plans for DC's I3 application are still underway within and among DCPS, charter LEAs, and the non-profit sector, DC is confident that I3 applications will serve as a strong complement to what has been through Race to the Top.

Title I. As a state with a high proportion of students living in poverty, DC must always make thoughtful use of Title I funds. Several Title I initiatives currently underway in DC are supported by Race to the Top initiatives outlined in this application. In particular – and given the additional ARRA funds available through Title I – many LEAs are implementing their own individualized reforms, as they have been encouraged to use Title I funds in ways that align with the core reforms associated with ARRA. Planned uses of Title I funds by LEAs include additional school turnaround and school improvement initiatives (such as DCPS' "Catalyst Schools" project and Friendship Public Charter School's investment in dedicated school improvement staff), secondary reading and mathematics interventions in selected schools, extended learning time programs, additional professional development (particularly in schools in improvement), supporting parental involvement activities, and expanding early childhood education programs.

Most Title I schools in DC operate school-wide programs, which allow for the use of Title I funds to upgrade their entire educational program. At the state level, funds reserved for administration will be used in part to fund activities within the statewide system of support; the persistently lowest-achieving schools and schools in restructuring will receive priority in the provision of resources and/or other support. In addition, funds allocated to schools in improvement, or under corrective action or restructuring through the state's required 4% 1003(a) reservation are being used to support both the development and implementation of school improvement strategies. With its funds reserved from the ARRA Title I allocation under Section 1003(a), the state is prioritizing funding LEAs that propose using the funds to perform thorough analyses of school needs, coupled with thoughtful strategic plans for future improvement activities (i.e., based upon those needs).

A detailed overview of how RTTT aligns with DCPS' plans for use of ARRA funding provides a strong example of the level of coordination of the DC RTTT plan with LEA stimulus-funded initiatives:

- *Innovation in Out-of-School Time, $4.6MM.* DCPS plans to use stimulus dollars to increase the amount of time its students spend on academics. DCPS is one of the only districts in the country with full-time afterschool coordinators across the system. More importantly, these coordinated are held accountable for bringing high quality afterschool programs to their schools and managing their performance. Coordinators work with Community Based Organizations on enrichment programs, as well as manage the Academic Power Hour that occurs after the school day and the Saturday Scholars program, both of which add critical learning time to the school week. All of these programs are made possible through stimulus funds. As a result, funds for out-of-school-time were not included in the DC RTTT application, as it was clear that DCPS and other LEAs have other sources of funding for this work.

- *School Turnarounds for Failing Schools: Catalyst Schools Project, $2.9MM.* In 2009, DCPS Chancellor Rhee introduced the DC Catalyst Project as one of many initiatives designed to disseminate best practices throughout the city. After a rigorous application process, 13 schools from across DC were asked to participate in a transformation process, through which each school would adopt a school-wide theme program. Schools chose from among three themes – STEM, Arts Integration, and World Cultures – with the ultimate goal of ensuring a rigorous and relevant school for students. Through the joint leveraging of private and federal dollars with stimulus funds, DCPS will fund staff to support the development and implementation of DC Catalyst schools for one planning year and two operational years, after which schools will incorporate sustainability plans into individual school budgets. Related to RTTT, this funding will ensure that Catalyst schools, some of which are in the bottom 20% of schools as identified in this notice, receive the support to implement a turnaround intervention as needed (RTTT Section E2).

- *Advancing Teaching and Learning: Professional Development and the Teaching and Learning Framework, $4.7MM.* DCPS has launched a new Teaching and Learning Framework that clearly articulates what excellence in teaching looks like. Stimulus dollars, in combination with other funds, will be used to support the core position of a professional development specialist in schools, allowing DCPS to provide job embedded professional development in pursuit of teaching excellence. This position will ensure that the IMPACT evaluation system leads to improved outcomes via aligned professional development (RTTT Section D2). These specialists will also be instrumental in supporting the launch of the Individualized PD Platform (RTTT Section D5), which will be made available to all LEAs.

- *Secondary Reading and Math Interventions, $2.7MM.* DCPS plans to target students in all high schools who need reading intervention. Efforts will ensure that such students receive individualized reading instruction that is developmentally appropriate. This important initiative supports overall RTTT goals, especially where DC's growth in reading has significant lagged math growth. DCPS also plans to continue to systematically focus on targeting students for secondary math interventions based on DC-BAS and DC-CAS scores, giving individualized instruction to these students to address deficiencies.

- *Early Childhood Reforms, $2.1MM.* DCPS plans to expand seats in pre-kindergarten classrooms by 2,000 over five years to meet the growing need of high quality early education in the city, using 2010 stimulus funding to create 15 more pre-school and pre-kindergarten classrooms which will serve an additional 260 students. This aligns with the overall RTTT goal of increasing the number of quality seats for students across DC, and ensures that students will reach school ready to learn.

- *School Improvement and Restructuring (Title I Required Set-Aside), $2.3MM.* As noted above, DCPS plans to use stimulus funds to support schools in "needs improvement" and "restructuring" status. In particular, DCPS plans to use stimulus funds to support a transition to a Pre-K to 8 school model by funding professional development on middle grades instruction. Plans also include implementation of an advisory period that provides one-to-one guidance to each student from an adult in the building. Moreover, DCPS will continue its Full-Service Schools (FSS), which require extra staff such as a family care coordinator and a mental health counselor. This funding will supplement SIG and RTTT funding by ensuring that adequate school supports exist as DCPS moves to turn around its persistently lowest achieving schools.

- *Grants Management and Accountability (Title I Required Set-Aside), $1.2MM.* As noted in Section A2, DC is undergoing a statewide movement towards greater efficiency in managing grants. Thus, just as OSSE will be implementing an improved grant-management platform (see OSSE Implementation Capacity, Appendix 2.4), so too will DCPS, ensuring increased accountability in grants management for all federal grants, including the RTTT application.

- *Parental Involvement (Title I Required Set-Aside), $0.2MM.* Involving families in student success is an important element of DC's reform agenda. DC held multiple community meetings to give parents the opportunity to provide input into the Race to the Top application. In addition, ensuring effective communication regarding the transition to new standards and assessments has been expressly discussed and budgeted for in the RTTT application. DCPS' commitment to funding school-created innovations in parental involvement through stimulus funding supplements this effort, by ensuring a closer relationship between school and family.

- *Teacher Quality (Title I Required Set-Aside), $1.2MM.* DCPS plans to use stimulus funds to support the recruitment and attention of highly qualified teachers. In parallel, the RTTT application ensures greater access for all LEAs to a pool of not just "highly qualified" teachers, but also teachers deemed effective and highly effective. This will be achieved through the funding of effective teacher pipelines.

- *Homeless Program and Support for Neglected and Delinquent Students and Other Title I (Title I Required Set-Aside), $1.4MM.* DCPS plans to use stimulus dollars for increased capacity for case management, help with residency and enrollment initiatives, as well as to address real-time student needs. Ensuring that schools have the ability to collaborate on best practices for serving unique student populations through the planned RTTT school collaboration structures will further support this effort.

IDEA Part B Stimulus Funds. While some states may have considered the use of IDEA Part B to be separate from a reform agenda, DC believes that the quality of special education services is critical to the effectiveness of reforms and their long-term sustainability. This is particularly true for DCPS, which spends over $150MM per year on the 2,400 students in private special education placements. Stimulus funds have been planned to ensure that related service providers – such as psychologists, social workers, speech-language pathologists, and more – are able to continue working with students to achieve their IEP goals within their general education classrooms. In addition, stimulus funds will be used to improve special education data collection by ensuring that all components of a student's specialized needs are accurately tracked and reported in the Special Education Data System (SEDS), including data related to private placements. Finally, stimulus funds will be used to improve data systems for Early Stages, the new state-of-the-art early childhood intervention center in DC. This data will ensure better processes for the early identification of learning issues, with a broader goal of reducing the over-identification of students for special education. The RTTT initiative to ensure entry-points to standards for students at all ability levels – as well as the planned connection of the new standards to the SEDS database – supports this effort to increase access to general education curriculum for students with special needs. In addition, the planned RTTT contract for a state-level analysis of special education information and service gaps (see OSSE Implementation Capacity plans, Appendix A2.4) further supports the work being done at the LEA level to provide access to a Free and Appropriate Public Education (FAPE) for all students.

Stimulus Funds For Preserving Resources and Increasing Equity. Many districts needed the windfall of stimulus funding to maintain adequate baseline education for students. This is also the case for DC, but there is an important additional consideration: ensuring that students in high-poverty schools have access to the arts and to programs for good mental and physical health is fundamental to DC reform efforts. In 2008, DCPS changed its school budgeting formula in order to prioritize equity, implementing a "Comprehensive Staffing Model" through which each school is required to provide art, music, physical education, and counseling. Stimulus dollars are to be used to ensure maintenance of these steps forward in equity. RTTT plans to ensure that OSSE thoughtfully assesses the effectiveness of teachers in high poverty schools further supplements this effort, ensuring that teachers in DC not only represent diverse content areas, but are also effective and highly effective in their teaching.

Title 5B Dissemination Grant Funds. These funds have been used by LEAs, both charter and DCPS, to support the transfer of best practices. Thirteen schools are currently engaged in two collaborative funded by this effort: the Power of Planning (POP) collaborative and the DC Collaborative for Change (DC3). These programs are the foundation upon which DC plans to build the PLaCEs program, as school leaders have noted that they have had a dramatic impact on instruction and are positioning schools for increased student achievement. Having

current participants of the Dissemination Grants programs support the implementation of PLaCEs will ensure that lessons learned about effective execution are captured and collaboratives are able to hit the ground running.

State and Local Funds. As stated in the application, DC has demonstrated a strong commitment to providing funding necessary to support aggressive education reform and student achievement. DC will continue to use its comparatively high per-student formula funding amount strategically to increase the impact of funding by placing a priority on pushing this funding down to the LEA, school, and classroom level as much as possible. This allows LEAs to put the funds where they are truly needed. Charter schools have total autonomy on how they use their local funds, enabling them to be creative and nimble in adjusting their resource strategies. DCPS, on the other hand, has placed a large priority in recent years on streamlining the central office to make it more efficient so that resources are not tied up in maintaining a large bureaucracy, but rather fund reform-focused central office investments, like building strong instructional improvement systems and a high-quality professional development program. As a result of streamlining central office functions, the majority of DCPS funds actually reach local schools, working to improve student achievement at the ground level by supporting such priorities like the comprehensive staffing model discussed above.

In addition, DC will continue to use interagency innovation funding in the Office of the Deputy Mayor for Education to coordinate wraparound services and evidence-based programs, particularly critical in high-need and turnaround schools. These funds enhance and align with local funds in other agency budgets, such as the Department of Health and the Department of Mental Health, that are dedicated to making available a comprehensive array of services and programs to support youth and families. Finally, the District plans to modernize the learning environment of every DCPS classroom within the next five years under a comprehensive schools master facilities plan. DC will strategically align its school modernization plan and the approved funding associated with the modernization of all schools with its turnaround efforts to ensure that as new programs and schools are opened, the facilities support academic and programmatic needs. The Office of the Deputy Mayor for Education will work with the school facilities agency and DCPS to coordinate planning for turnaround schools with a goal of accelerating those schools in the modernization plan pipeline.

Philanthropic Funds. DC is fortunate to have a community of philanthropists that is deeply invested in seeing the planned reforms succeed and student achievement increase, as evidenced by the strong letters of support included with this application. To date, incredibly generous local funders – including individuals, foundations, and corporations – have supported a variety of innovations that either laid the groundwork for, or will supplement, Race to the Top plans. These investments have spanned both charter LEAs and DCPS, as well as the support organizations feeding DC's human capital pipelines and delivering essential data tools (among other things). Of particular note are the following recent investments that are in direct alignment with Race to the Top goals.

The DC Schools Fund, a $23.8 million fund comprising investments from both local and national funders managed by New Schools Venture Fund, is making strategic investments in the charter sector over the next 3.5 years. Very much in line with DC's Race to the Top Theory of Change, this fund aims to reduce the number of low-achieving schools, catalyze improvements in mid-performers, and support the replication of high-achievers. Investments to date have focused primarily on human capital; performance and data management; and advocacy, parent communication, and organizing.

DCPS, with the support of the DC Public Education Fund and DC Education Compact (now closed), has received commitments from several local and national funders for several key initiatives, including:

- *Human Capital:*
    - Design of IMPACT version 1.0 and roll-out.
    - Performance pay system for highly effective teachers (pending approval of DCPS' proposed collective bargaining agreement).
- *Data and Accountability:*
    - A pilot of the Achievement Network model in 11 DCPS schools, as well as support to design DCPS' system-wide school-based data capacity-building model.
    - Planning and capacity-building for the design of an individualized, online PD system aligned with IMPACT that will be built upon with Race to the Top funding to become the full Individualized PD Platform outlined in section D5.
- *Turnarounds:*
    - Planning years for external providers that are currently in their first year of turning around some of DCPS' lowest-achieving high schools (Friendship Public Charter School and Friends of Bedford), a strategy that proved successful in the pilot and that is thus being proposed in this application.
    - A pilot of differential funding for turnaround schools of an additional $1K per student, a strategy that proved successful in the pilot and that is thus being proposed in this application.
    - Planning year of the Catalyst Schools initiative and support of the program's first two years of implementation costs – allowing Catalyst schools to complete initial implementation while holding their core budgets harmless.

Summary

Within the context of other funding sources, DC's Race to the Top application is unique in its commitment to increasing school quality at all levels, in a targeted and strategic way that leverages diverse federal and private funds directed toward reform initiatives. Ultimately, the budget outlined herein reflects DC's priority: to provide LEAs with strong guidance, support, and information systems that enable them be drivers of dramatic increases to student achievement. The application reflects DC's strong commitment to turning around its persistently lowest-achieving schools, to providing tools and systems for increasing the effectiveness of all schools in the system, and to giving high performing schools the resources needed to expand. An investment of $112.5MM in Race to the Top funding will allow DC to execute successfully on its plans, to make dramatic steps in closing the achievement gap for its students, and to serve as a national model for reform.

Appendix A2.4

Project-Level Budget Tables & Narratives

Appendix A2.4 Project Level Budget Tables & Narratives
OSSE Implementation Capacity: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: OSSE Implementation Capacity
Associated with Criteria: All Assurances
(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	$637,000	$637,000	$637,000	$637,000	$2,548,000
2. Fringe Benefits	$114,660	$114,660	$114,660	$114,660	$458,640
3. Travel					
4. Equipment	$610,000				$610,000
5. Supplies					
6. Contractual	$1,000,000	$1,000,000	$750,000	$750,000	$3,500,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$2,361,660	$1,751,660	$1,501,660	$1,501,660	$7,116,640
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$2,361,660	$1,751,660	$1,501,660	$1501,660	$7,116,640

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

OSSE IMPLEMENTATION CAPACITY: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
As noted in Section A2 of the application, OSSE plans to develop a Race to the Top office to oversee all Race to the Top project execution and coordination. This office will actively track data on performance measures, ensure that LEAs are positioned to execute LEA-level projects, and support LEAs in meeting reporting requirements. This office will also oversee all state-level projects and manage the multiple contracts with vendors.

1) Personnel

The following requested personnel will be hired as employees of this project for the four-year duration of the project:

- **Project Director (1),** 100% FTE, $95,000
  - Oversee all RTTT initiatives and coordinate across programs, offices, and agencies.
  - Oversee the RTTT Executive Office and report directly to the Deputy Chief of Staff of OSSE.

- **RTTT Fiscal Manager** (1), 100% FTE, $85,000
  - Act as fiscal manager responsible for overseeing fund distribution to LEAs and ensuring compliance with financial tracking and reporting requirements
  - Report to the Project Director.

- **Reporting & Implementation Manager** (1), 100% FTE, $85,000
  - Ensure that OSSE and LEAs are using RTTT funds appropriately and effectively and meeting the objectives of the RTTT grant. This individual will be responsible for monitoring all ARRA RTTT programmatic implementation and meeting implementation reporting requirements.
  - Report to the Project Director.

- **Grant & Contract Analyst** (1), 100% FTE, $72,000
  - Provide back-office, data analysis support to the fiscal manager and implementation manager.
  - Manage all contracts associated with RTTT initiatives.
  - Report to the Project Director.

- **Effectiveness Managers,** (3), each 100% FTEs, $75,000
  - Manage components of the RTTT grant related to school, principal, and teacher effectiveness across all assurance areas.
  - Serve as the main points of contact with the District's LEAs.
  - Publish requirements for teacher and principal evaluations and ensure LEAs meet these requirements, gather information on teacher and effectiveness as submitted by LEAs, conduct analysis on effectiveness to determine equitable distribution and effectiveness of hard-to-staff areas, and review LEA plans for addressing effectiveness gaps.
  - Outline and gather information required from LEAs for Prep Program Scorecards; develop Prep Program Scorecards with website contractor; work with certification programs on understanding the scorecards and consequences.
  - Calculate the list of persistently lowest achieving schools annually and make it public, work with DCPS and PCSB to ensure they get plans in place for each school on the list; review plans from DCPS and fund specific teams of people in a "planning year" before a turnaround; review plans from DCPS and fund additional monies for culture-changing solutions at turnaround schools; facilitate quarterly discussions between the Mayor's Office responsible for Modernization Plan and the DCPS team responsible for planning and executing turnarounds.
  - Convene the New Standards Working Group.

- Convene a P-20 Consortium.
- Partner with DCPS on the Educational Leadership Degree
- Administer the competitive grant process for teacher pipeline programs.
- All three positions report to the Project Director.

- **Research & Data Manager** (1), 100% FTE, $75,000
  - Provide data necessary to develop the New Standards Website; develop the new OSSE Website with data available for stakeholders; support the launch of Prep Program Scorecards; develop an online research request tool; identify and create a portfolio of research-ready data sets; publish a list of research priorities for DC and encourage submission; sort data from the Individualized PD Platform to make research-ready.
  - Report to the Project Director.

The following additional responsibilities will be folded into current roles within the OSSE assessment office at no-cost:

- Develop vendor contract for revised DC-CAS
- Hire vendor to work on revision of DC-CAS for administration in 2012 and oversee management of this contract
- Create a list of vendor possibilities for interim assessments for LEAs
- Review LEA proposals for using funding for interim assessments
- Convene and Manage Student Growth Measure Task Force and the Human Capital Task Force to meet over life of grant
- Oversee the build-out of a system to track growth for all students (i.e., manage vendor)
- Oversee the piloting of new assessments by LEAs
- Identify preferred vendors capable of meeting the needs of LEAs for data-driven instruction and submit list to LEAs
- Supply LEAs with list of preferred vendors for data systems support and development

The above roles are directly built upon specific responsibilities that emerge in the projects identified in DC's RTTT application Sections B through E, such that each program manager is responsible for overseeing the execution of RTTT initiatives.

2) Fringe Benefits

- Fringe benefits are calculated at 18%
- For an annual personnel cost of $637K, this amounts to $114.7K annually

3) Travel

- N/A, positions are local and some travel allowances are built into existing funds that may be used for visits to other states as needed.

4) Equipment

- In order to successfully manage the RTTT grant, OSSE must move beyond its current homegrown system to a more sophisticated grants management software
- OSSE will also need additional technology in terms of laptops for its RTTT staff
- Equipment is any tangible, nonexpendable, personal property having a useful life of more than one year and an acquisition cost of $5000 or more per unit (34 CFR 80.3).

Equipment	Cost of Item	Item Description	Total
Grants management software (1): One federal grants management software package license will be needed to support the effective administration of RTTT and coordination with other federal grant funds	$600,000	Federal grants management software	$600,000
Laptop computers (4): Four laptop computers and printers will be needed to support the work of the RTTT office; the remaining four computer/printer combinations will come from current supply	$2,500	Laptop computers and printers	$10,000

5) Supplies

- N/A, office supplies for OSSE are available through general operating funds

6) Contractual

- OSSE plans to utilize $3.5MM in professional service contracts for additional capacity; $1.0MM in years 1 and 2, and $750K in years 3 and 4
- These contracts will involve:
  - One $1M contract over the first two years for consulting support to build on OSSE's current special education knowledge base and data systems and pinpoint the services needed most by special education students in LEAs. Investing in these services and programs will allow for the most students to remain in their local schools and lead to a long-term education and budgetary impact on DC's special education system.
  - Additional short-term (e.g., 1-2 month) contracts for:
    - Collection of data from DC IHEs on preparation level of DC graduates
    - Development of Prep program Scorecards
    - Graphic design and printing of booklets and brochures
    - Analysis of effectiveness measured against indicators of poverty, determining 25% of schools for which these are most highly correlated
    - Analysis of state-wide effectiveness by content area, determining which content areas are "least effective"
- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR.

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- Year 1: $2.4MM
- Year 2: $1.6MM
- Year 3: $1.5MM
- Year 4: $1.5MM
- Total: $7.1MM

Standards Website: Project-Level Budget Table

Budget Part II: Project-Level Budget Table Project Name: Standards Website Associated with Criteria: B3 (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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	$1,000,000				$1,000,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$1,000,000				$1,000,000
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$1,000,000				$1,000,000

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

STANDARDS WEBSITE: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
The goal of the OSSE Common Core Standards website is to make the standards come alive and to explain how they will be used on a daily basis in the classroom, as well as to provide a bridge between the current DC standards and the common core standards. LEAs will also receive formula funding for school and community implementation. The website will contain information for teachers, administrators, parents, and students, including:

- Materials for teachers/administrators: model standards-based lessons, annotated student exemplars, and online instructional videos
- Materials for students: sample questions on the different standards, an explanation of how the standards connect to their career/college readiness, and an overview of the standards in student-friendly language
- Materials for parents: an introduction to the Common Core, tips on how to monitor your child's progress in mastering the standards, and information on the re-alignment of the DC-CAS. All materials be available in several different languages.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A

3) Travel
- N/A, local supervision

4) Equipment
- N/A

5) Supplies
- N/A, office supplies for OSSE are available through general operating funds

6) Contractual
- OSSE will contract with a web designer to develop and launch a clear, coherent website featuring the new core standards (for example, www.corestandardsdc.org) to provide a one-stop source for materials and information about the new standards in the DC context: $500,000 over 6 months
- OSSE will contract with an outside vendor to create materials for website including bridge documents, documents for parents and other community members, and more: $500,000 over 6 months
- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs

- $1,000,000

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- As there are no indirect or LEA-related costs, the total four-year cost is $1,000,000

Standards Entry Points: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: Standards Entry Points
Associated with Criteria: B3
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	$700,000				$700,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$700,000				$700,000
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$700,000				$700,000

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

STANDARDS ENTRY POINTS: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
OSSE wants to ensure that all students are engaged and challenged by the standards. Many states have crafted documents that help teachers to differentiate instruction based on individual student differences. This manual will help teachers to address the standards, no matter what the skills and needs of their students. Additionally, ensuring that the Common Core standards are available in the Special Education Data System will be help IEP writers connect IEP's to the new standards.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A, see implementation plan

3) Travel
- N/A, local supervision

4) Equipment
- N/A

5) Supplies
- N/A, office supplies for OSSE are available through general operating funds

6) Contractual
- OSSE will work with a state partner to create and print a manual providing a framework and guidance around entry points to the core standards that describes the progression of skills and knowledge for each standard targeted towards meeting the needs of students with disabilities, at-risk students, and high-needs students, similar to the Massachusetts Curriculum Frameworks for Students with Disabilities. Many states have created similar documents, and DC is interested in learning from their experiences. The money will be used to update the manual to connect to the Common Core standards and to revise the document to take into account the specific situation in DC: $200,000 over 8 months (2 months each for Math, ELA, Science and Social Studies)

- OSSE will contract with a vendor to provide teacher training around the manual and the ways it can be used for instructional differentiation and IEP creation: $200,000

- OSSE will contract with a vendor to incorporate the language used in the manual document into SEDS (Special Education Data System). The common core standards entry points will be provided as a dropdown menu so IEP writers can take them into account while writing IEPs: $300,000 over 4 months

- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR.

Explanation:

These cost estimates come from discussions with the Massachusetts Department of Education, which has written a similar framework for students with disabilities.

7) Training Stipends

- N/A

8) Other

- N/A

9) Total Direct Costs

- $700,000

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- As there are no indirect or LEA-related costs, the total four-year cost is $700,000

Instructional Improvement Systems: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: Instructional Improvement Systems
Associated with Criteria: C3
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual					
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$2,000,000	$1,000,000	$1,000,000	$1,000,000	$5,000,000
13. Total Costs (lines 9-12)	$2,000,000	$1,000,000	$1,000,000	$1,000,000	$5,000,000

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

INSTRUCTIONAL IMPROVEMENT SYSTEMS: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
Charter LEAs face many challenges connected to data analysis. For many charter LEAs, data is isolated in several different systems, all of which lack the ability to provide student level data to teachers. Additionally, many systems lack the ability to analyze assessment and standards-based classroom performance data according to standards in a way that will inform instruction. OSSE seeks to provide charter LEAs with instructional improvement system that will provide teachers with student-level data. An instructional improvement system enables teachers/administrators to act on information and use their unique expertise to target instructional materials and resources.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A, see implementation plan

3) Travel
- N/A, local supervision

4) Equipment
- N/A

5) Supplies
- N/A, office supplies for OSSE are available through general operating funds

6) Contractual
- N/A

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs
- N/A

10) Indirect Costs
- N/A

11) Funding for Involved LEAs
- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- The competitive grant will be structured so that any Participating Charter LEA with a proposal for how to use a portion of this grant in accordance with RFP guidelines set by OSSE in Summer 2010 can submit an application by Fall 2010.

- There will be no minimum or maximum number of grants possible.
- Grants will be awarded in late Fall 2010 for implementation of instructional improvement systems to begin in Summer 2011.
- LEAs are free to design their own systems, however, discussions with local vendors have revealed the approximate costs outlined below.
- LEAs will receive funds in excess of the yearly costs outlined below, but will need to collaborate in order to cover the overall system costs. OSSE believes that this method of funding will encourage LEA collaboration. LEAs will be enticed to work with each other and purchase from a single vendor; LEAs who have designed their own systems will have a financial incentive to share with others.

Overall System Costs	Yr 1	Yr 2	Yr 3	Yr 4	4 yr total
Development	$100,000				$100,000
Training	$100,000				$100,000
Project Management	$30,000				$30,000
Testing/Support/Other	$95,000				$95,000
TOTAL	$325,000				$325,000

One-time LEA Costs	Yr 1	Yr 2	Yr 3	Yr 4	4 yr total
Professional Development	$3,000				$3,000
Year 1 System Costs	$22,000				$22,000
Support	$15,000				$15,000
TOTAL	$40,000				$40,000

Ongoing LEA Costs	Yr 1	Yr 2	Yr 3	Yr 4	4 yr total
Professional Development		$2,000	$2,000	$2,000	$6,000
System Costs		$18,000	$18,000	$18,000	$54,000
Support		$10,000	$10,000	$10,000	$30,000
TOTAL		$30,000	$30,000	$30,000	$90,000

13) Total Costs

- Year 1: $2MM
- Year 2: $1MM
- Year 3: $1MM
- Year 4: $1MM
- Total: $5MM

Enhanced Online Data: Project-Level Budget Table

Budget Part II: Project-Level Budget Table Project Name: Enhanced Online Data Associated with Criteria: C2 (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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	$250,000	$150,000	$50,000	$50,000	$500,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$250,000	$150,000	$50,000	$50,000	$500,000
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$250,000	$150,000	$50,000	$50,000	$500,000

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

ENHANCED ONLINE DATA: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
Because of the wide variety of school choice options, a number of sites present school-level data to allow parents to make comparisons, however, OSSE wants to provide additional information for parents, researchers and other key stakeholders. A user-friendly website that offers aggregate-level data will help engage and inform community members and key stakeholders. OSSE will also provide training to community members to help enable them to understand how this data can help them make more informed decisions.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A, see implementation plan

3) Travel
- N/A, local supervision

4) Equipment
- N/A

5) Supplies
- N/A, office supplies for OSSE are available through general operating funds

6) Contractual
- OSSE will contract with a vendor to create a new, user-friendly website that allows key stakeholders to more easily access data through interactive web functions. Data will be displayed in a choice of graphic displays; spreadsheets can be uploaded into Excel, and data can be analyzed at the school, LEA, and state level, aggregated or by NCLB subgroup: $150,000 for the first year and second year, and $50,000 in subsequent years – The first phase of this project is to be completed by Fall 2011.

- OSSE will contract with a vendor to provide additional data to key stakeholders including parents, teachers, and researchers. Users will be able to download aggregate-level spreadsheets on data including truancy, graduation, attendance, AYP status, and more. The website will add additional school-level data including, at minimum, information on Highly Qualified Teachers, SAT and NAEP scores. The website will display national and state averages to allow for comparisons. The website will allow OSSE to track what types of data users are downloading to get an idea of statewide research priorities: $100,000 – This project is to be completed by Fall 2012.

- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR.

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs
- $500,000

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- As there are no indirect or LEA-related costs, the total four-year cost is $500,000

Statewide Research Tools: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: Statewide Research Tools
Associated with Criteria: C3
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	$135,000	$100,000	$100,000	$100,000	$435,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)	$135,000	$100,000	$100,000	$100,000	$435,000
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$135,000	$100,000	$100,000	$100,000	$435,000

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

STATEWIDE RESEARCH TOOLS: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
OSSE wants to encourage outside researchers (both at universities and nonprofit organizations) to collect data and present their findings. Additionally, OSSE will be able to help focus researchers on its research priorities including the effectiveness of instructional materials and strategies and approaches for educating different types of students. An online data-request tool will allow researchers to request specific information and provide OSSE with important information to gauge community research priorities. It also serves as a monitoring tool for OSSE and allows the state to ensure that researchers have obtained proper authority and adhere to pre-defined parameters for data-use and research reporting. Research-ready data sets ensure that OSSE can quickly respond to many researcher requests for data.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A, see implementation plan

3) Travel
- N/A, local supervision

4) Equipment
- N/A

5) Supplies
- N/A, office supplies for OSSE are available through general operating funds

6) Contractual
- OSSE will contract with a vendor to develop an online research request tool that allows researchers or outside organizations to easily apply for access to the portfolio of data sets: $35,000 – This project is to be completed by Fall 2010.

- OSSE will contract with a vendor to identify and create a portfolio of research-ready data sets, including student achievement, enrollment, teacher and financial data. That same vendor will update the information and regularly publish a list of research priorities: $100,000 per year – This project is to be completed by Fall 2011 and updated annually.

- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR.

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs
- $435,000

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- As there are no indirect or LEA-related costs, the total four-year cost is $435,000

State Growth Measure: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: State Growth Measure
Associated with Criteria: D2
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual	$1,000,000	$500,000	$500,000	$500,000	$2,500,000
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs					
13. Total Costs (lines 9-12)	$1,000,000	$500,000	$500,000	$500,000	$2,500,000

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

STATE GROWTH MEASURE: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
The task of aggregating student data for students in LEAs outside of DCPS (i.e., charter LEAs) is complex, and the additional step of linking student growth to specific teachers in a city with high mobility rates and a variety of teaching models is still more complicated. OSSE will contract with a vendor over a four-year period to ensure that the growth analysis of data for charter LEAs in conducted in a way that maximizes economies of scale and makes use of the formula and groundwork already established by DCPS. At the end of the four-year timeframe, OSSE will evaluate whether the analysis can be adopted in-house (i.e., within OSSE) or whether additional funds will be needed from within the state budget to support an ongoing vendor partnership.

1) Personnel
- N/A. Personnel overseeing this initiative at the state level are included in the OSSE Implementation Plan Budget (page 1-5 in this Appendix).

2) Fringe Benefits
- N/A

3) Travel
- N/A

4) Equipment
- N/A

5) Supplies
- N/A

6) Contractual
- Products and Services to be Provided:
    - A database to house student DC-CAS data for 2009 and 2010 for all DC students
    - An analysis of growth for students in charter LEAs, using the entire pool of DC students as the benchmark group (i.e., to determine whether students "beat the odds" for projected gains)
    - A process and implementation plan for roster validation
    - A process for calculating teacher impact on student growth
- Cost:
    - The primary cost of building the database with student data and creating ongoing processes is front-loaded at $500K in Year 1 of the project.
    - For every year (including Year 1), the budget includes an ongoing cost for conducting analyses and calculations using validated rosters. This cost is estimated at $500K per year.
    - The total project cost is $2.5MM (Year 1 costs of $1MM, followed by an annual cost of $500K in Years 2 through 4).
    - This cost has been benchmarked against the cost that DCPS incurred to
- The State will follow all DC procurement procedures, which are consistent with 34 CFR Parts 74.40 - 74.48 and Section 80.36 of EDGAR

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs

- $2.5MM

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A, this is a state-level project

12) Supplemental Funding for Participating LEAs

- N/A, this is a state-level project

13) Total Costs

- Year 1: $1MM
- Year 2: $500K
- Year 3: $500K
- Year 4: $500K
- Total: $2.5MM

Teacher Pipelines: Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: Teacher Pipelines
Associated with Criteria: D4
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual					
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$1,500,000	$2,500,000	$2,500,000	$2,500,000	$ 9,000,000
13. Total Costs (lines 9-12)	$1,500,000	$2,500,000	$2,500,000	$2,500,000	$ 9,000,000

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

TEACHER PIPELINES: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
The funding for teacher pipelines is based on the Theory of Change that DC must recruit several hundred effective and highly effective teachers over the next few years if the District is to dramatically alter the current portfolio of school options. Thus the DC RTTT application provides for the launch of teacher pipeline models through a competitive grant process targeted toward programs that will increase the effectiveness of teachers, especially in hard-to-staff areas. Among the specifications will be:

- Preference for programs that meet the bar for alternative certification as outlined in D1, thus creating more alternative pipelines;
- Preference for programs that ensure that teachers are trained in a way that will lead to measurable effectiveness (e.g. by being trained in a high-achieving school); and
- Preference for programs that bring in teachers with a strong likelihood of effectiveness in hard-to-staff areas, especially STEM and special education.

1) Personnel

- N/A, personnel overseeing this initiative at the state level are included in the OSSE Implementation Capacity Budget

2) Fringe Benefits

- N/A

3) Travel

- N/A

4) Equipment

- N/A

5) Supplies

- N/A

6) Contractual

- N/A

7) Training Stipends

- N/A

8) Other

- N/A

9) Total Direct Costs

- N/A

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A

12) Supplemental Funding for Participating LEAs

- Because this funding will go to Participating LEAs on a competitive basis, it is considered "Supplemental Funding for Participating LEAs."
- The competitive grant will be structured so that any Participating LEA with a proposal for how to use a portion of this grant in accordance with RFP guidelines set by OSSE in Summer 2010 can submit an application by Summer 2010.
- Grants will be awarded in two rounds: Summer 2010 and Spring 2011, for launch in the summers of the same year. LEAs can apply for a multi-year grant.
- There will be no minimum or maximum number of possible grants.
- Costing for this project was based on feedback from DCPS on teacher pipeline costs, as well as input from high-performing charters about costs to sustain residency models that were piloted in the 2009-2010 year (and that are yielding effective teachers).

13) Total Costs

- Year 1: $1.5MM
- Year 2: $2.5MM
- Year 3: $2.5MM
- Year 4: $2.5MM
- Total: $9MM

Education Leadership Degree: Project-Level Budget Table

Instructions:
For each project the State has proposed in its Budget Summary Narrative, the State should submit a Project-Level Budget Table that includes the budget for the project, for each budget category and each year of the grant.

Budget Part II: Project-Level Budget Table
Project Name: Education MBA
Associated with Criteria: D4
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual					
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$413,000	$1,203,000	$683,000	$433,000	$2,732,000
13. Total Costs (lines 9-12)	$413,000	$1,203,000	$683,000	$433,000	$2,732,000

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

EDUCATION LEADERSHIP DEGREE: PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
Training effective leaders is an important part of the DC strategy for increasing overall student achievement. Because DCPS has already been working in the trenches on teacher and educator effectiveness, the district is best positioned to lead the charge on designing a new training program for leaders. The proposed program is structured to reflect a combined MBA/MPA program for education leadership. Funding is structured as a pass-through to DCPS for use in launching an education leadership degree. The leadership degree will be administered in collaboration with higher education and members of DC's charter community, with support from OSSE, as needed. The project-specific timeline is:

- Year 1 (SY 2010-2011) will be used for finding the appropriate university partner and crafting the plan.
- Year 2 (SY2011-SY2012) will be used to create the program design and curriculum, market the program, recruit the first cohort, and hire faculty.
- Year 3 (SY 2012-SY2013) will be the first year of the program, which will launch in Summer 2012.

As a university partnership program will confer the benefits of degrees upon graduates, funding from RTTT will not be used to pay for faculty, nor will it be used for tuition. Rather, RTTT will be used exclusively for program design and launch.

1) Personnel
- N/A, personnel overseeing this initiative at the state level are included in the OSSE Implementation Capacity Budget

2) Fringe Benefits
- N/A

3) Travel
- N/A

4) Equipment
- N/A

5) Supplies
- N/A

6) Contractual
- N/A

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs
- N/A

10) Indirect Costs
- N/A

11) Funding for Involved LEAs

- N/A

12) Supplemental Funding for Participating LEAs

- Because this project will be executed by one LEA, it is considered "Supplemental Funding for Participating LEAs." Nevertheless, considerable thought has been put into how the project will be executed and how the funds will be deployed, as follows:

A) Personnel

- 4 FTEs in DCPS will be responsible for overseeing the launch of the Education Leadership Degree
  - 1 Project Director, $110,000
  - 1 Content Director, $80,000
  - 1 Operations Director, $80,000
  - 1 Recruitment Director, $80,000
- Fringe of the above at 18%

Activity	Year 1	Year 2	Year 3	Year 4	Total
Personnel – 4 FTE	$350,000	$350,000	$350,000	$350,000	$1,440,000
Fringe	$63,000	$63,000	$63,000	$63,000	$2,732,200

B) Curriculum Design and Retooling

- In Year 2, the content manager will work directly with the university partner on designing an MBA/MPA appropriate for education leaders. This may involve contracting with professional service providers and the purchase of copyrighted materials to inform the decisions.
- In Year 3, as the program is executed and faculty teach the content for the first time, there will be additional needs for retooling the curriculum.

Activity	Year 1	Year 2	Year 3	Year 4	Total
Curriculum Design & Retooling		$750,000	$250,000		$1,000,000

C) Recruitment Materials and Ads

- As a new program in which the quality of the cohort is of critical importance in ensuring the caliber of the program overall, recruiting the right candidates is of utmost importance.
- Recruitment and advertising costs are included for the preparation year and the first two program years.

Activity	Year 1	Year 2	Year 3	Year 4	Total
Recruitment Materials & Ads		$40,000	$20,000	$20,000	$80,000

13) Total Costs

- Year 1: $413K
- Year 2: $1.2MM
- Year 3: $683K
- Year 4: $433K
- TOTAL: $2.7MM

Professional Learning Communities of Effectiveness (PLaCEs):
Project-Level Budget Table

Budget Part II: Project-Level Budget Table
Project Name: [fill in the project name the State has assigned to this work]
Associated with Criteria: [fill in the designations of the criteria associated with this project]
(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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual					
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$1,075,724	$3,192,811	$2,918,035	$2,813,431	$10,000,000
13. Total Costs (lines 9-12)	$1,075,724	$3,192,811	$2,918,035	$2,813,431	$10,000,000

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

PROFESSIONAL LEARNING COMMUNITIES OF EFFECTIVENESS (PLaCEs): PROJECT-LEVEL BUDGET NARRATIVE

Purpose:
DC believes that by harnessing the talent and innovation latent within its system of schools through strategic collaboration, it is possible to transform the District into a system of high-achieving schools. Already, plans are underway, with two formal collaboratives of 13 total schools working together in to increase the quality of instruction and raise student achievement. These collaboratives were initially funded by the Title VB Dissemination Grant program, and RTTT funds will enable DC to radically scale this 13 school program to a program of 34 schools, impacting nearly 10,000 students. In this way, a large proportion of mid-performing schools will be situated in a network that will raise expectations for teachers and students and increase overall effectiveness. At the same time, high performing schools will have access to new technology and staff leadership opportunities, as well as the opportunity to share their success.

1) Personnel
- N/A, personnel overseeing this initiative at the state level are included in the OSSE Implementation Capacity Budget

2) Fringe Benefits
- N/A

3) Travel
- N/A

4) Equipment
- N/A

5) Supplies
- N/A

6) Contractual
- N/A

7) Training Stipends
- N/A

8) Other
- N/A

9) Total Direct Costs
- N/A

10) Indirect Costs
- N/A

11) Funding for Involved LEAs
- N/A

12) Supplemental Funding for Participating LEAs
- Given that PLaCEs are collaboratives of individual schools situated within LEAs, funding for PLaCEs will flow to LEAs as supplemental funding through competitive grants. Collaboratives of schools will

come together and apply for the funding as a group, or schools may apply to join an existing collaborative.

- There will be three rounds of funding:
  - one in Summer 2010—to fund two existing programs in 13 schools (Power of Planning, with 3 schools, and DC Collaborative for Change, with 10 schools), with a goal of knowledge capture for effective implementation of the overall program;
  - one in Spring 2011—to fund an additional 18 schools (launch 3 new programs of 5 schools, and add 3 more schools to the Power of Planning), expanding program reach to 31 schools; and
  - one in Spring 2012—to fund an additional 3 schools to join any consortia, bringing the overall total to 34 schools city-wide.
- Each school in a collaborative will receive funds through its LEA to pay for program costs. Program costs are spread across four components, though the specific items funded within these categories will vary depending on the collaborative goals, theme, and approach. The program components are:
  A) Instructional Leadership Institute;
  B) Execution and Dissemination;
  C) Technology to Support Implementation; and
  D) Accountability and Program Assessment.
- An example approach, drawn from the initial year of the Power of Planning collaborative, is outlined below.

Program Component	Description	Annual Cost per School
Instructional Leadership Institute	A leadership institute for all PLaCE school leaders in early July, followed by a planning institute for school-based staff. Costs include stipends, lodging and travel for expert facilitators, stipends for principals to attend the institute, planning stipends for teachers for the planning institute, and planning resources.	$55,000
Execution and Dissemination	Funds for one Dissemination Coordinator who will be responsible for planning and implementing the project. He or she will work directly with partner school leaders to plan and execute the Instructional Leadership Institute, as well as future planning conferences. He or she will be responsible for documentation and dissemination, via both paper and electronic means, the effective practices developed and shared in the project.	$19,750
Technology to Support Partnership Implementation	Technological resources that support the collaboration concept. For example, in the Power of Planning collaborative this funding has been used for digital video cameras to tape lessons for peer review as well as interactive assessment systems that give teachers the feedback they need to assess the effectiveness of their long-term plans and make appropriate adjustments. Other collaboratives may choose to invest in other technology.	$34,900 (one-time only)
Accountability and Program Assessment	Funds for support and accountability "check-ins" for the partner schools. Periodic daily conferences at which experts who led the Instructional Leadership Institute will return to fine-tune the collaboratives' practice and assist further with implementation. An end-of-year conference will take place each spring, in which teachers at all schools will participate. A final program evaluation will assess collaboratives' impact each at the end of each year.	$8,000
Total Per School in Launch Year		$117,616

To support the goal of reaching 34 schools and nearly 10,000 students, the yearly budget is as follows:

PLaCE Costs	Per School	Year 1	Year 2	Year 3	Year 4
Total Schools	n/a	*13*	*31*	*34*	*34*
Total New Schools	n/a	*0*	*18*	*3*	*0*
Total Annual Cost	$82,748	$1,075,724	$2,565,187	$2,813,431	$2,813,431
Total One-Time Cost	$34,868	-	$627,624	$104,604	-
Total Cost	$117,616	$1,075,724	$3,192,811	$2,918,035	$2,813,431
Total Project Cost					$10,000,000

13) Total Costs

- Year 1: $1.1MM
- Year 2: $3.2MM
- Year 3: $2.9MM
- Year 4: $2.8MM
- Total: $10MM

DCPS School Turnarounds: Project-Level Budget Table

Budget Part II: Project-Level Budget Table Project Name: DCPS School Turnarounds Associated with Criteria: E2 (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					
2. Fringe Benefits					
3. Travel					
4. Equipment					
5. Supplies					
6. Contractual					
7. Training Stipends					
8. Other					
9. Total Direct Costs (lines 1-8)					
10. Indirect Costs*					
11.Funding for Involved LEAs					
12. Supplemental Funding for Participating LEAs	$478,634	$1,418,633	$2,358,633	$6,055,300	$10,311,200
13. Total Costs (lines 9-12)	$478,634	$1,418,633	$2,358,633	$6,055,300	$10,311,200

All applicants must provide a break-down by the applicable budget categories shown in lines 1-15.
Columns (a) through (d): For each project year for which funding is requested, show the total amount requested for each applicable budget category.
Column (e): Show the total amount requested for all project years.
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DCPS SCHOOL TURNAROUNDS: PROJECT-LEVEL BUDGET NARRATIVE

Because charter schools use only the option of "school closure" in the case of schools that fall within the persistently lowest achieving 5% of schools, DC's state approach to school turnaround is a pass-through to DCPS to work on applying one of four turnaround models to the persistently lowest-achieving 5% of schools as well as the broader lowest-achieving 20% of schools as identified by OSSE.

1) Personnel

- N/A, personnel overseeing this initiative at the state level are included in the OSSE Implementation Capacity Budget

2) Fringe Benefits

- N/A

3) Travel

- N/A

4) Equipment

- N/A

5) Supplies

- N/A

6) Contractual

- N/A

7) Training Stipends

- N/A

8) Other

- N/A

9) Total Direct Costs

- N/A

10) Indirect Costs

- N/A

11) Funding for Involved LEAs

- N/A

12) Supplemental Funding for Participating LEAs

There are 3 strategies that DCPS will be employing:

A) Building Capacity for Support from the Office of School Innovation (OSI)

- One person to manage high school turnaround partners, 100% FTE, $85,000
- One person to manage elementary and middle school turnaround partners, 100% FTE, $85,000
- One person to manage portfolio data, 100% FTE, $100,000
- One person to manage parent/community relations for turnaround, 100% FTE, $85,000
- 18% Fringe

Activity	Description	Year 1	Year 2	Year 3	Year 4	4 yr total
OSI Capacity Building	4 FTE	$355,000	$355,000	$355,000	$355,000	$1,420,000
	Fringe	$63,900	$63,900	$63,900	$63,900	$255,600

B) Funding Prep Years for Turnaround Teams

- 4 teams a year with the following funded components, for a total of 16 schools planned for turnaround (bottom 5%, with select schools in the bottom 20%)
- 1 Recruiter, 100% FTE, $70,000
- Leadership Team of 3 people, all 100% FTE, $300,000 total
- 18% Fringe
- Marketing and Recruitment travel, $20,000
- Data analysis/consulting or in-house, $50,000
- Summer staff training (1 wk to prepare for "Summer Bridge"), $30,000
- Summer Bridge session for incoming students to shift culture, $30,000
- Printing/materials, $10,000
- Site visits to other turnaround schools, $10,000

Activity	Year 1	Year 2	Year 3	Year 4	4 yr total
Prep Year Funding	$2,346,400	$2,346,400	$2,346,400	$2,346,400	$9,385,600

C) Differential Funding for Turnaround Schools

- For the 10 schools in the persistently lowest-achieving 5%, a $1,000 per student stipend will be used in the first four turnaround years. This is the amount of per-student funding given by private donors to the current DCPS turnaround partners, and those organizations have noted that it made a dramatic impact in their ability to fund additional school-level supports for students, making a considerable dent in the positions needed that were not funded through formula-based allocations.
- The calculation below is based on an average for 470 students per school, which is the average of the schools in the persistently lowest achieving 5%. There are 4 schools that will be in turnaround in SY 2010-2011 (3 in year 2, 1 in year 1). There will be 6 schools in turnaround in SY 2011-2012 (3 in year 3, 1 in year 2, 2 in year 1). There will be 8 schools in turnaround in SY 2012-2013 (3 in year 4, 1 in year 3, 2 in year 2, 2 in year 1). There will be 7 schools in turnaround in SY 2013-2014 (1 in year 4, 2 in year 3, 2 in year 2, 2 in year 1).

Activity	Description	Year 1	Year 2	Year 3	Yr 4	Total
Differential Funding	Per student amt; avg students = 470	$1,880,000	$2,820,000	$3,760,000	$3,290,000	$11,750,000

13) Total Costs

- The total cost for the above three initiatives is $22.8MM. However, DC has planned for a seamless use of School Improvement Grant (SIG) funding and Race to the Top funding. In the first three years of the grant, SIG grant funding will be available, provided that DC is able to get a waiver to use SIG funding through Fall 2013. Thus, RTTT funding will be used to "top off" SIG funding in support of the initiatives above. The total cost of the turnaround projects that will be allocated to RTTT is $10,311,200.

	Year 1	Year 2	Year 3	Year 4	Total
TOTAL	$4,645,300	$5,585,300	$6,525,300	$6,055,300	$22,811,200
SIG Funding	$4,166,667	$4,166,667	$4,166,6667		$12,500,000
RTTT "Top Off"	$478,633	$1,418,633	$2,358,633	$6,055,300	$10,311,200

Appendix A2.5

Statements of Support for RTTT Application

ELEANOR HOLMES NORTON
DISTRICT OF COLUMBIA

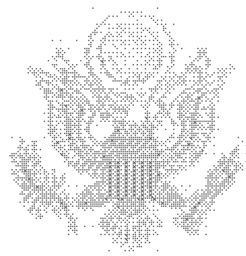
COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE

SUBCOMMITTEES:

CHAIRWOMAN:
ECONOMIC DEVELOPMENT,
PUBLIC BUILDINGS, AND EMERGENCY
MANAGEMENT

AVIATION

WATER RESOURCES AND ENVIRONMENT



Congress of the United States
House of Representatives
Washington, D.C. 20515

COMMITTEE ON
OVERSIGHT AND
GOVERNMENT REFORM

SUBCOMMITTEES:

FEDERAL WORKFORCE, POSTAL
SERVICE, AND DISTRICT OF COLUMBIA

* COVERS DISTRICT OF COLUMBIA ISSUES

COMMITTEE ON
HOMELAND SECURITY

SUBCOMMITTEES:

TRANSPORTATION SECURITY AND
INVESTMENT PROTECTION

EMERGENCY COMMUNICATION,
PREPAREDNESS, AND RESPONSE

January 11, 2010

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

Dear Secretary Duncan,

I am pleased to express my support for the District of Columbia's Race to the Top Fund application. District leaders committed to a bold plan to reform our public schools. I believe that the District's application firmly demonstrates the city's commitment to ensuring that every child succeeds.

The District presents a unique opportunity for the U.S. Department of Education to show that the policy and reform priorities of the Race to the Top Fund can have a dramatic impact. Many of the key components that you are seeking in a successful reform environment are in place in DC. The Chancellor of District of Columbia Public Schools is implementing aggressive and innovative strategies at the classroom, school, and central office levels. This has been born out through significant gains in student achievement, both on the state tests and the recent National Assessment of Educational Progress (NAEP). The District also has a large and vibrant charter school sector, providing parents across the city quality public school options, and a dedicated initiative to provide quality pre-kindergarten programming for every child. We are ready to take District reforms to the next level, and a Race to the Top Fund award will help accelerate these efforts. The District will serve as a national model for education reform.

The District's application aligns with your key reform components: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. Over the next four years, the District will demonstrate a level of dynamic changes that will place us at the top of state education systems and urban education systems.

I urge you to consider the DC Race to the Top Fund application favorably. The city's commitment to reform has been clearly stated. With your support, I am confident the District will be a leader in the country in raising the bar and enabling all of our students to succeed.

Sincerely,

Eleanor Holmes Norton

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COUNCIL OF THE DISTRICT OF COLUMBIA
THE JOHN A. WILSON BUILDING
1350 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004

VINCENT C. GRAY
CHAIRMAN

January 13, 2010

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

Dear Secretary Duncan,

I am delighted to express my support for the award of Race to the Top Funds to the District of Columbia. The District is unique among jurisdictions throughout the nation, and the award will undoubtedly enhance the potential impact and provide added value to federal investments in the city's school reform efforts.

The first of these unique characteristics is the healthy competition that results from dual public school systems. The District of Columbia has 58 separate local education agencies (LEAs), with only one traditional public school system. The remaining 57 LEAs represent a robust, innovative and increasingly successful public charter school system, with 57 schools on 99 campuses, each with enrollment open to students throughout the city. Creative strategies and instructional models, real opportunities for parental involvement and significant progress among many in minimizing persistent achievement gaps have increased the attraction of public charter schools, sparked exponential growth in enrollment and created a demand for similar innovation within the traditional school system.

Second, the District's relatively small size and centralized bureaucracy allow for expeditious implementation and a more immediate impact on educational reforms. As you know, the city's traditional public school system is governed by a Chancellor that reports directly to the Mayor, and each public charter school is autonomous with regard to operations and instructional strategy. As such, both governance approaches possess the independence to institute bold reforms in each of the four areas targeted by the Race to the Top Fund without a need for state or local school board approval. In addition, our combined school system population of only 74,000 students allows more funding per pupil than similar investments in states with larger student populations, and further enhances the overall impact of investments at the school and student level.

Finally, the District of Columbia benefits from an actively engaged legislative body, which I chair, that understands the critical nature of education reform; it shares the Department of Education's sense of urgency, and has committed its full support. One of my first actions as Chairman was to move oversight of education to the Committee of the Whole, in recognition of this issue's importance to every member of the Council. Since then, this Council has streamlined the educational governance structure, invested unprecedented amounts of local resources in public education and school facilities modernization, and broadened the scope of education reform through landmark legislation the Council adopted ensuring high-quality public education for every child in the District of Columbia beginning at age three.

These unique circumstances make the District of Columbia fertile ground for aggressive reforms in public education. The entire District government stands prepared to support this effort. With Race to the Top funds to leverage existing resources, there is no doubt we will succeed. On behalf of the Council, I urge your support in approving the District's application.

Sincerely,

Vincent C. Gray

TEL: 202-724-8032 • FAX: 202-724-8085 • E-MAIL: VGRAY@DCCOUNCIL.US

January 12, 2010

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

Re: The District of Columbia's Race to the Top Application

Dear Secretary Duncan:

The Achievement Network is writing this letter in support of the District of Columbia's Race to the Top application.

A non-profit organization, The Achievement Network provides support and tools to build the capacity of 33 D.C. schools to use data from regular, standards-aligned interim assessments to improve students' academic achievement. The Achievement Network also has a formal partnership with the District of Columbia Public Schools to apply its data-driven approach to DCPS's support of its schools. The District of Columbia is one of the six urban Networks served by The Achievement Network, which currently serves almost 100 schools in the United States.

From our work in D.C., The Achievement Network believes that the District of Columbia is well positioned to successfully integrate the key elements of the Race to the Top application. Many of these critical elements already exist:

Commitment to using data to increase student achievement: From our current work with the charter community (22 schools) and the District of Columbia Public Schools (11 schools), both types of LEA's are invested in using data to increase achievement and are prioritizing the work as a key lever of improvement. The Office of the State Superintendent of Education has also given a clear message about the importance of using data by requiring LEAs participating in RTTT to use interim assessments. Our experience shows there is a strong appetite and capacity for further and deeper work with data across the state.

Alignment with existing state priorities: The District of Columbia Public Schools is already implementing a clear *Teaching and Learning Framework* which trains teachers on the key elements of high quality instruction, focused on: 1) planning for standards to be covered; 2) teaching lessons that are aligned to standards and 3) assessing to determine gaps in student learning. This Framework is perfectly aligned to the RTTT's focus on standards, assessment and

teacher and principal quality. Most importantly, it illustrates that D.C. is already building the structures and processes known to increase student achievement.

Human Capital: Organizations like Teach for America and New Leaders for New Schools exist in D.C. and their presence is building a pipeline of talented school leaders and teachers who have exposure and initial training in backwards planning, aligning curricula to state standards, using data to increase student achievement and setting a belief in high expectations for all students. Many of the schools we serve have NLNS Residents in leadership positions and TFA corps members in the classroom and these schools represent strong candidates for our approach to plan, teach, assess and act on data to close gaps in student learning.

Ability to share best practices in data inquiry work: The schools' geographic proximity and the unique mix of charter schools and district schools promote practice sharing for the effective use data to increase achievement. There is evidence that practice sharing is beginning. Our organization hosts 5 annual Network events in D.C. for district and charter schools and the most recent event had over 100 school leaders and teacher leaders across the schools come together to share what is working.

These conditions—plus the commitment of local leadership— demonstrate the existing efforts to support the key elements of D.C Race to the Top application. We are confident that an investment in Washington, D.C. would lead to increased student achievement across the state.

Respectfully Submitted,

John Maycock, Chief Program Officer

Ted Preston, Chief Executive Officer

The Achievement Network
44 School Street
Boston, MA 002108
(617) 725-0000

AMERICAN UNIVERSITY
WASHINGTON, DC

Cornelius M. K
Pr

January 11, 2010

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

Dear Secretary Duncan,

I am pleased to express my support for the District of Columbia's Race to the Top Fund application. The local universities and District leaders are committed to a bold plan to reform our public schools. As the DC application demonstrates, we are firmly committed to ensuring that every child succeeds.

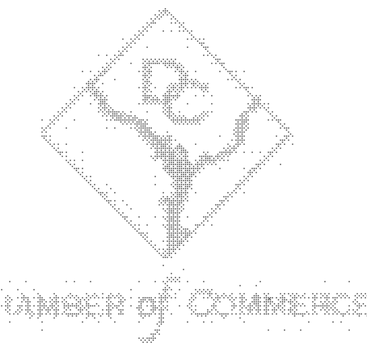
The District is truly ahead of the curve in creating and implementing a visionary education reform agenda. Many of the key components that you are seeking in a successful reform environment are in place in DC or under development. The Chancellor of District of Columbia Public Schools is implementing aggressive strategies at the classroom, school, and central office levels that will continue to support DC schoolchildren and result in significant gains in student achievement. The District also has a vibrant charter school movement, providing parents across the city quality public school options, and a dedicated initiative to provide quality pre-kindergarten programming for every child. We are ready to support the District's reforms, and a Race to the Top Fund award will help accelerate these efforts. The DC application presents a unique opportunity to show that the Race to the Top Fund can have a dramatic impact – the District will serve as a national model for education reform.

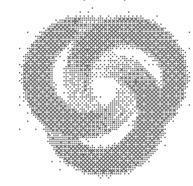
The District's reform strategies are well aligned with Race to the Top priorities: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. The Race to the Top funds will enable the District, over the next four years, to increase the rate of change and create outcomes for students that position the District as a model for state education systems and urban education systems.

I urge you to consider the DC Race to the Top Fund application favorably. With your support, I am confident the District will lead the country in raising the bar and enabling all of our students to succeed.

Sincerely,

Cornelius M. Kervin
President





GREATER WASHINGTON
Board of Trade

January 12, 2010

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

Re: Business Community Support for District of Columbia Race to the Top Application

Dear Secretary Duncan,

On behalf of the Federal City Council, D.C. Chamber of Commerce, and the Greater Washington Board of Trade, we are pleased to offer the business community's support for the District of Columbia's Race to the Top Fund application. Today, we believe that our nation's capital is at the cusp of great change and improvement in its public school system, driven by the leadership, commitment, and creativity that is evident in the District's application. Race to the Top presents a unique opportunity to help Washington DC become, not just the nexus of federal education policy, but a real example of excellence that reflects the core tenets of this competition. We respectfully seek your favorable review and response.

For too long, children in the District of Columbia have been victims of a fragmented and rudderless public education system that is only now beginning to show signs of stability and improvement. Over the past few years, our elected officials have united to make the success of our traditional public school system the District's top priority, while celebrating, at the same time, the growth and success of our robust network of public charter schools. We can say with confidence that the foundation for long-term success is being built here in the District, and in many aspects, these efforts represent the leading edge of the vision set forth in Race to the Top – a vision founded on teaching excellence, high expectations, and a focus on student achievement and success.

Education stakeholders from across the nation are already looking to the District of Columbia to see whether our efforts will bear fruit. Those who have watched closely have seen D.C. Public Schools Chancellor Michelle Rhee move aggressively in a short amount of time to create a culture of accountability in the central office, implement data-driven decision-making, recruit a wave of leaders to serve as principals in our schools, and make teaching excellence her top

FEDERAL CITY COUNCIL • 1156 15th Street, NW, Suite 600 • Washington DC 20005 • Tel: (202) 223-4560
D.C. CHAMBER OF COMMERCE • 1213 K Street, NW • Washington, DC 20005 • Tel: (202) 347-7201
GREATER WASHINGTON BOARD OF TRADE • 1725 I Street, NW • Washington, DC 20006 • Tel: (202) 857-5900

priority. These efforts have already had a positive impact on student achievement, according to the results of recent state and national assessments. Likewise, our public charter school sector is now able to showcase a number of excellent schools, which are proving year-in and year-out that every child – regardless of their neighborhood, household income or family background – can perform at the highest levels in school. The District of Columbia has shown its commitment, not just with its focus on turning around our K-12 system, but also with investments in universal pre-kindergarten and additional pathways to higher education in community college and four-year university settings.

The goal for the District of Columbia is to maintain this positive momentum and, with Race to the Top funding, accelerate the next phase of improvements. Over the next few years, your support would help the District of Columbia make significant progress in turning around the lowest-achieving schools, strengthening the human capital and data infrastructure needed to help all schools improve, and ensuring that the highest performing schools are able to share their best practices with other schools in the city. We see the Race to the Top competition as a chance to solidify the gains being made with our reform efforts but also to showcase, to the nation, real progress in education, based on strong school leadership, excellent instruction, high expectations, and a relentless focus on helping each student fulfill his or her potential.

We urge you to support and fund the District of Columbia's Race to the Top application, and we count on your leadership in helping make the nation's capital a model for the entire country.

Sincerely,

(b)(6)

John W. Hill	Barbara Lang	James Dinegar, CAE
CEO	President & CEO	President & CEO
Federal City Council	D.C. Chamber of Commerce	Greater Washington Board of Trade

Attachment

Brief Description of Business Organizations in Support

Federal City Council
1156 15th Street, NW, Suite 600, Washington, DC 20005

The Federal City Council is a 501(c)(3) non–profit, non–partisan organization dedicated to the improvement of the Nation's Capital. Established in 1954 and modeled on Pittsburgh's Allegheny Conference on Community Development, the Council is composed of and financed by over 200 of the region's top business, professional, educational, and civic leaders.

Since 1960, during the administration of John F. Kennedy, members of the President's Cabinet and a number of other senior Federal officials have served as Federal Trustees in an ex-officio capacity.

Serving as a catalyst for progress, the Council works to improve the city by focusing the creative and administrative talents of its members on major problems and opportunities. Typically, the Council takes on a very limited number of projects at any given time. In most instances, these projects are large and complex, and they frequently involve the private sector, the Federal government, and the District government.

D.C. Chamber of Commerce
1213 K Street, NW, Washington, DC 20005

The DC Chamber of Commerce is the voice of business in the District of Columbia. As business' champion, we provide leadership on a broad spectrum of legislative and policy issues. Our leadership and advocacy efforts are never as important as when policy decisions are made that crucially affects businesses' growth and bottom line.

The D.C. Chamber has played a vital role in helping grow the D.C. economy, create more jobs, and improve the District's competitiveness regionally. With over 2,000 members, the Chamber has the ability to greatly influence the decision making of the city's leaders and improve the climate for doing business in D.C. Members include businesses that range from small, start up companies to large, multi-million dollar corporations.

Greater Washington Board of Trade
1725 I Street, NW, Washington, DC 20006

The Greater Washington Board of Trade is the largest regional network of business and nonprofit leaders and the only regional organization representing all industry sectors. Founded in 1889, the Board of Trade enjoys a long history of creating and maintaining a business climate that is healthy, inviting and profitable for the regional business community and the community at large.

As the regional business organization, the Board of Trade addresses business concerns that stretch across geographic boundaries. Pro-business and bipartisan, the Board of Trade convenes business, nonprofit and government leaders to collaborate on important issues throughout the District of Columbia, Suburban Maryland and Northern Virginia.

A 501(c)(6) association, the Greater Washington Board of Trade is supported by its members, programs and events. The membership is comprised of members from *Fortune* 100 companies to small businesses and nonprofit organizations.

Eli Broad
Founder

January 12, 2010

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

Re: Endorsement of D.C.'s Race to the Top Application and Plan

Dear Committee Members,

I am writing to enthusiastically express my support for the District of Columbia Race to the Top application to U.S. Department of Education (ED). The Broad Foundation views the District of Columbia as one of the most promising urban districts in the country. We have been impressed with D.C.'s bold efforts to transform its public education system and the remarkable improvement in student achievement as exemplified by state tests and the recent National Assessment of Educational Progress (NAEP) over the last two years.

The District presents a unique opportunity for the Department of Education to demonstrate that the Race to the Top Fund can actually change the unacceptable results of the American education system. Many of the reform elements that ED believes will improve our school systems are in place in DC. Most children in D.C. attend the District of Columbia Public Schools (DCPS). DCPS Chancellor Michelle Rhee has energized the city around education and is implementing aggressive and innovative strategies at the classroom, school, and central office levels. She also has demonstrated a commitment to performance and has taken aggressive steps to hold schools and people accountable for failing to improve the educational results of D.C.'s children. The District also has a vibrant charter school movement where innovative entrepreneurs are providing parents across the city with high-quality public school options. Several charter schools such as KIPP-DC, D.C. Prep and El Haynes are shattering myths that poor children cannot learn at the same pace as their affluent counterparts.

Our Foundation is a national venture philanthropy focused on dramatically improving urban K-12 public education. We are pleased to be an ongoing partner with D.C. as an investor in DCPS and the charter sector. We are eager to continue our involvement in the education reform activities underway in D.C.

Based on D.C.'s leadership team, the reforms underway, student outcomes over the last two years, and the quality of D.C.'s RTTT strategy, we believe that D.C. will dramatically improve educational outcomes for students. This work has the potential to be instructive for other states across the country, and we encourage you to consider their application.

Sincerely,

(b)(6) [redacted]

Eli Broad

The Eli and Edythe Broad Foundation
10900 Wilshire Boulevard, Twelfth Floor | Los Angeles, California 90024

t 310.954.5001
f 310.954.5014
ebroad@broadfoundation.org
www.broadfoundation.org

CITYBRIDGE
FOUNDATION

January 12, 2010

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

Dear Secretary Duncan,

It is with great pleasure that I write to express my support for the District of Columbia Race to the Top Fund state application. Through CityBridge Foundation, our private family foundation, my family and I have been working in DC education reform for nearly 10 years. We have committed over $10 million to this work since 2000. Our work spans the K-12 system and focuses on traditional public schools as well as the charter school sector. We have supported the development of a Kindergarten Readiness Assessment for public school students, created new pipelines for talent to enter classrooms across the city, and helped to launch two new elementary charter schools in the city's highest need neighborhoods.

There is no doubt that in Washington, DC our education reform movement is thriving. Our schools have shattered the prevailing orthodoxy about what low-income students can and should accomplish. We may profit more than any other American city from the fortunate convergence happening in our field with knowledge, practice, and funding aligning in one district. My CityBridge colleagues and I believe that Washington can be the first city conclusively to break the link between poverty and low academic achievement.

In our Chancellor Michelle Rhee, DC has the most aggressively hopeful (and perhaps the bravest) public school leader in the nation. We have a mayor whose political capital is solidly behind real reform, no matter how difficult. Achievement scores have improved steadily, talent from all over the nation is flocking to the city's schools, and DC now boasts some of the highest-performing charter schools in the nation. Given the small, manageable size of our public school system, the robust charter market, and the availability of local, national, and Federal funding, DC is ideally positioned for rapid, sustained progress—the kind of progress that may take us across the finish line and actually eliminate educational inequality. DC is becoming a talent mecca and a crucial laboratory for education reform. As our successes build, this trend should intensify. Success brings more investment, more talent, and more political space for those leading reform—a virtuous cycle that may provide a breakthrough of historic proportion.

The Watergate | Tel: 202.266.7990 | Fax: 202.266.5917 | 600 New Hampshire Avenue, NW | Washington, DC 20037

The pro-reform signal sent to the nation should DC win this Race to the Top Fund competition will be significant. At CityBridge, we stand ready to put our weight behind this reform agenda and its sustainability across time. We urge the Department of Education to consider this application favorably. With your support, we can build upon our momentum and lead the country in showing what is possible and what can be done to create real, sustainable change in public education.

Sincerely,

(b)(6)

Katherine B. Bradley
President and Founder

The Community Foundation for the National Capital Region

Where giving and opportunity meet

January 11, 2010

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

Dear Secretary Duncan,

It is with great pleasure that I write to express my support for the District of Columbia Race to the Top Fund state application. Over two years ago, the District undertook a bold course of action to transform our public education system in order to provide every opportunity for our students to succeed. I am confident that the District is second to none in setting out an aggressive agenda for reform.

The District presents a unique opportunity for the Department of Education to demonstrate that the policy and reform priorities of the Race to the Top Fund can have a dramatic impact. Many of the key components that the Department is seeking in a successful reform environment are in place in DC. In the District of Columbia Public School system, Chancellor Michelle Rhee is implementing aggressive and innovative strategies at the classroom, school, and central office levels. Already, we are seeing significant gains in student achievement. The District also has a vibrant charter school movement, providing parents across the city quality public school options, and a dedicated initiative to provide quality pre-kindergarten programming for every child. Simply put, we are poised to succeed. With a Race to the Top Fund award, we can accelerate these efforts underway and serve as the national model for education reform.

The District of Columbia's application reflects our strongest core reform components: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. We have acted with a sense of urgency and purpose befitting of the potential our students undoubtedly possess. Over the next four years, the District will demonstrate a level of dynamic change that places us at the top of states education systems.

1200 16th Street NW | Suite 120 | Washington, DC 20036 | (202) 955-5890 | (202) 955-5894 (fax) | www.thecommunityfoundation.org
Our regional affiliates: Alexandria Community Trust | The Montgomery County Community Foundation | The Prince George's Community Foundation

The Community Foundation for the National Capital Region

Where giving and opportunity meet

The Community Foundation for the National Capital Region, through our Collaborative for Education Organizing, has invested nearly $1 million since 2007 in area nonprofit organizations, to better prepare and organize parents and students to advocate for quality reforms in education. The Foundation not only supports this application, but looks forward to working with DCPS to identify nonprofit/community-based partners for the work outlined in this proposal, where applicable.

As the largest private funding institution of nonprofit organizations in the metropolitan Washington region and as a committed advocate for quality education for all students, I urge you to consider the DC Race to the Top Fund application favorably. The city's commitment to reform is clear. With your support, we can build upon our momentum and lead the country in showing what is possible and what can be done to create real, sustainable change in public education.

Sincerely,

(b)(6)

Terri Lee Freeman
President

1200 19th Street NW | Suite 420 | Washington, DC 20036 | (202) 955-5890 | (202) 955-5894 fax | www.thecommunityfoundation.org
Our regional affiliates: Alexandria Community Trust | The Montgomery County Community Foundation | Prince George's Community Foundation

DISTRICT OF COLUMBIA
COLLEGE
SUCCESS
FOUNDATION

1220 12th Street SE, Suite 110, Washington, D.C. 20003-3722
ph. 202.207.1800 • fx. 202.207.1801 • toll free 877.655.4097
www.dccollegesuccessfoundation.org

January 11, 2010

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

Dear Secretary Duncan:

I am pleased to express my support for the District of Columbia's Race to the Top Fund application. District leaders are committed to a bold plan to reform our public schools. As the DC application demonstrates, we are firmly committed to ensuring that every child succeeds.

The District is truly ahead of the curve in creating and implementing a visionary education reform agenda. Many of the key components you are seeking in a successful reform environment are in place in DC. The Chancellor of District of Columbia Public Schools is implementing aggressive and innovative strategies at the classroom, school, and central office levels. As a result, we are seeing significant gains in student achievement, both on the state tests and the recent National Assessment of Educational Progress (NAEP). The District also has a vibrant charter school movement, providing quality public school options to parents across the city, and a dedicated initiative to provide quality pre-kindergarten programming for every child. We are ready to take District reforms to the next level, and a Race to the Top Fund award will accelerate these efforts. The DC application represents a unique opportunity to show that the Race to the Top Fund can have a dramatic impact – the District will serve as a national model for education reform.

The District's reform strategies align well with Race to the Top priorities: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. The Race to the Top funds will enable the District, over the next four years, to increase the rate of change and create outcomes for students, positioning the District as a model for state and urban education systems.

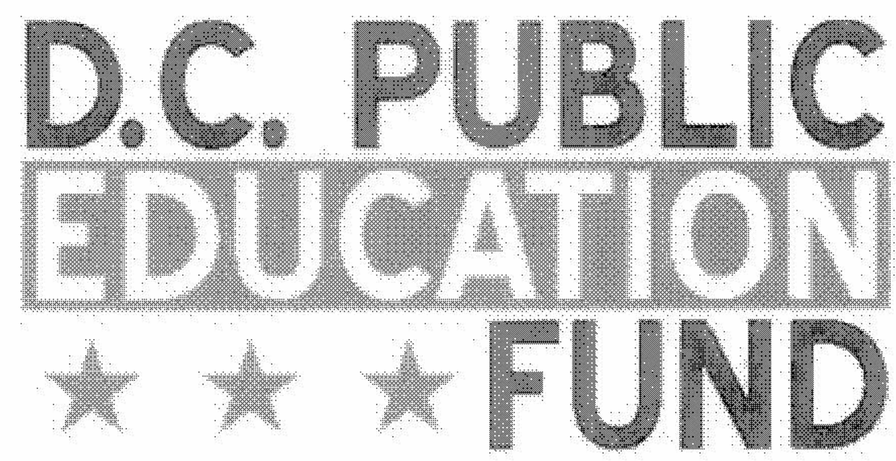
I urge you to consider the DC Race to the Top Fund application favorably. With your support, we are confident the District will lead the country in raising the bar and enabling all our students to succeed.

Sincerely,

(b)(6)

Bob Craves
President and CEO

Herbert R. Tillery
Executive Director



January 13, 2010

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

Dear Secretary Duncan,

DC Public Education Fund is pleased to express our support for the District of Columbia's Race to the Top Fund application.

DC Public Education Fund was founded in November 2007 to support Mayor Fenty and Chancellor Rhee's bold reform work, and to create a long-term vehicle for public-private partnerships in support of DCPS. Our mission is to improve student achievement in the District of Columbia by serving as a strategic partner to businesses, foundations, community leaders, and individual donors in supporting and investing in high-impact programs with the District of Columbia Public Schools (DCPS).

In the past year, we have been proud to support several mission-critical DCPS initiatives, including:

- IMPACT, the revolutionary new teacher effectiveness assessment system;
- DC Catalyst Project, a themes-based school transformation model; and
- The Achievement Network pilot, an intensive, school-based data capacity-building program.

Additionally, if and when DCPS and the Washington Teachers' Union ratify a new Collective Bargaining Agreement, we will be honored to support it – making DCPS' highly effective teachers the highest paid educators in the nation. Individually, these initiatives represent some of the most critical school reform work happening anywhere in the United States. Taken together, they exemplify the strong alignment between DCPS' Strategic Plan and your Race to the Top agenda.

While our mission is focused primarily on DCPS, we helped fund the preparation of the DC Race to the Top application because we saw in this competition the potential to pair the current aggressive reform efforts underway in DCPS with the strengths of the District's entrepreneurial, high-performing charter schools and networks. Throughout the Race to the Top planning process we have been incredibly impressed by the synergy between the District's education leaders. This application represents a new level of collaboration between traditional and charter schools, and further solidifies our belief that DC is poised to make a momentous breakthrough – eliminating the achievement gap and ensuring that all children in the District are attending high quality schools.

We urge the Department of Education to consider DC's application favorably. DC is fortunate to have a community of philanthropists that is deeply invested in seeing the planned reforms succeed and student achievement increase. With your support, we can build on the District's momentum and create long-term, sustainable change in DC's public schools.

Sincerely,

(b)(6)

Cate Swinburn
President

1534 14th Street NW • Washington, DC 20005 • (202) 355-5052

FIGHT FOR CHILDREN

CHAMPIONING CHANGE ★ CHANGING LIVES

January 14, 2010

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

Dear Secretary Duncan,

On behalf of Fight For Children, I am honored to express support for the District of Columbia's Race to the Top Fund state application. Fight For Children is an independent not-for-profit organization that recognizes, promotes, and cultivates quality education for low-income children in the District. As a partner working alongside DC Public Schools (DCPS) and DC charter schools, I have seen firsthand the city's commitment to public education reform. The District is now combining the lessons learned from our decade-old charter school movement with the aggressive implementation of effective practices in DC Public Schools. I am confident that our city will not only be successful in its education reform efforts, but will create a national model other states will emulate.

Because our education leaders, including Mayor Adrian Fenty, DC Public Schools Chancellor Michelle Rhee, and State Superintendent Kerri Briggs, have laid so much groundwork for reform, the District is uniquely positioned to demonstrate to the nation that policy and reform priorities of the Race to the Top Fund can have a dramatic and lasting impact on student achievement. Our local school leaders are going well beyond talking about reform. They are working diligently and quickly to put in place the proven components of excellent schools. For example, the District has made it a priority to ensure there is an excellent teacher in every classroom and that every school is led by an effective principal. Through Fight For Children's Quality Schools Initiative over the past two years, we have recognized several DCPS and charter schools for their leadership in these areas. In addition to getting the human capital equation correct, the District recognizes the crucial role that effective use of data plays in instruction and overall school success. The ongoing implementation of DCPS's effectiveness assessment system, IMPACT, including its use of student growth data to evaluate educators, is concrete evidence of the city's commitment to reform. Fight For Children has been a major partner for DCPS and a private funder of this ground-breaking initiative.

Today, the District is demonstrating many of the guiding principles described in the Race to the Top Fund. We believe that a grant from the Race to the Top Fund will enable us to push beyond basic reform and demonstrate that a system of low-achieving schools can quickly be reinvented. The Race to the Top Fund will also allow the District to ensure that its oversight and management systems are strong so that the reforms it is making today will endure.

On behalf of Fight For Children, I ask that you give careful consideration to the District's Race to the Top Fund application. There is no doubt that our city's leaders, teachers, and parents are committed to lasting education reform. With the support of the Race to the Top Fund, we can accelerate our progress and create a national model for education excellence in the Nation's Capital.

Sincerely,

(b)(6)

Michela English
President & CEO

1825 K Street NW, Suite 1080
Washington, DC 20006
Main: 202.772.0400
Fax: 202.772.0401
www.fightforchildren.org

FOCUS
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January 11, 2010

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

Dear Secretary Duncan:

I am delighted to express my support for the District of Columbia's Race to the Top Fund application. As the D.C. application demonstrates, District leaders are firmly committed to ensuring that every child succeeds.

The District is truly ahead of the curve in creating and implementing a visionary education reform agenda. Many of the key components of a successful reform environment that you are seeking are in place in D.C.

The District has a vibrant public charter school movement, providing parents across the city, especially the most disadvantaged, with quality education options. This 14-year old school reform, which now educates 38% of D.C. public school children, has closed the citywide student achievement gap by 25 percent in three years. As you know, the District of Columbia Public Schools is now also aggressively pursuing reform, greatly strengthening innovation and accountability across the board.

As a result of D.C.'s school reforms, we are seeing significant gains in student achievement, both on the state tests and the recent National Assessment of Educational Progress. We are ready to take District reforms to the next level, and a race to the top fund will accelerate these efforts. The D.C. application presents a unique opportunity to show that the Race to the Top Fund can have a dramatic impact and allow the District to serve as a national model for education reform.

The District's reform strategies align well with Race to the Top priorities: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. The Race to the Top funds will enable the District, over the next four years, to increase the rate of change and create outcomes for students that position the District as a model for state education systems and urban education systems.

I urge you to consider the D.C. Race to the Top Fund application favorably.

With your support, I am confident the District will lead the nation in raising the bar and enabling all of our children to succeed.

Sincerely,

(b)(6)

Robert Cane
Executive Director

GEORGETOWN UNIVERSITY

Office of Public Affairs

January 13, 2010

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

Dear Secretary Duncan:

Georgetown University is pleased to express its support for the District of Columbia's Race to the Top Fund application.

Georgetown University has partnered with the District of Columbia Public Schools for a number of years in a variety of ways and on a number of levels, including, for example, student tutoring programs and faculty-led programs in such academic areas as biology, civic engagement, and foreign language instruction. We are presently working with the school system in developing ways to assess teacher and student performance. It is clear that District leaders are committed to a bold plan to reform our public schools, and –as its application demonstrates – that the leadership of the District of Columbia Public Schools is firmly committed to ensuring that every child succeeds.

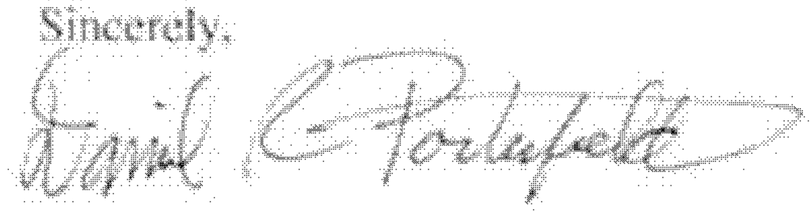
The District is truly a national leader in creating and implementing a visionary education reform agenda. Many of the key components that the Department of Education believes must be present in a successful reform environment are in place here in DC. Chancellor Michelle Rhee and her staff are implementing innovative, results-oriented strategies at the classroom, school, curricular, and central office levels. As a result, we have begun to see significant gains in student achievement, both on the state tests and the most recent National Assessment of Educational Progress (NAEP). The District also has a vibrant charter school movement, providing parents across the city with quality public school options, and a dedicated initiative to provide outstanding pre-kindergarten programming for every child. We are ready to take District reforms to the next level, and a Race to the Top Fund award will help accelerate our progress. The DC application presents a unique opportunity to show that the Race to the Top Fund can generate measurable results. I believe it would be catalyzing for school districts across the country to see that the public schools in the District of Columbia – long a source of national shame – can be transformed into a national model for education reform.

Washington DC 20057

The District's reform strategies align well with Race to the Top priorities: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the poorest-performing schools. The Race to the Top funds will enable the District, over the next four years, to build upon our recent progress and launch a generation of DC children for college success.

I respectfully ask you to support the DC Race to the Top Fund application. With this investment from the Department of Education, I am confident that the District of Columbia Public Schools can become an extraordinary urban school system.

Sincerely,



Daniel R. Porterfield, Ph.D.
Senior Vice President for Strategic Development

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC

STEVEN KNAPP
PRESIDENT

January 14, 2010

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

Dear Secretary Duncan,

On behalf of The George Washington University, I write in strong support of the District of Columbia's Race to the Top Fund application.

Under the leadership of Chancellor Michelle Rhee, the District is engaged in an aggressive school reform plan. Significant gains in student performance have already been achieved, both on the state tests and in the recent National Assessment of Educational Progress. The District's reform strategies align well with the Race to the Top priorities, and the support of this innovative program would play a vital role in transforming the District into a model of urban education.

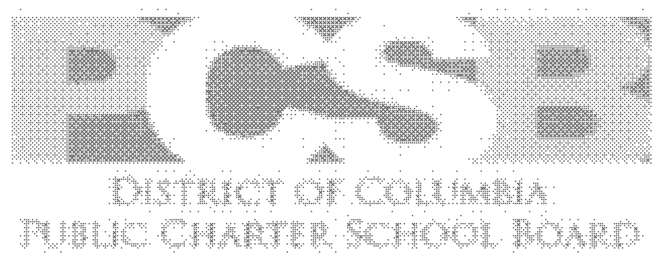
We at George Washington are proud of our educational collaboration with the District. Our partnerships include active engagement with the School Without Walls, located in the midst of our Foggy Bottom Campus, and with the Duke Ellington School of the Performing Arts, where members of our faculty frequently serve as teachers. This fall, we launched a program that enables students in the School Without Walls to graduate simultaneously with high school diplomas and associate degrees from the university. Throughout the District, our Graduate School of Education and Human Development offers free graduate instruction and research expertise to teachers and administrators. Our students also serve the schools by providing thousands of hours as mentors and tutors. In short, George Washington has a vested interest in the success of the DC Public Schools, and we stand ready to do even more.

With thanks for your favorable consideration of the District's application,

Sincerely,

Steven Knapp
President

2121 EYE STREET, NW • WASHINGTON, DC 20052 • 202-994-6500 • FAX 202-994-0654



January 13, 2010

Superintendent Kerri Briggs
Office of the State Superintendent of Education
Government of the District of Columbia
One Judiciary Square
441 4th Street NW
Suite 350N
Washington, DC 20001

Dear Superintendent Briggs,

On behalf of the DC Public Charter School Board (PCSB), I am pleased to express our support for the District of Columbia's Race to the Top Fund application. The application reflects support for the bold reforms currently underway in DC, including those within the charter school sector, which is working to provide students and parents across the city with quality public school options. The application also reflects the spirit of collaboration and innovation that has reinvigorated our reform efforts in the District, and I am pleased to have your commitment that we will continue down this path going forward.

As you know, the PCSB is committed to ensuring school quality. Our new Performance Management Framework ensures a process for holding accountable charter schools that do not meet a rigorous bar for quality in terms of academic and non-academic results for students. Consistent with our Framework, we will implement a plan for closure of any charter school on the list of "persistently lowest-achieving schools," as defined in the District's Race to the Top application.

In order to identify the schools that are persistently lowest-achieving, we will work with you and your office to review the criteria and to ensure that the appropriate definition and methodology are in place. We are committed to meeting the goals of turnaround in the Race to the Top application, and welcome the partnership with the Office of the State Superintendent in this endeavor.

The Public Charter School Board is pleased to be a part of the effort to transition DC to a system of high-achieving schools.

Sincerely,

Thomas A. Nida
Board Chair

3333 14th St., NW • Suite 210 • Washington, DC 20010 • Office 202-328-2660 • Fax 202-328-2661 • www.dcpubliccharter.com

Allen L. Sessoms
President

January 11, 2010

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

Dear Secretary Duncan,

I am pleased to express my support for the District of Columbia's Race to the Top Fund application. District leaders committed to a bold plan to reform our public schools. As the DC application demonstrates, we are firmly committed to ensuring that every child succeeds.

The District is truly ahead of the curve in creating and implementing a visionary education reform agenda. Many of the key components that you are seeking in a successful reform environment are in place in DC. The Chancellor of District of Columbia Public Schools is implementing aggressive and innovative strategies at the classroom, school, and central office levels. As a result, we are seeing significant gains in student achievement, both on the state tests and the recent National Assessment of Educational Progress (NAEP). The District also has a vibrant charter school movement, providing parents across the city quality public school options, and a dedicated initiative to provide quality pre-kindergarten programming for every child. We are ready to take District reforms to the next level, and a Race to the Top Fund award will help accelerate these efforts. The DC application presents a unique opportunity to show that the Race to the Top Fund can have a dramatic impact – the District will serve as a national model for education reform.

The District's reform strategies align well with Race to the Top priorities: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. The Race to the Top funds will enable the District, over the next four years, to increase the rate of change and create outcomes for students that position the District as a model for state education systems and urban education systems.

University System of the District of Columbia
4200 Connecticut Avenue, NW · Washington, DC 20008 · p: (202) 274-6016 · f: (202) 274-5304 · www.udc.edu

I urge you to consider the DC Race to the Top Fund application favorably. With your support, I am confident the District will lead the country in raising the bar and enabling all of our students to succeed.

Sincerely,

Allen L. Sessoms

The
WALTON FAMILY
FOUNDATION
| P.O. Box 2030 | Bentonville | AR 72712-2030

January 13, 2010

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

Dear Secretary Duncan,

The Walton Family Foundation is pleased to express support for the District of Columbia's Race to the Top Fund application. Our foundation invests in Washington DC's reform effort and helped to fund the preparation of this application, because local reformers and political leaders have helped create one of the strongest school choice environments in the country. We believe that unless all parents have the power to choose the best schools for their children, reform efforts will be stymied, short-lived and ultimately fall short of their potential. The nation's capital provides a rich and visible laboratory for demonstrating that choice is a key driver for school improvement.

We believe that the proposed programs for DC will build on the increasingly vibrant education marketplace – where two-thirds of DC families already choose charter or out-of-boundary traditional public schools – by improving human capital and turning around chronically failing schools. We are encouraged that LEAs will develop teacher training programs and evaluation plans that are true to proven principles of data-driven instruction. We support the notion that the feedback loop to parents must be proactive and transparent.

We understand that the school turnaround effort in DC, already begun in a thoughtful way, can be a model for the nation, with its focus on true turnarounds, restarts and closures. Chancellor Rhee understands that autonomy is a key to successful school start-up and her vocal support of charters, her contracts with charter organizations, as well as her desire to gain chartering authority for DCPS are signs that she takes the lessons of the charter movement very seriously.

The District's application aligns with your key reform components: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school; data-driven decision-making; instruction that is tied to rigorous academic standards; and a willingness to intervene in the lowest-achieving schools. The Race to the Top funds will enable the District, over the next four years, to increase the pace of reforms that we expect will make the District a model for state education systems and urban education systems.

We urge you to consider the DC Race to the Top Fund application favorably. Your ability to use Washington as your bully pulpit will be enhanced if Washington is a shining example of the reforms you wish to implement.

Sincerely,

(b)(6)

Buddy D. Philpot
Executive Director
Walton Family Foundation

P. 479.464.1570 | F. 479.464.1580 | www.waltonfamilyfoundation.org

WASHINGTON
Regional Association of
GRANTMAKERS

January 9, 2010

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

Dear Secretary Duncan,

On behalf of Washington Grantmakers, I am pleased to express my support for the District of Columbia's Race to the Top Fund application. Over two years ago, the District undertook a bold course of action to transform our public education system in order to provide all our students with the opportunity to succeed. Since that time I have been continually impressed by the District's sense of urgency and purpose befitting the potential our students possess.

Washington Grantmakers is a membership association of nearly 100 foundations and corporate giving programs in the Washington metropolitan region. Collectively, our members invest more than $450 million annually to nonprofit organizations serving our region's neediest residents. In addition, our members are engaged in the complex issues facing our community such as public education reform.

Washington Grantmakers has enjoyed an open and collaborative relationship with the District's education leaders over the past two years. This ongoing commitment to engaging with the funding community has been instrumental in keeping Washington Grantmakers' members informed and supportive of the advances within our public education system.

The District presents a unique opportunity for the U.S. Department of Education to demonstrate that the policy and reform priorities of the Race to the Top Fund can have dramatic impact. Many of the key components you seek in a successful reform environment are in place in DC. The Chancellor of District of Columbia Public Schools is implementing aggressive and innovative strategies at the classroom, school, and central office levels. The District also boasts a vibrant charter school movement, providing parents across the city with quality public school options, and a dedicated initiative to provide quality pre-kindergarten programming for every child. We are ready to take District reforms to the next level, and a Race to the Top Fund award will help accelerate these efforts.

The District's application aligns with your key reform components: a relentless focus on providing an excellent teacher in every classroom and a strong principal in every school, data-driven decision-making, instruction that is tied to rigorous academic standards and a willingness to intervene in the lowest-achieving schools. Race to the Top funds will enable the District, over the next four years, to increase the pace of change, and will make the District a model for urban education systems.

On behalf of Washington Grantmakers, I urge you to consider the DC Race to the Top Fund application favorably. With your support, the District will build on our current momentum and lead the country in showing that it is possible to create real, sustainable change in public education and in the opportunities we provide for all our students.

Sincerely,

(b)(6)

Tamara Lucas Copeland
President
Washington Regional Association of Grantmakers
1400 16th Street, NW
Suite 740
Washington, DC 20036
copeland@washingtongrantmakers.org
202/939-3441

investing in social change
venture philanthropy partners

January 15, 2010

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

Dear Secretary Duncan,

On behalf of Venture Philanthropy Partners (VPP), I am pleased to submit this letter of support for the District of Columbia Race to the Top Fund state application. Over the past two years, public education in Washington, D.C. has been at an extraordinary inflection point with community and political leaders supporting dramatic changes to the local education landscape. In the future, we believe that the dynamic reform agenda will continue to be executed and significantly improve educational achievement for District students.

VPP is a nonprofit philanthropic investment organization that provides growth capital and strategic assistance to build, strengthen, and scale high potential community-based organizations serving the core developmental, learning, and educational needs of children of low-income families in the National Capital Region. Since its inception in 2000, VPP has raised over $83 million and completed investment partnerships with 12 well-respected local nonprofit organizations. Of those organizations, VPP has committed over $15 million to high-performing educational programs, including charter schools, afterschool programs, and early childhood development programs to demonstrate creative local solutions to the complex educational issues evident in public education in the region. VPP's significant philanthropic investments have played a pivotal role in the community to help develop effective and catalytic approaches that enhance and support the local education reform efforts in the District.

The District is uniquely positioned to demonstrate that the Race to the Top Fund can have significant and far-reaching impact on education. Political leaders and community stakeholders have made educational quality and effectiveness a priority in Washington, D.C. In the political leadership, there exists complete congruency between the Mayor and the Chancellor of Education on the need for comprehensive education reform. In the school system, many critical reform initiatives have already begun including negotiations with unions regarding the teacher evaluation system. The District also has a robust alternative education program providing an array of public school options - with an impressive and dedicated DC Public Charter School Board providing sole oversight responsibility. Clearly, the Race to the Top Fund would augment and accelerate reform efforts that are in progress and given the close proximity of the District to the U.S. Department of Education, showcase promising programs and initiatives at a national level.

Once again, VPP supports the District in its effort to improve the educational opportunities for students through the Race to the Top Fund state award sponsored by the United States Department of Education. In the District of Columbia, educational inequity among children and youth is prevalent and we believe that effectively increasing educational success in our Nation's Capital would be a beacon for the entire nation.

If you have any questions or need additional information please feel free to contact me at ctcole@vppartners.org or (202) 263-4786.

Sincerely,

(b)(6)

Carol Thompson Cole
President & CEO

1201 15th Street, NW • Suite 420 • Washington, DC 20005 • Tel: 202.955.8085 • Fax: 202.955.8087 • www.vppartners.org

Appendix A3.1

TUDA Summary Reports

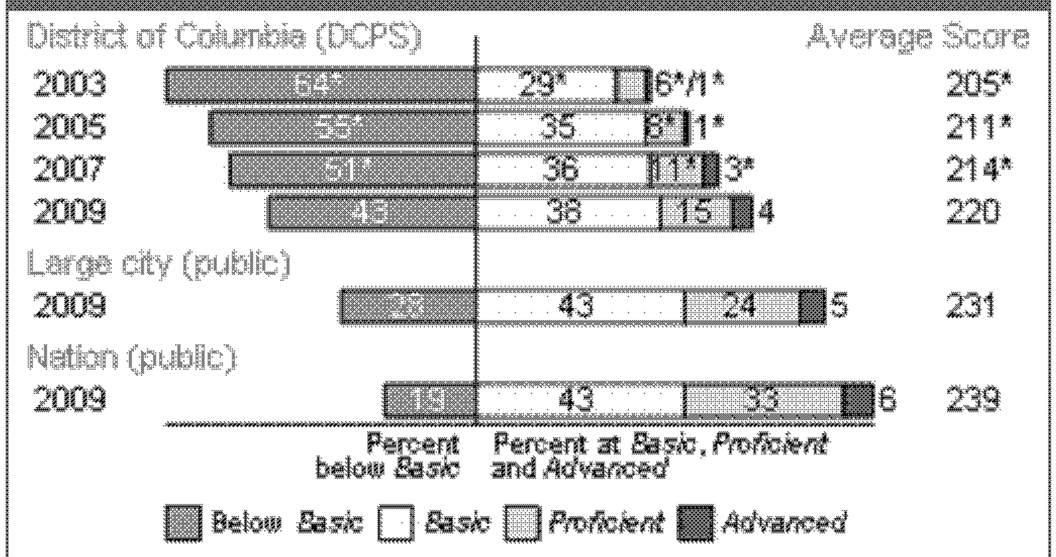
The Nation's Report Card Mathematics 2009

TUDA Snapshot Report

Overall Results

- In 2009, the average score of fourth-grade students in District of Columbia was 220. This was lower than the average score of 231 for public school students in large cities.
- The average score for students in District of Columbia in 2009 (220) was higher than their average score in 2007 (214) and was higher than their average score in 2003 (205).
- In 2009, the score gap between students in District of Columbia at the 75th percentile and students at the 25th percentile was 44 points. This performance gap was wider than that of 2003 (38 points).
- The percentage of students in District of Columbia who performed at or above the NAEP *Proficient* level was 19 percent in 2009. This percentage was greater than that in 2007 (14 percent) and was greater than that in 2003 (7 percent).
- The percentage of students in District of Columbia who performed at or above the NAEP *Basic* level was 57 percent in 2009. This percentage was greater than that in 2007 (49 percent) and was greater than that in 2003 (36 percent).

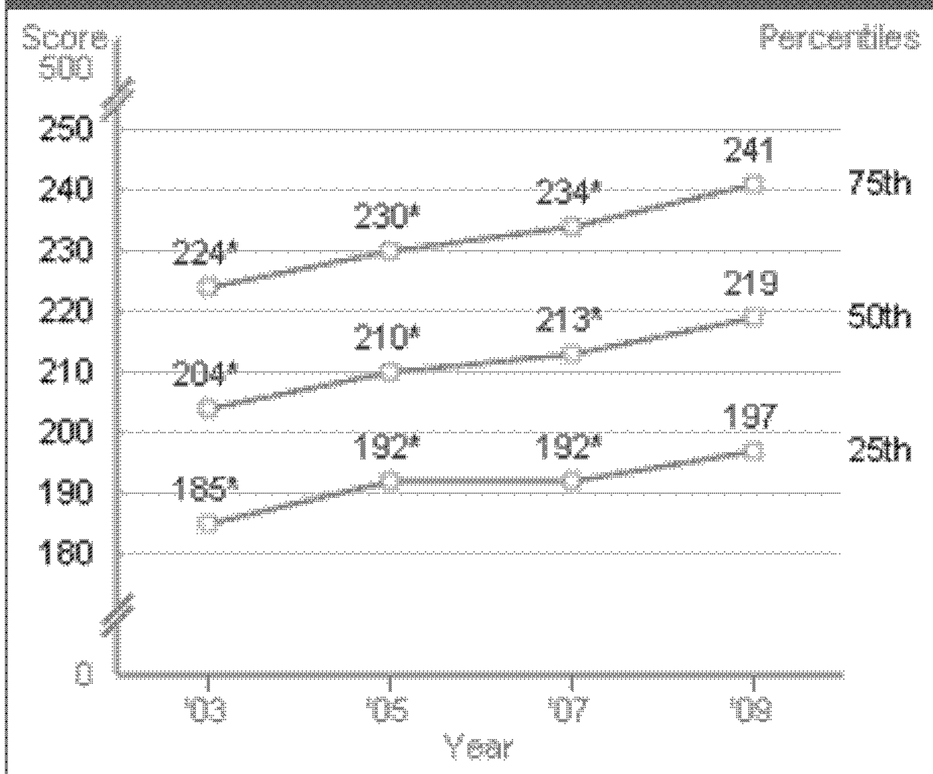
Achievement-Level Percentages and Average Score Results



* Significantly different ($p < .05$) from district's results in 2009.

NOTE: Detail may not sum to totals because of rounding.

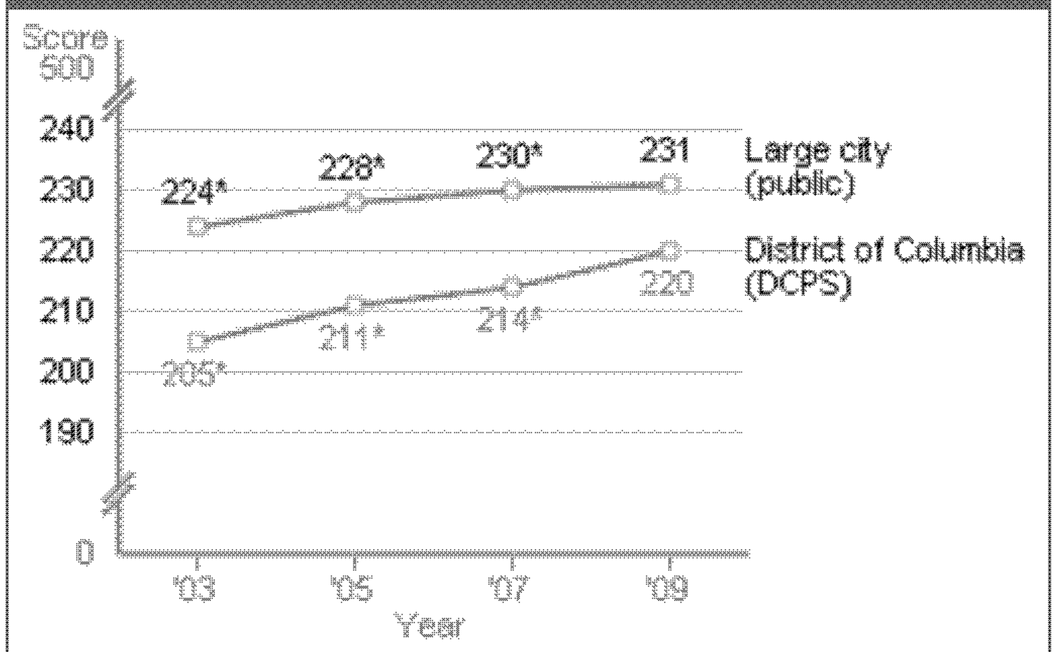
Scores at Selected Percentiles



* Significantly different ($p < .05$) from 2009.

NOTE: Scores at selected percentiles on the NAEP mathematics scale indicate how well students at lower, middle, and higher levels performed.

Average Scores for District and Large Cities



* Significantly different ($p < .05$) from 2009.

Results for Student Groups in 2009

Reporting Groups	Percent of students	Avg. score	Percentages at or above *Basic*	Percentages at or above *Proficient*	Percent at *Advanced*
Gender					
Male 51		218	55	19	4
Female	49	222	59	18	4
Race/Ethnicity					
White 9		270	99	81	33
Black 77		212	49	9	#
Hispanic 12		227	69	25	2
Asian/Pacific Islander	2	‡	‡	‡	‡
American Indian/Alaska Native	#	‡	‡	‡	‡
National School Lunch Program					
Eligible 72		210	47	8	#
Not eligible	27	245	83	46	14

\# Rounds to zero. ‡ Reporting standards not met.

NOTE: Detail may not sum to totals because of rounding, and because the "Information not available" category for the National School Lunch Program, which provides free/reduced-price lunches, and the "Unclassified" category for race/ethnicity are not displayed.

Score Gaps for Student Groups

- In 2009, female students in District of Columbia had an average score that was not significantly different from that of male students.
- In 2009, Black students had an average score that was 58 points lower than that of White students. This performance gap was not significantly different from that in 2003 (60 points).
- In 2009, Hispanic students had an average score that was 43 points lower than that of White students. This performance gap was narrower than that in 2003 (57 points).
- In 2009, students who were eligible for free/reduced-price school lunch, an indicator of low income, had an average score that was 35 points lower than that of students who were not eligible for free/reduced-price school lunch. This performance gap was wider than that in 2003 (21 points).

NOTE: DCPS = District of Columbia Public Schools. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2003–2009 Mathematics Assessments.

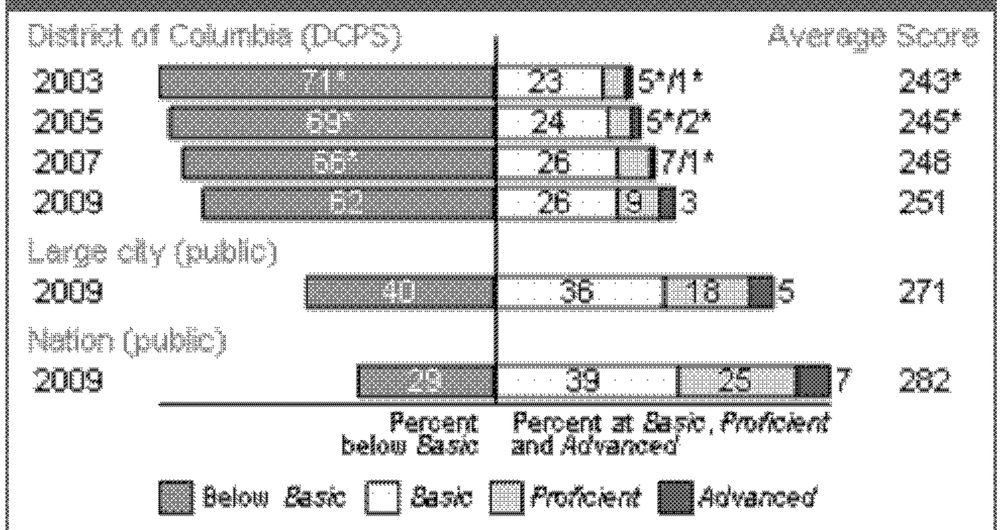
The Nation's Report Card Mathematics 2009

TUDA Snapshot Report

Overall Results

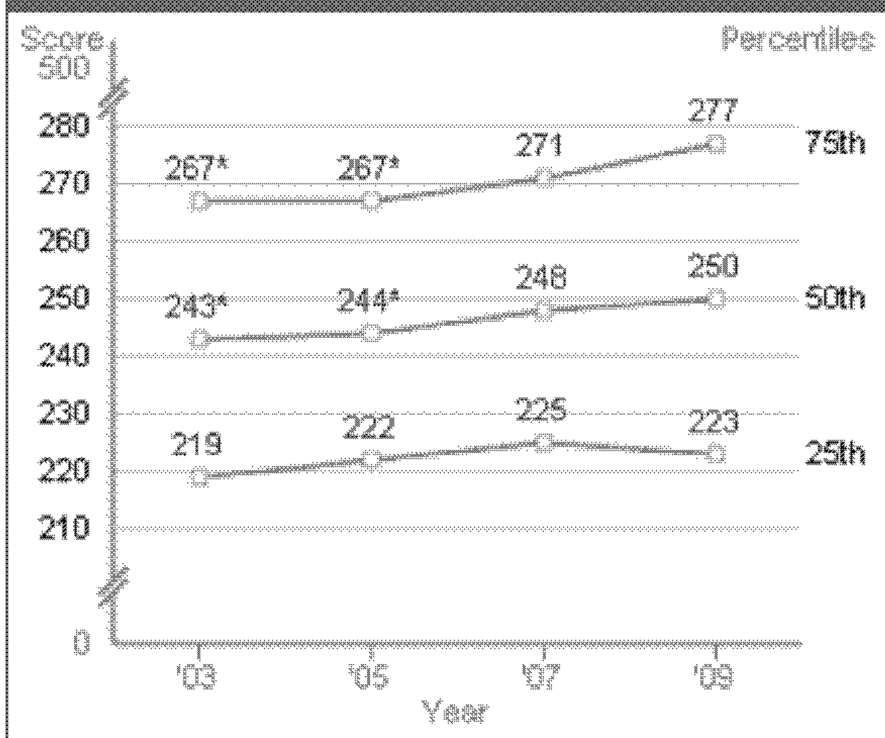
- In 2009, the average score of eighth-grade students in District of Columbia was 251. This was lower than the average score of 271 for public school students in large cities.
- The average score for students in District of Columbia in 2009 (251) was not significantly different from their average score in 2007 (248) and was higher than their average score in 2003 (243).
- The overall score in 2009 (251) was higher than in 2007 when the 2007 average score is recomputed to exclude charter schools (244) to account for the change in population definition for 2009.
- In 2009, the score gap between students in District of Columbia at the 75th percentile and students at the 25th percentile was 54 points. This performance gap was not significantly different from that of 2003 (48 points).
- The percentage of students in District of Columbia who performed at or above the NAEP *Proficient* level was 12 percent in 2009. This percentage was greater than that in 2007 (8 percent) and was greater than that in 2003 (6 percent).
- The percentage of students in District of Columbia who performed at or above the NAEP *Basic* level was 38 percent in 2009. This percentage was greater than that in 2007 (34 percent) and was greater than that in 2003 (29 percent).

Achievement-Level Percentages and Average Score Results



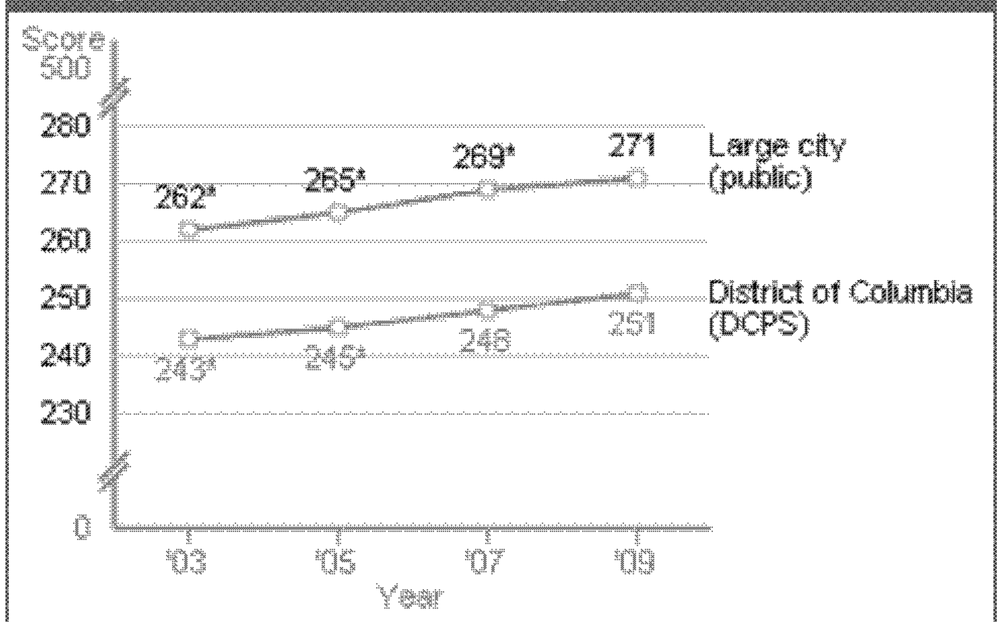
* Significantly different ($p < .05$) from district's results in 2009.
NOTE: Detail may not sum to totals because of rounding.

Scores at Selected Percentiles



* Significantly different ($p < .05$) from 2009.
NOTE: Scores at selected percentiles on the NAEP mathematics scale indicate how well students at lower, middle, and higher levels performed.

Average Scores for District and Large Cities



* Significantly different ($p < .05$) from 2009.

Results for Student Groups in 2009

Reporting Groups	Percent of students	Avg. score	Percentages at or above *Basic*	Percentages at or above *Proficient*	Percent at *Advanced*
Gender					
Male 4	8	248	36	12	3
Female	52	254	40	12	4
Race/Ethnicity					
White 5		‡	‡	‡	‡
Black 8	2	244	32	6	#
Hispanic 1	1	263	56	17	2
Asian/Pacific Islander	2	‡	‡	‡	‡
American Indian/Alaska Native	#	‡	‡	‡	‡
National School Lunch Program					
Eligible 7	5	243	31	6	1
Not eligible	25	276	61	29	12

Rounds to zero. ‡ Reporting standards not met.

NOTE: Detail may not sum to totals because of rounding, and because the "Information not available" category for the National School Lunch Program, which provides free/reduced-price lunches, and the "Unclassified" category for race/ethnicity are not displayed.

Score Gaps for Student Groups

- In 2009, female students in District of Columbia had an average score that was not significantly different from that of male students.
- Data are not reported for White students in 2009, because reporting standards were not met.
- Data are not reported for White students in 2009, because reporting standards were not met.
- In 2009, students who were eligible for free/reduced-price school lunch, an indicator of low income, had an average score that was 33 points lower than that of students who were not eligible for free/reduced-price school lunch. This performance gap was wider than that in 2003 (18 points).

NOTE: Beginning in 2009, if the results for charter schools are not included in the school district's Adequate Yearly Progress (AYP) report to the U.S. Department of Education under the Elementary and Secondary Education Act, they are excluded from that district's TUDA results. DCPS = District of Columbia Public Schools. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2003–2009 Mathematics Assessments.

ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences
NCES 2008-465XW4

The Nation's Report Card

Reading 2007

Trial Urban District Snapshot Report

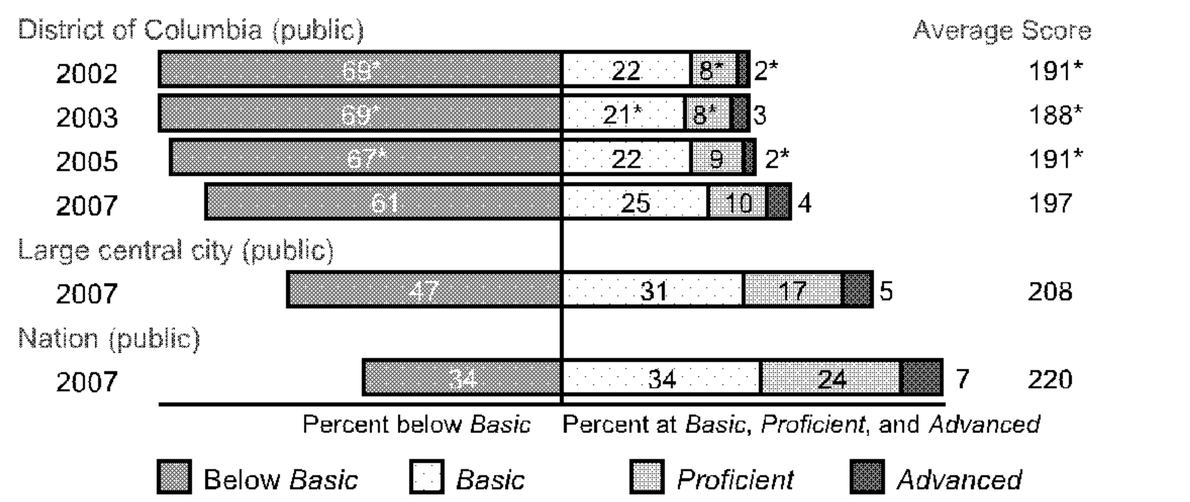
District of Columbia
Grade 4
Public Schools

The National Assessment of Educational Progress (NAEP) assesses reading on a 0-500 point scale. In 2007, the District of Columbia was one of eleven urban districts that voluntarily participated in the NAEP reading assessment on a trial basis.

Overall Reading Results for the District of Columbia

- In 2007, the average scale score for fourth-grade students in the District of Columbia was 197. This was higher than their average score in 2005 (191) and was higher than their average score in 2002 (191).[1]
- The District of Columbia's average score (197) in 2007 was lower than that of public schools in large central cities[2] (208).
- The percentage of students in the District of Columbia who performed at or above the NAEP *Proficient* level was 14 percent in 2007. This percentage was greater than that in 2005 (11 percent) and was greater than that in 2002 (10 percent).
- The percentage of students in the District of Columbia who performed at or above the NAEP *Basic* level was 39 percent in 2007. This percentage was greater than that in 2005 (33 percent) and was greater than that in 2002 (31 percent).

Percentages at NAEP Achievement Levels and Average Score



NOTE: The NAEP grade 4 reading achievement levels correspond to the following scale points: Below *Basic*, 207 or lower; *Basic*, 208–237; *Proficient*, 238–267; *Advanced*, 268 or above.

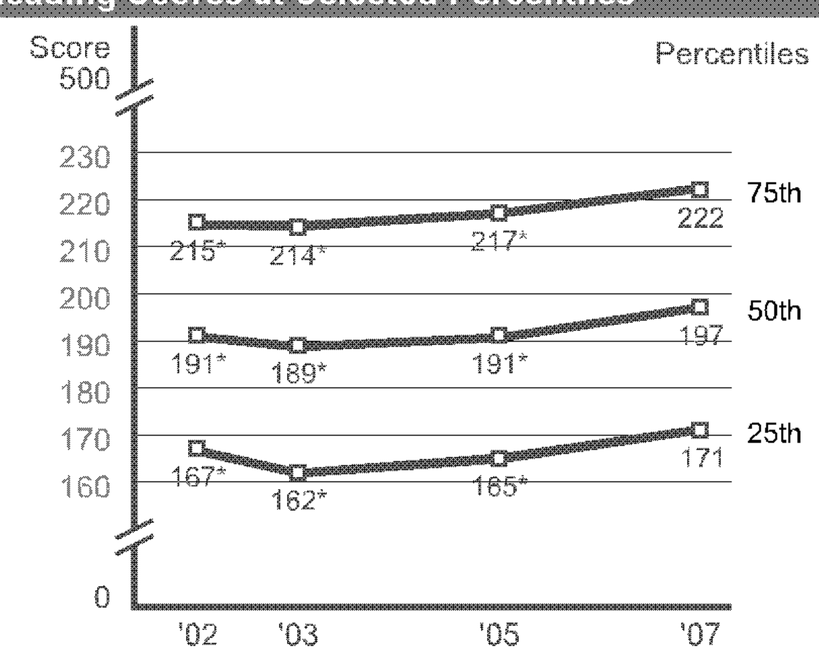
Performance of NAEP Reporting Groups in the District of Columbia: 2007

Reporting groups	Percent of students[3]	Average score	Percent below *Basic*	Percent of students at or above *Basic*	Percent of students at or above *Proficient*	Percent *Advanced*
Male	48	194 ↑	64 ↓	36 ↑	12	3
Female	52	200 ↑	59	41	16	4
White	6 ↑	258	4	96	74	38
Black	86	192 ↑	67 ↓	33 ↑	9	1
Hispanic	7	206 ↑	45 ↓	55 ↑	15	2
Asian/Pacific Islander	1	‡	‡	‡	‡	‡
American Indian/Alaska Native	#	‡	‡	‡	‡	‡
Eligible for National School Lunch Program	66 ↓	188 ↑	71	29	6	#
Not eligible for National School Lunch Program	34 ↑	216	42	58	29	10

Average Score Gaps Between Selected Groups

- In 2007, male students in the District of Columbia had an average score that was lower than that of female students by 6 points. In 2002, the average score for male students was lower than that of female students by 10 points.
- In 2007, Black students had an average score that was lower than that of White students by 67 points. In 2002, the average score for Black students was lower than that of White students by 60 points.
- In 2007, Hispanic students had an average score that was lower than that of White students by 52 points. In 2002, the average score for Hispanic students was lower than that of White students by 55 points.
- In 2007, students who were eligible for free/reduced-price school lunch, a proxy for poverty, had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 28 points. In 2002, the average score for students who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 25 points.
- In 2007, the score gap between students at the 75th percentile and students at the 25th percentile was 51 points. In 2002, the score gap between students at the 75th percentile and students at the 25th percentile was 48 points.

Reading Scores at Selected Percentiles



NOTE: Scores at selected percentiles on the NAEP reading scale indicate how well students at lower, middle, and higher levels performed.

Rounds to zero. ‡ Reporting standards not met.
* Significantly different from 2007. ↑ Significantly higher than 2005. ↓ Significantly lower than 2005.

[1] Comparisons (higher/lower/narrower/wider/not different) are based on statistical tests. The .05 level was used for testing statistical significance. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages. Comparisons across jurisdictions and comparisons with the nation or within a jurisdiction across years may be affected by differences in exclusion rates for students with disabilities (SD) and English language learners (ELL). The exclusion rates for SD and ELL in District of Columbia as District were 5 and 2 in 2007, respectively.For more intormation on NAEP significance testing see http://nces.ed.gov/nationsreportcard/reading/interpret-results.asp#statistical.

[2] "Large central city" includes public schools located in large central cities (population 250,000 or more) within metropolitan statistical areas as defined by the federal Office of Management and Budget. It is not synonymous with "inner city."

[3] For comparison, non-White students comprised 79 percent of students in large central city public schools and 44 percent in public schools nationally at grade 4. Also, students eligible for free/reduced-price school lunch comprised 70 percent of students in large central city public schools and 45 percent in public schools nationally.

NOTE: Detail may not sum to totals because of rounding and because the "Information not available" category for the National School Lunch Program, which provides free and reduced-price lunches, and the "Unclassified" category for race/ethnicity are not displayed. Visit http://nces.ed.gov/nationsreportcard/reading/tuda.asp for additional results and detailed information.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2002–2007 Trial Urban District Reading Assessments.

NCES 2008-465XW8

The Nation's Report Card

Reading 2007

Trial Urban District Snapshot Report

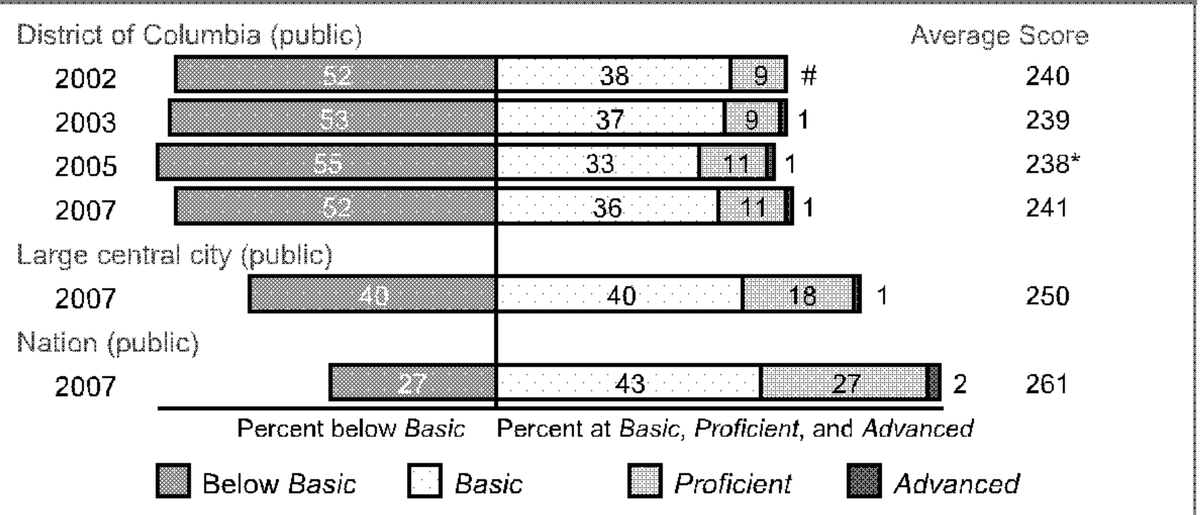
District of Columbia
Grade 8
Public Schools

The National Assessment of Educational Progress (NAEP) assesses reading on a 0-500 point scale. In 2007, the District of Columbia was one of eleven urban districts that voluntarily participated in the NAEP reading assessment on a trial basis.

Overall Reading Results for the District of Columbia

- In 2007, the average scale score for eighth-grade students in the District of Columbia was 241. This was higher than their average score in 2005 (238) and was not significantly different from their average score in 2002 (240).[1]
- The District of Columbia's average score (241) in 2007 was lower than that of public schools in large central cities[2] (250).
- The percentage of students in the District of Columbia who performed at or above the NAEP *Proficient* level was 12 percent in 2007. This percentage was not significantly different from that in 2005 (12 percent) and was not significantly different from that in 2002 (10 percent).
- The percentage of students in the District of Columbia who performed at or above the NAEP *Basic* level was 48 percent in 2007. This percentage was not significantly different from that in 2005 (45 percent) and was not significantly different from that in 2002 (48 percent).

Percentages at NAEP Achievement Levels and Average Score



Rounds to zero.

NOTE: The NAEP grade 8 reading achievement levels correspond to the following scale points: Below *Basic*, 242 or lower; *Basic*, 243–280; *Proficient*, 281–322; *Advanced*, 323 or above.

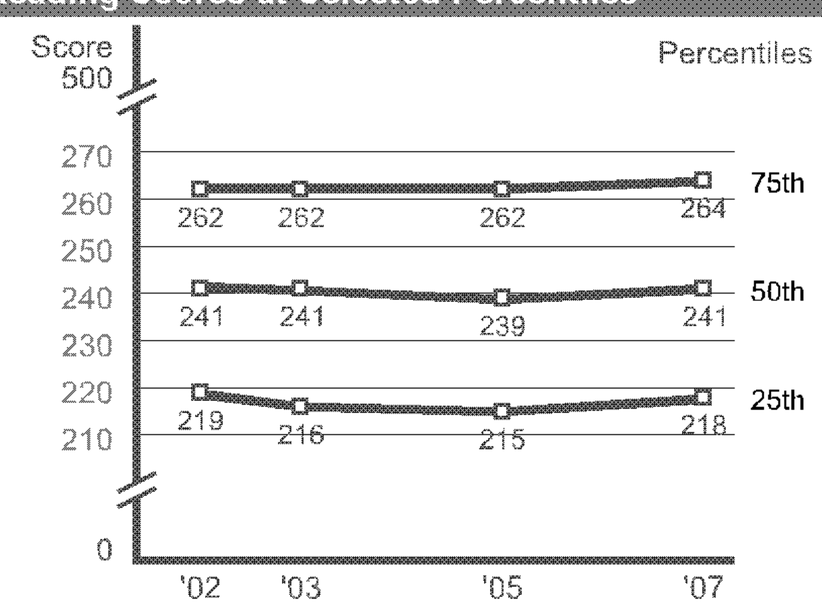
Performance of NAEP Reporting Groups in the District of Columbia: 2007

Reporting groups	Percent of students[3]	Average score	Percent below *Basic*	Percent of students at or above *Basic*	Percent of students at or above *Proficient*	Percent *Advanced*
Male	44	235 ↑	59	41	9	1
Female	56	245	47	53	15	1
White	3	‡	‡	‡	‡	‡
Black	88	238 ↑	55	45	9	#
Hispanic	8	249	44	56	19	1
Asian/Pacific Islander	1	‡	‡	‡	‡	‡
American Indian/Alaska Native	#	‡	‡	‡	‡	‡
Eligible for National School Lunch Program	65 ↓	234	59	41	7	#
Not eligible for National School Lunch Program	35 ↑	253	40	60	22	3

Average Score Gaps Between Selected Groups

- In 2007, male students in the District of Columbia had an average score that was lower than that of female students by 10 points. In 2002, the average score for male students was lower than that of female students by 10 points.
- Data are not reported for White students in 2007, because reporting standards were not met. Therefore, the performance gap results with Black students are not reported.
- Data are not reported for White students in 2007, because reporting standards were not met. Therefore, the performance gap results with Hispanic students are not reported.
- In 2007, students who were eligible for free/reduced-price school lunch, a proxy for poverty, had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 18 points. In 2002, the average score for students who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 17 points.
- In 2007, the score gap between students at the 75th percentile and students at the 25th percentile was 46 points. In 2002, the score gap between students at the 75th percentile and students at the 25th percentile was 44 points.

Reading Scores at Selected Percentiles



NOTE: Scores at selected percentiles on the NAEP reading scale indicate how well students at lower, middle, and higher levels performed.

Rounds to zero. ‡ Reporting standards not met.
* Significantly different from 2007. ↑ Significantly higher than 2005. ↓ Significantly lower than 2005.

[1] Comparisons (higher/lower/narrower/wider/not different) are based on statistical tests. The .05 level was used for testing statistical significance. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages. Comparisons across jurisdictions and comparisons with the nation or within a jurisdiction across years may be affected by differences in exclusion rates for students with disabilities (SD) and English language learners (ELL). The exclusion rates for SD and ELL in District of Columbia as District were 4 and 1 in 2007, respectively.For more intormation on NAEP significance testing see http://nces.ed.gov/nationsreportcard/reading/interpret-results.asp#statistical.

[2] "Large central city" includes public schools located in large central cities (population 250,000 or more) within metropolitan statistical areas as defined by the federal Office of Management and Budget. It is not synonymous with "inner city."

[3] For comparison, non-White students comprised 77 percent of students in large central city public schools and 42 percent in public schools nationally at grade 8. Also, students eligible for free/reduced-price school lunch comprised 64 percent of students in large central city public schools and 40 percent in public schools nationally.

NOTE: Detail may not sum to totals because of rounding and because the "Information not available" category for the National School Lunch Program, which provides free and reduced-price lunches, and the "Unclassified" category for race/ethnicity are not displayed. Visit http://nces.ed.gov/nationsreportcard/reading/tuda.asp for additional results and detailed information.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2002–2007 Trial Urban District Reading Assessments.

Appendix A3.2

Historical Data

A3(ii)(a) – Historical ESEA and NAEP Results

STATEWIDE ESEA RESULTS – Percent of Students Scoring Proficient or Advanced (2003 – 2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Reading	35.5%	37.4%	39.8%	34.6%	36.2%	42.7%	45.3%	**10.7**
Math	43.4%	45.5%	45.3%	26.1%	31.1%	39.6%	44.8%	**18.6**

* The DC-CAS test was first implemented in the 2005-2006 school year
Source: OSSE website: www.nclb.osse.dc.gov

STATEWIDE NAEP SCORES (2003 – 2009)						
	2003	**2005**	**2007**	**2009**	**4 Year Gain**	**6 Year Gain**
4th Grade Reading	188	191	197	N/A *	**9**	
4th Grade Math	205	211	214	219	8**	**14**
8th Grade Reading	239	238	241	N/A *	**2**	
8th Grade Math	243	245	248	254	**9**	**11**

* Reading scores are not yet available for 2009
** D.C. had the highest 4 year gain for 4th Grade Math of any state in the U.S. between 2005-2009
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(ii)(a) – Historical ESEA Results by Subgroup

ESEA RESULTS by Subgroup –Reading – Percent of Students Scoring Proficient or Advanced (2003 – 2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	49.9%	54.0%	57.1%	61.7%	65.4%	67.6%	74.1%	**12.4**
Black/Non-Hispanic	33.9%	35.5%	37.6%	31.5%	32.7%	39.3%	41.8%	**10.3**
Hispanic	32.0%	34.4%	40.8%	39.5%	39.9%	47.0%	48.7%	**9.2**
Amer. Indian/Alaskan Native	41.7%	50.0%	**	53.3%	55.0%	**	75.0%	**21.7**
White/Non-Hispanic	81.5%	83.3%	83.1%	84.4%	86.9%	88.0%	87.6%	**3.2**
Gender								
Female	39.7%	41.2%	44.0%	39.5%	41.0%	48.2%	50.7%	**11.2**
Male	31.5%	33.7%	36.1%	29.8%	31.4%	37.3%	39.9%	**10.1**
SPED								
Disabled	8.2%	12.0%	16.0%	11.9%	14.6%	20.3%	18.4%	**6.4**
Non-disabled	41.8%	43.7%	46.2%	40.2%	41.4%	47.6%	51.4%	**11.2**
English Proficiency								
LEP/NEP	21.7%	20.5%	37.2%	31.4%	33.6%	38.8%	44.7%	**13.3**
Non-LEP/NEP	36.5%	38.8%	40.3%	34.8%	36.7%	43.4%	45.4%	**10.6**
Econ. Status								
Econ. Disadvantaged	32.2%	33.4%	37.4%	29.5%	31.1%	37.3%	39.9%	**10.4**
Non-Econ. Disadvantaged	40.4%	45.2%	45.3%	44.0%	44.9%	53.1%	57.8%	**13.9**
STATE Total:	**35.5%**	**37.4%**	**39.8%**	**34.6%**	**36.2%**	**42.7%**	**45.3%**	**10.7**

* The DC-CAS test was first implemented in the 2005-2006 school year
** Data is not available due to inadequate sample size
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical ESEA Results by Subgroup

ESEA RESULTS by Subgroup – Math – Percent of Students Scoring Proficient or Advanced (2003 – 2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	80.2%	82.1%	82.0%	65.5%	73.3%	78.1%	86.5%	**20.9**
Black/Non-Hispanic	41.0%	42.9%	42.0%	22.7%	27.2%	35.5%	40.5%	**17.8**
Hispanic	46.5%	50.7%	56.6%	31.5%	36.9%	48.1%	53.4%	**22.0**
Amer. Indian/Alaskan Native	45.8%	55.0%	**	33.3%	50.0%	**	75.0%	**41.7**
White/Non-Hispanic	82.8%	85.5%	84.4%	79.7%	82.2%	86.1%	86.0%	**6.3**
Gender								
Female	46.9%	49.1%	48.4%	27.6%	32.8%	41.7%	46.9%	**19.3**
Male	40.2%	42.3%	42.5%	24.7%	29.3%	37.6%	42.6%	**17.9**
SPED								
Disabled	9.0%	11.9%	15.8%	7.5%	10.2%	16.0%	16.9%	**9.5**
Non-disabled	51.4%	53.9%	53.2%	30.7%	36.1%	44.8%	51.0%	**20.3**
English Proficiency								
LEP/NEP	42.8%	47.5%	59.4%	26.8%	33.9%	43.1%	53.0%	**26.1**
Non-LEP/NEP	43.5%	46.1%	44.7%	26.1%	31.2%	39.7%	43.9%	**17.9**
Econ. Status								
Econ. Disadvantaged	41.4%	42.8%	43.9%	21.3%	26.3%	34.7%	40.1%	**18.8**
Non-Econ. Disadvantaged	46.6%	50.9%	48.6%	35.1%	39.3%	49.1%	55.6%	**20.5**
STATE Total:	**43.4%**	**45.5%**	**45.3%**	**26.1%**	**31.1%**	**39.6%**	**44.8%**	**18.6%**

* The DC-CAS test was first implemented in the 2005-2006 school year
** Data is not available due to inadequate sample size
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical ESEA Results by Subgroup and School Level

ESEA RESULTS - Elementary Reading - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	63.7%	72.9%	73.6%	65.7%	66.9%	73.6%	75.7%	**10.0**
Black/Non-Hispanic	41.8%	44.0%	48.0%	33.8%	34.1%	41.4%	43.7%	**9.9**
Hispanic	41.7%	43.8%	51.1%	41.2%	44.1%	50.7%	49.4%	**8.2**
White/Non-Hispanic	90.8%	88.8%	88.0%	86.7%	84.7%	87.7%	90.3%	**3.6**
Gender								
Female	48.5%	49.9%	54.6%	41.5%	42.8%	50.9%	52.9%	**11.4**
Male	39.8%	42.6%	46.5%	32.8%	33.8%	40.2%	42.7%	**9.9**
SPED								
Disabled	13.1%	17.6%	24.8%	15.4%	18.2%	25.9%	23.4%	**8.0**
English Proficiency								
LEP/NEP	29.9%	31.3%	50.1%	36.7%	40.3%	45.9%	48.0%	**11.3**
Econ. Status								
Econ. Disadvantaged	38.9%	41.0%	46.3%	31.4%	33.2%	39.9%	41.4%	**10.0**
STATE Total:	**44.1%**	**46.2%**	**50.6%**	**37.2%**	**38.2%**	**45.5%**	**47.8%**	**10.6**

* The DC-CAS test was first implemented in the 2005-2006 school year
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical ESEA Results by Subgroup and School Level

ESEA RESULTS - Secondary Reading - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	44.1%	43.9%	43.9%	56.3%	59.9%	63.2%	75.2%	**18.9**
Black/Non-Hispanic	28.2%	30.2%	29.8%	29.6%	32.2%	39.5%	42.6%	**13.0**
Hispanic	25.7%	28.6%	30.1%	38.6%	34.7%	44.5%	48.9%	**10.3**
White/Non-Hispanic	73.9%	81.0%	78.7%	82.5%	92.6%	94.6%	89.1%	**6.5**
Gender								
Female	33.7%	35.7%	35.9%	37.8%	40.0%	47.6%	50.8%	**13.0**
Male	26.2%	28.3%	27.8%	27.0%	29.2%	36.3%	39.6%	**12.6**
SPED								
Disabled	5.2%	8.7%	9.1%	8.4%	8.8%	14.4%	15.3%	**6.9**
English Proficiency								
LEP/NEP	15.6%	8.8%	12.5%	19.3%	17.6%	25.9%	34.6%	**15.3**
Econ. Status								
Econ. Disadvantaged	25.5%	27.4%	28.0%	27.2%	29.0%	35.4%	39.6%	**12.4**
STATE Total:	**29.8%**	**31.9%**	**31.9%**	**32.3%**	**34.8%**	**42.2%**	**45.4%**	**13.0**

* The DC-CAS test was first implemented in the 2005-2006 school year
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical ESEA Results by Subgroup and School Level

ESEA RESULTS – Elementary Math - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	83.9%	87.0%	89.3%	63.6%	67.7%	76.3%	82.1%	**18.5**
Black/Non-Hispanic	51.0%	52.8%	54.9%	22.8%	25.9%	35.9%	41.1%	**18.3**
Hispanic	56.8%	60.8%	67.1%	32.0%	39.4%	48.8%	53.5%	**21.4**
White/Non-Hispanic	91.7%	90.3%	88.2%	82.4%	77.7%	84.7%	88.5%	**6.1**
Gender								
Female	56.7%	58.3%	61.5%	28.0%	32.1%	42.5%	47.8%	**19.8**
Male	50.5%	52.8%	54.6%	25.6%	28.9%	38.9%	44.4%	**18.7**
SPED								
Disabled	13.1%	16.3%	23.2%	9.4%	11.9%	19.4%	21.5%	**12.1**
English Proficiency								
LEP/NEP	48.4%	51.1%	68.6%	29.0%	36.6%	45.3%	53.6%	**24.6**
Econ. Status								
Econ. Disadvantaged	49.5%	51.1%	55.1%	21.2%	25.8%	35.5%	40.3%	**19.1**
STATE Total:	**53.6%**	**55.5%**	**58.0%**	**26.8%**	**30.5%**	**40.7%**	**46.1%**	**19.3**

* The DC-CAS test was first implemented in the 2005-2006 school year
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical ESEA Results by Subgroup and School Level

ESEA RESULTS – Secondary Math - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Proficiency Gain ('06 – '09)**
Race/Ethnicity								
Asian/Pacific Islanders	79.7%	79.5%	76.9%	69.5%	73.7%	81.0%	85.9%	**16.4**
Black/Non-Hispanic	34.0%	36.7%	32.4%	23.3%	30.0%	37.4%	43.3%	**19.9**
Hispanic	40.6%	44.9%	46.1%	31.6%	33.7%	49.8%	54.4%	**22.8**
White/Non-Hispanic	75.7%	82.6%	80.1%	77.4%	92.4%	94.2%	85.4%	**8.0**
Gender								
Female	40.1%	43.3%	38.5%	28.1%	34.8%	43.1%	48.7%	**20.6**
Male	33.5%	35.7%	33.1%	24.4%	30.9%	38.7%	44.0%	**19.5**
SPED								
Disabled	6.5%	9.4%	10.1%	5.6%	7.6%	12.8%	14.5%	**8.9**
English Proficiency								
LEP/NEP	39.3%	41.6%	41.6%	21.8%	23.6%	38.0%	45.2%	**23.5**
Econ. Status								
Econ. Disadvantaged	33.2%	36.2%	32.4%	22.0%	27.6%	35.0%	41.6%	**19.6**
STATE Total:	**36.6%**	**39.3%**	**35.8%**	**26.3%**	**32.9%**	**41.0%**	**46.4%**	**20.2**

* The DC-CAS test was first implemented in the 2005-2006 school year
Source: OSSE website: www.nclb.osse.dc.gov

A3(ii)(a) – Historical NAEP Scores by Subgroup

NAEP SCORES – 4th Grade Reading (2003 – 2007)					
	2003	**2005**	**2007**	**2009***	**4 Year Gains**
All students	188	191	197		**9**
Male	182	186	194		**12**
Female	195	195	200		**5**
White	254	252	258		**4**
Black	184	187	192		**8**
Hispanic	187	193	206		**19**
SPED	148	154	162		**14**
Not SPED	192	195	199		**7**
FRL	182	183	188		**6**
Not FRL	206	215	216		**10**
ELL	174	177	198		**24**
Not ELL	189	191	197		**8**

* Reading scores for 2009 are not yet available
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(ii)(a) – Historical NAEP Scores by Subgroup

NAEP SCORES – 8th Grade Reading (2003 – 2007)					
	2003	**2005**	**2007**	**2009***	**4 Year Gains**
All students	239	238	241		**2**
Male	231	230	235		**4**
Female	245	245	245		**0**
White	**	301	**		
Black	236	235	238		**2**
Hispanic	240	247	249		**9**
SPED	199	199	210		**11**
Not SPED	243	243	243		**0**
FRL	232	234	234		**2**
Not FRL	248	249	253		**5**
ELL	231	**	**		
Not ELL	239	238	241		**2**

* Reading scores for 2009 are not yet available
** Data not available due to inadequate sample size
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(ii)(a) – Historical NAEP Scores by Subgroup

NAEP Scores – 4th Grade Math (2003 – 2009)						
	2003	**2005**	**2007**	**2009**	**4 Year Gains**	**6 Year Gains**
All students	205	211	214	219	**8**	**14**
Male	204	212	213	218	**6**	**14**
Female	206	211	214	221	**10**	**15**
White	262	266	262	270	**4**	**8**
Black	202	207	209	213	**6**	**11**
Hispanic	205	215	220	227	**12**	**22**
SPED	177	188	188	193	**5**	**16**
Not SPED	208	214	216	222	**8**	**14**
FRL	200	206	207	211	**5**	**11**
Not FRL	221	229	228	242	**13**	**21**
ELL	200	206	209	215	**9**	**15**
Not ELL	205	211	214	220	**9**	**15**
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/						

A3(ii)(a) – Historical NAEP Scores by Subgroup

NAEP Scores – 8th Grade Math (2003 – 2009)						
	2003	**2005**	**2007**	**2009**	**4 Year Gains**	**6 Year Gains**
All students	243	245	248	254	**9**	**11**
Male	242	246	248	252	**6**	**10**
Female	244	245	248	255	**10**	**11**
White	**	317	**	**		
Black	240	241	245	249	**8**	**9**
Hispanic	246	252	251	265	**13**	**19**
SPED	204	208	211	213	**5**	**9**
Not SPED	248	250	252	259	**9**	**11**
FRL	235	241	243	247	**6**	**12**
Not FRL	254	261	259	272	**11**	**18**
ELL	231	**	226	**		
Not ELL	244	246	249	254	**8**	**10**

** Data not available due to inadequate sample size
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(iii)(b) – Historical ESEA Achievement Gaps

ESEA Absolute Achievement Gap - Reading - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Decrease in Gap ('06-'09)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)								
Asian/Pacific Islanders	31.5%	29.4%	25.9%	22.8%	21.5%	20.4%	13.5%	**9.3**
Black/Non-Hispanic	47.6%	47.8%	45.4%	52.9%	54.1%	48.6%	45.8%	**7.1**
Hispanic	49.5%	49.0%	42.3%	44.9%	47.0%	41.0%	38.9%	**6.0**
Amer. Indian/Alaskan Native	39.8%	33.3%	**	31.1%	31.9%	**	12.6%	**18.5**
Gender - Calculated as (proficiency for females - proficiency for males)								
Female – Male	8.2%	7.5%	7.9%	9.7%	9.6%	10.9%	10.8%	**-1.1**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)								
Non-disabled – SPED	33.5%	31.8%	30.3%	28.3%	26.9%	27.3%	33.0%	**-4.7**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)								
Non-LEP/NEP - LEP/NEP	14.9%	18.3%	3.2%	3.5%	3.1%	4.6%	0.7%	**2.8**
Econ. Status - Calculated as (proficiency for non-disadvantaged - proficiency for disadvantaged)								
Econ. Disadvantaged	8.2%	11.8%	7.9%	14.4%	13.8%	15.8%	17.9%	**-3.5**
STATE Total:	**35.5%**	**37.4%**	**39.8%**	**34.6%**	**36.2%**	**42.7%**	**45.3%**	

* The table above gives the absolute difference in percentage points for a given achievement gap
* Example: For gender gap in 2009, the female proficiency equals 50.7% and male equals 39.9% giving an absolute gap of 10.8%
** Data is not available due to inadequate sample size
Source: OSSE website: www.nclb.osse.dc.gov

A3(iii)(b) – Historical ESEA Achievement Gaps

ESEA Absolute Achievement Gap - Math - Percent of Students Scoring Proficient or Advanced (2003-2009)								
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Percentage Point Decrease in Gap ('06-'09)**
Race/Ethnicity - Calculated as the amount a given ethnicity is below proficiency of (White/Non-Hispanic)								
Asian/Pacific Islanders	2.5%	3.4%	2.4%	14.1%	8.8%	8.0%	-0.5%	**14.7**
Black/Non-Hispanic	41.7%	42.6%	42.4%	57.0%	55.0%	50.6%	45.5%	**11.5**
Hispanic	36.2%	34.8%	27.8%	48.2%	45.3%	38.0%	32.5%	**15.7**
Amer. Indian/Alaskan Native	36.9%	30.5%	**	46.3%	32.2%	**	11.0%	**35.4**
Gender - Calculated as (proficiency for females - proficiency for males)								
Female – Male	6.7%	6.8%	5.9%	3.0%	3.5%	4.1%	4.4%	**-1.4**
SPED - Calculated as (proficiency for non-disabled students - proficiency for special needs students)								
Non-disabled – SPED	42.5%	42.0%	37.4%	23.2%	26.0%	28.8%	34.1%	**-10.8**
English Proficiency - Calculated as (proficiency for non-LEP/NEP - proficiency for LEP/NEP)								
Non-LEP/NEP - LEP/NEP	0.7%	-1.5%	-14.7%	-0.8%	-2.7%	-3.3%	-9.0%	**8.3**
Econ. Status - Calculated as (proficiency for non-disadvantaged - proficiency for disadvantaged)								
Econ. Disadvantaged	5.2%	8.2%	4.7%	13.8%	13.0%	14.4%	15.5%	**-1.7**
STATE Total:	**43.4%**	**45.5%**	**45.3%**	**26.1%**	**31.1%**	**39.6%**	**44.8%**	

* The table above gives the absolute difference in percentage points for a given achievement gap
* Example: For Gender Gap in 2009, the female proficiency equals 46.9% and male equals 42.6% giving an absolute gap of 4.4%
** Data is not available due to inadequate sample size
Source: OSSE website: www.nclb.osse.dc.gov

A3(iii)(b) – Historical NAEP Achievement Gaps

NAEP Scores Absolute Achievement Gap – 4th Grade Reading					
	2003	**2005**	**2007**	**2009***	**Decrease in Gap ('03 - '07)**
All students	188	191	197		
Gender - Calculated as (female score - male score)					
Female – Male	13	9	6		**7**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	70	65	66		**4**
Hispanic	67	59	52		**15**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	44	41	37		**7**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	24	32	28		**-4**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	15	14	-1		**16**

* Reading scores for 2009 are not yet available
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(iii)(b) – Historical NAEP Achievement Gaps

NAEP Scores Absolute Achievement Gap – 8th Grade Reading					
	2003	**2005**	**2007**	**2009***	**Decrease in Gap ('03 - '07)**
All students	239	238	241		
Gender - Calculated as (female score - male score)					
Female – Male	14	15	10		**4**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	**	66	**		**N/A**
Hispanic	**	54	**		**N/A**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	44	44	33		**11**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	16	15	19		**-3**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	8	**	**		**N/A**

* Reading scores for 2009 are not yet available
** Data is not available due to an inadequate sample size of the comparison subgroup
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

A3(iii)(b) – Historical NAEP Achievement Gaps

NAEP Scores Absolute Achievement Gap – 4th Grade Math					
	2003	**2005**	**2007**	**2009**	**Decrease in Gap ('03 - '09)**
All students	205	211	214	219	
Gender - Calculated as (female score - male score)					
Female – Male	2	-1	1	3	**-1**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	60	59	53	57	**3**
Hispanic	57	51	42	43	**14**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	31	26	28	29	**2**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	21	23	21	31	**-10**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	5	5	5	5	**0**
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/					

A3(iii)(b) – Historical NAEP Achievement Gaps

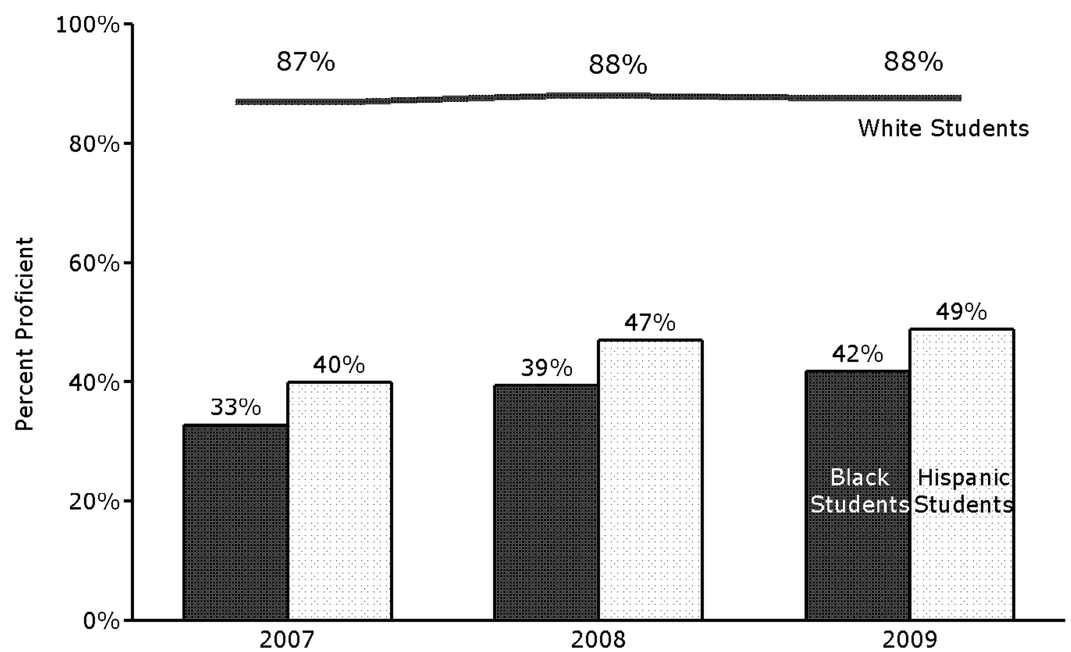
NAEP Scores Absolute Achievement Gap – 8th Grade Math					
	2003	**2005**	**2007**	**2009**	**Decrease in Gap ('03 - '09)**
All students	243	245	248	254	
Gender - Calculated as (female score - male score)					
Female – Male	2	-1	0	3	**-1**
Race/Ethnicity - Calculated as (white student score - specific subgroup score)					
Black	**	76	**	**	**N/A**
Hispanic	**	65	**	**	**N/A**
SPED - Calculated as (Not SPED score - SPED score)					
Not SPED – SPED	44	42	41	46	**-2**
Free & Reduced Lunch - Calculated as (Not FRL score - FRL score)					
Not FRL – FRL	19	20	16	25	**-6**
English Language Learners - Calculated as (not-ELL score - ELL score)					
Not-ELL – ELL	13	N/A	23	N/A	**-10 ('03 – '07)**

** Data is not available due to an inadequate sample size of the comparison subgroup
Source: National Assessment of Educational Progress: http://nces.ed/gov/nationsreportcard/naepdata/

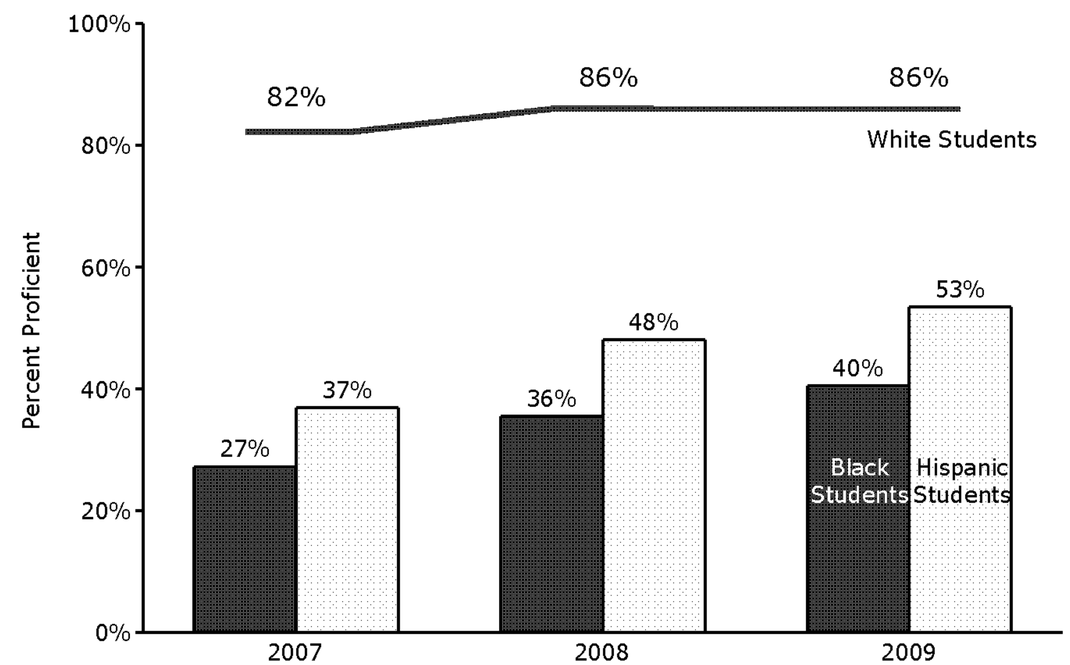
A3(ii)(b) – ESEA - Graph of Achievement Gap – Race/Ethnicity

Achievement Gap: Race/Ethnicity (2007-2009)

Reading



Math



A3(iii)(c) – Graduation Rates

Draft Graduation Rates by Subgroup (Class of 2009)*	
DCPS	72.33%
PCSB	83.35%
DC STATE	74.71%
Race/Ethnicity	
Asian	79.37%
Black	76.59%
Hispanic	61.71%
Native American	83.33%
White	72.78%
English Language Learners	
Limited English Proficiency	94.26%
Not LEP	74.19%
Special Education	
Special Education	94%
Regular Education	73%
Economic Status	
FRL	96.27%
No FRL	58.36%

High School Graduation Rates (2007-2009)			
	2007	**2008**	**2009**
STATEWIDE	N/A*	70.0%	74.7%
DCPS	66.2%	67.9%	72.3%
PCSB	N/A*	88.0%	83.4%
* STATEWIDE and PCSB graduation data for 2007 is not available			

* Graduation Rates for 2009 have not yet been fully audited

** Graduation data calculated using leaver rate method – (graduating seniors divided by the sum of graduating seniors and dropouts for the class over the preceding four years)

Source: OSSE: www.nclb.osse.dc.gov, District of Columbia Public Charter School Board

Appendix B1.1

MOA Common Core Standards

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:	

Appendix B1.2

Common Core Standards
List of States

Press Release 9/1/09

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

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.

Appendix B1.3

Draft Standards

Common Core State Standards Initiative Sub-Appendix

1. College and Career Readiness Standards for Reading, Writing, and Speaking and Listening **191**

2. College and Career Readiness Standards for Mathematics **216**

3. Standards for English Language Arts K–12 **228**

4. Standards for Mathematics K-12 **289**

5. Evidence for Individual Reading, Writing, and Speaking and Listening Standards **318**

6. Evidence for Individual Math Standards **347**

College and Career Readiness Standards for Reading, Writing, and Speaking and Listening

Draft for Review and Comment

September 21, 2009

College and Career Readiness Standards for Reading, Writing, and Speaking and Listening

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How to Read the Document vii

Core Standards for Reading Informational and Literary Texts
Standards for the Range and Content of Student Reading 1-A
Standards for Student Performance 1-B

Core Standards for Writing
Standards for the Range and Content of Student Writing 2-A
Standards for Student Performance 2-B

Core Standards for Speaking and Listening
Standards for the Range and Content of Student Speaking and Listening 3-A
Standards for Student Performance 3-B

Applications of the Core
Application of the Core: Research 4-A
Application of the Core: Media 4-B

Illustrative Texts: Exemplars of Reading Text Complexity
Introduction 5
Illustrative Texts with Annotations 6

~~Illustrative Student Writing Samples~~ **- Coming in next draft**
~~Introduction~~
~~Student Writing Samples with Annotations~~

Sample of Works Consulted 31

Core Standards for Reading, Writing, and Speaking and Listening

The Core Standards identify essential college- and career-ready skills and knowledge in reading, writing, and speaking and listening across the disciplines. While the English language arts classroom has often been seen as the proper site for literacy instruction, this document acknowledges that the responsibility for teaching such skills must also extend to the other content areas. Teachers in the social and natural sciences, the humanities, and mathematics need to use their content area expertise to help students acquire the discipline-specific skills necessary to comprehend challenging texts and develop deep knowledge in those fields. At the same time, English language arts teachers not only must engage their students in a rich array of literature but also must help develop their students' ability to read complex works of nonfiction independently.

What is taught is just as important as how it is taught; the Core Standards should be accompanied by a comprehensive, content-rich curriculum. While this document defines the outcomes all students need to reach to be college and career ready, many important decisions about curriculum will necessarily be left to states, districts, schools, teachers, professional organizations, and parents. For example, while the standards require that students read texts of sufficient complexity, quality, and range, this document does not contain a required reading list. If states and districts choose to develop one, they should look at the Reading exemplars provided here to get a sense of the level of complexity students must be able to handle independently when they read. Educators can also model their efforts on reading lists from around the nation and the world as long as the texts ultimately included meet the range and content standards in this document.

Standards today must ready students for competition and collaboration in a global, media-saturated environment. Colleges and universities have become international meetinghouses where people from across the globe learn with and from one another. At the same time, business today is truly a worldwide enterprise. Media-related technology helps shape what goes on in both college and the workplace; indeed, it has in some important ways reshaped the very nature of communication. Students who meet the Core Standards will have the reading, writing, speaking, and listening skills to flourish in the diverse, rapidly changing environments of college and careers.

Although reading, writing, and speaking and listening are articulated separately in the standards that follow, these divisions are made for the sake of clarity and manageability. In reality, the processes of communication are tightly interrelated and often reciprocal. The act of reading can no more be separated from the written word than the act of listening can be from the spoken word. When reading, students demonstrate their comprehension most commonly through a spoken or written interpretation of the text. As students solve problems, share insights, and build the

knowledge they need for college and career success, they draw simultaneously on their capacities to read, write, speak, and listen.

Student Practices in Reading, Writing, and Speaking and Listening

The following practices in reading, writing, and speaking and listening undergird and help unify the rest of the standards document. They are the "premises"—broad statements about the nature of college and career readiness in reading, writing, and speaking and listening—that underlie the individual standards statements and cut across the various sections of the document. Every idea introduced here is subsequently represented in one or more places within the larger document.

* * *

Students who are college and career ready exhibit the following capacities in their reading, writing, and speaking and listening:

1. *They demonstrate independence as readers, writers, speakers, and listeners.*

   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 and articulate their own ideas.

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 specific in-depth 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, and speaking and listening 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. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in the natural 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 textual evidence when offering an oral or written interpretation of a piece of writing. 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, and listening. 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.

Introductory Evidence Statement for Reading, Writing, and Speaking and Listening Standards

To develop college- and career-ready standards for Reading, Writing, and Speaking and Listening that are rigorous, relevant, and internationally benchmarked, the work group consulted evidence from a wide array of sources. These included standards documents from high-performing states and nations; student performance data (including assessment scores and college grades); academic research; frameworks for assessments, such as NAEP; and results of surveys of postsecondary instructors and employers regarding what is most important for college and career readiness.

The evidence strongly suggests that similar reading, writing, speaking, and listening skills are necessary for success in both college and the workplace. A review of the standards of high-performing nations also suggests that many of these skills are already required in secondary schools internationally. The work group has endeavored to articulate these skills in the Core Standards, focusing educators, students, parents, and resources on what matters most.

Given that a set of standards cannot be simplistically "derived" from any body of evidence, the work group sometimes relied on reasoned judgment to interpret where the evidence was most compelling. For example, there is not a consensus among college faculty about the need for incoming students to be able to comprehend graphs, charts, and tables and to integrate information in these data displays with the information in the accompanying text. Although some evidence suggests that this skill is critical in the workplace and in some entry-level courses, college faculties from the various disciplines disagree on its value (with science and economics faculty rating it more highly than English and humanities professors do). The work group ultimately included a standard on the integration of text and data because the preponderance of the evidence suggests the skill's importance in meeting the demands of the twenty-first-century workplace and some college classrooms.

In most cases, the evidence is clearer. In writing, for example, there is unequivocal value placed on the logical progression of ideas. The expectation that high school graduates will be able to produce writing that is logical and coherent is found throughout the standards of top-performing countries and states. This ability is also valued highly by college faculty and employers. In response to such clear evidence, the work group included Writing student performance standard #5: "Create a logical progression of ideas or events, and convey the relationships among them."

A bibliography of some of the sources the work group drew upon most is included at the end of this document. The reader should also refer to the Core Standards Web site (http://www.corestandards.org), which contains a list of standards linked to relevant sources of evidence.

Finally, while the standards reflect the best evidence available to date, the decisions the work group made are necessarily provisional. The core should be reexamined periodically as additional research on college and career readiness emerges. Indeed, this document may serve as an agenda for such research.

How to Read the Document

This document is divided into three main sections: strands, applications, and supporting materials.

Strands
There are three *strands*: Reading, Writing, and Speaking and Listening. Although each strand is presented discretely for ease of understanding, the document should be considered a coherent whole.

The three strands are each in turn divided into two sections: S*tandards for Range and Content* and S*tandards for Student Performance*.

> **Standards for Range and Content**
> The Standards for Range and Content in each strand describe the contexts in which college- and career-ready students must be able to read, write, speak, and listen. Rather than merely supplement or illustrate the numbered list of Standards for Student Performance, the Standards for Range and Content are themselves required and carry equal force.
>
> **Standards for Student Performance**
> The Standards for Student Performance in each strand enumerate the essential skills and understandings that students who are college and career ready in reading, writing, speaking, and listening must have no later than the end of high school.

Applications
The clearest examples of the integrated nature of communication are the *Applications of the Core* for Research and Media. The Core Standards for Reading, Writing, and Speaking and Listening have been designed to include the essential skills and knowledge that students need to apply to college and career tasks, such as research and media. Rather than having an additional set of standards that would largely duplicate those already in Reading, Writing, and Speaking and Listening, the document includes the Research and Media applications that draw upon standards already in those strands. This both reaffirms the centrality of the core processes of reading, writing, speaking, and listening and shows how those processes can be combined and extended to describe key communicative acts in the classroom and workplace.

In the Research and Media applications, specific Reading, Writing, and Speaking and Listening standards are identified with a letter or letters corresponding to the relevant strand (R for Reading, W for Writing, and S&L for Speaking and Listening) and a number or letter corresponding to the statement within that strand. For example, R-14 refers to the fourteenth statement in the Standards for Student

Performance in Reading, and W-A refers to the first statement of the Standards for Range and Content in Writing.

Supporting Materials: Reading and Writing Exemplars
Reading and Writing exemplars, and their accompanying annotations, are used to lend further specificity to the standards.

> **Reading Exemplars**
> The Reading exemplars, representing a range of subject areas, time periods, cultures, and formats, illustrate the level of text complexity students ready for college and careers must be able to handle on their own. The exemplars are mostly excerpts or representations of larger works. To be truly college and career ready, students must be able to handle full texts—poems, short stories, novels, technical manuals, research reports, and the like. Annotations accompanying the exemplars explain how each text meets the criterion of high text complexity. The annotations also provide brief performance examples that further clarify the meaning and application of the standards.
>
> ~~**Writing Exemplars**~~ **- Coming in the next draft**
> ~~The Writing exemplars are authentic samples of student writing created across the nation under a variety of conditions and for a variety of purposes and audiences. Annotations accompanying the exemplars indicate how these samples meet the Standards for Student Performance in Writing.~~

Core Standards for Reading Informational and Literary Texts

Standards for the Range and Content of Student Reading

A. **Complexity:** A crucial factor in readiness for college and careers is students' ability to comprehend complex texts independently. In college and careers, students will need to read texts characterized by demanding vocabulary, subtle relationships among ideas or characters, a nuanced rhetorical style and tone, and elaborate structures or formats. These challenging texts require the reader's close attention and often demand rereading in order to be fully understood.

B. **Quality:** The literary and informational texts chosen for study should be rich in content and in a variety of disciplines. All students should have access to and grapple with works of exceptional craft and thought both for the insights those works offer and as models for students' own thinking and writing. These texts should include classic works that have broad resonance and are alluded to and quoted often, such as influential political documents, foundational literary works, and seminal historical and scientific texts. Texts should also be selected from among the best contemporary fiction and nonfiction and from a diverse range of authors and perspectives.

C. **Vocabulary:** To be college and career ready, students must encounter and master a rich vocabulary. Complex texts often use challenging words, phrases, and terms that students typically do not encounter in their daily lives. Specific disciplines and careers have vocabularies of their own. Attentive reading of sophisticated works in a wide range of fields, combined with close attention to vocabulary, is essential to building comprehension and knowledge.

D. **Range:** Students must be able to read a variety of literature, informational texts, and multimedia sources in order to gain the knowledge base they need for college and career readiness.

Literature: Literature enables students to access through imagination a wide range of experiences. By immersing themselves in literature, students enlarge their experiences and deepen their understanding of their own and other cultures. Careful reading of literature entails attentiveness to craft and details of design, which has broad value for students' work in college and career environments.

Informational Text: Because most college and workplace reading is nonfiction, students need to hone their ability to acquire knowledge from informational texts. Workplace and discipline-specific reading will often require students to demonstrate persistence as they encounter a large amount of unfamiliar and often technical vocabulary and concepts. Students must demonstrate facility with the features of texts particular to a variety of disciplines, such as history, science, and mathematics.

Multimedia Sources: Students must be able to integrate what they learn from reading text with what they learn from audio, video, and other digital media. Many of the same critical issues that students face when reading traditional printed texts will arise as they seek to comprehend multimedia, such as determining where the author has chosen to focus, evaluating evidence, and comparing different accounts of similar subjects.

E. **Quantity:** Students must have the capacity to handle independently the quantity of reading material, both in print and online, required in college and workforce training. Studies show that the amount of reading students face in high school is often far lower than that required for typical first-year college courses. Students need to be able to perform a close reading of a much higher volume of texts and to sort efficiently through large amounts of print and online information in search of specific facts or ideas.

Note: *The essential role of independence in college and career readiness:* The significant scaffolding that often accompanies reading in high school usually disappears in college and workforce training environments. Students must therefore have developed their ability to read texts of sufficient complexity, quality, and range on their own. To become independent, students must encounter unfamiliar texts presented without supporting materials.

Core Standards for Reading Informational and Literary Texts

Standards for Student Performance

1. Determine both what the text says explicitly and what can be inferred logically from the text.
2. Support or challenge assertions about the text by citing evidence in the text explicitly and accurately.
3. Discern the most important ideas, events, or information, and summarize them accurately and concisely.
4. Delineate the main ideas or themes in the text and the details that elaborate and support them.
5. Determine when, where, and why events unfold in the text, and explain how they relate to one another.
6. Analyze the traits, motivations, and thoughts of individuals in fiction and nonfiction based on how they are described, what they say and do, and how they interact.
7. Determine what is meant by words and phrases in context, including connotative meanings and figurative language.
8. Analyze how specific word choices shape the meaning and tone of the text.
9. Analyze how the text's organizational structure presents the argument, explanation, or narrative.
10. Analyze how specific details and larger portions of the text contribute to the meaning of the text.
11. Synthesize data, diagrams, maps, and other visual elements with words in the text to further comprehension.
12. Extract key information efficiently in print and online using text features and search techniques.
13. Ascertain the origin, credibility, and accuracy of print and online sources.
14. Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing whether the evidence provided is relevant and sufficient.
15. Analyze how two or more texts with different styles, points of view, or arguments address similar topics or themes.
16. Draw upon relevant prior knowledge to enhance comprehension, and note when the text expands on or challenges that knowledge.
17. Apply knowledge and concepts gained through reading to build a more coherent understanding of a subject, inform reading of additional texts, and solve problems.
18. Demonstrate facility with the specific reading demands of texts drawn from different disciplines, including history, literature, science, and mathematics.

Note: *These Standards for Student Performance, as is the case for every strand, must be demonstrated across the range and content from the preceding page.* They are meant to apply to fiction and nonfiction. For example:
- "Determine when, where, and why events unfold" applies to plot and setting in literature as well as the sequence of a scientific procedure.
- "Analyze the traits, motivations, and thoughts of individuals" applies to studying characters in fiction and figures in historical texts.

Core Standards for Writing

Standards for the Range and Content of Student Writing

A. **Purpose:**

Make an Argument: While many high school students have experience presenting their opinions, they need to be able to make arguments supported by evidence in order to be ready for careers and college. Students must be able to frame the debate over a claim, present the reasoning and evidence for the argument, and acknowledge and address its limitations. In some cases, students will make arguments to gain entry to college or to obtain a job, laying out their qualifications or experience. In college, students might defend an interpretation of a work of literature or of history; in the workplace, employees might write to recommend a course of action.

Inform or Explain: In college and in workforce training, writing is a key means for students to show what they know and to share what they have seen. Writing to inform or explain often requires students to integrate complex information from multiple sources in a lucid fashion. Explanations can take the form of laying out facts about a new technology or documenting findings from historical research; well-crafted explanations often make fresh connections and express ideas creatively.

B. **Audience:** Students must adapt their writing so that it is appropriate to the audience by choosing words, information, structures, and formats that conform to the conventions of the discipline in which they are writing. The form and use of evidence in literary analysis, for example, are likely to be quite different from those in geology or business. Students must also be able to consider their audience's background knowledge and potential objections to an argument.

C. **Situation:**

On-demand Writing: Students must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline. College and career readiness requires that students be able to write effectively to a prompt on an exam or respond quickly yet thoughtfully to a supervisor's urgent request for information.

Writing over Time: Students must be able to revisit and make improvements to a piece of their writing over multiple drafts when circumstances encourage or require it. To improve writing through revision, students must be capable of distinguishing good changes from ones that would weaken the writing.

D. **Technology and Collaboration:** Technology offers students powerful tools for producing, editing, and distributing writing as well as for collaboration. Especially in the workplace, writers often use technology to produce documents and to provide feedback.

E. **Quantity:** The evidence is clear that, in order to become better writers, students must devote significant time to producing writing. Students must practice writing several analytical pieces each term if they are to achieve the deep analysis and interpretation of content expected for college and careers.

Note on narrative writing:

Narrative writing is an important mode of writing; it is also a component of making an argument and writing to inform or explain. Telling an interesting story effectively or providing an accurate account of a historical incident requires the skillful use of narrative techniques. Narrative writing requires that students present vivid, relevant details to situate events in a time and place and also craft a structure that lends a larger shape and significance to those details. As an easily grasped and widely used way to share information and ideas with others, narrative writing is a principal stepping-stone to writing forms directly relevant to college and career readiness.

Core Standards for Writing

Standards for Student Performance

1. Establish and refine a topic or thesis that addresses the specific task and audience.
2. Gather the information needed to build an argument, provide an explanation, or address a research question.
3. Sustain focus on a specific topic or argument.
4. Support and illustrate arguments and explanations with relevant details, examples, and evidence.
5. Create a logical progression of ideas or events, and convey the relationships among them.
6. Choose words and phrases to express ideas precisely and concisely.
7. Use varied sentence structures to engage the reader and achieve cohesion between sentences.
8. Develop and maintain a style and tone appropriate to the task, purpose, and audience.
9. Demonstrate command of the conventions of standard written English, including grammar, usage, and mechanics.
10. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.
11. Assess the quality of one's own writing, and, when necessary, strengthen it through revision.
12. Use technology as a tool to produce, edit, and distribute writing.

When **writing to inform or explain**, students must also do the following:

13. Synthesize information from multiple relevant sources, including graphics and quantitative information when appropriate, to provide an accurate picture of that information.
14. Convey complex information clearly and coherently to the audience through purposeful selection and organization of content.
15. Demonstrate understanding of content by reporting facts accurately and anticipating reader misconceptions.

When **writing arguments**, students must also do the following:

16. Establish a substantive claim, distinguishing it from alternate or opposing claims.
17. Link claims and evidence with clear reasons, and ensure that the evidence is relevant and sufficient to support the claims.
18. Acknowledge competing arguments or information, defending or qualifying the initial claim as appropriate.

Note: "The conventions of standard written English" encompass a range of commonly accepted language practices designed to make writing clear and widely understood. When formal writing contains errors in grammar, usage, and mechanics, its meaning is obscured, its message is too easily dismissed, and its author is often judged negatively. Proper sentence structure, correct verb formation, careful use of verb tense, clear subject-verb and pronoun-antecedent agreement, conventional usage, and appropriate punctuation are of particular importance to formal writing.

Core Standards for Speaking and Listening

Standards for the Range and Content of Student Speaking and Listening

A. **Group and One-to-One Situations:** Students are expected to be able to speak and listen effectively in both groups and one-to-one. Success in credit-bearing college coursework, whether in the humanities, mathematics, or the sciences, depends heavily on being able to take in and respond to the concepts and information conveyed in lectures and class discussions. Success in the workplace is similarly dependent on listening attentively to colleagues and customers and expressing ideas clearly and persuasively.

   These speaking and listening skills may need to be applied differently in different settings. The immediate communication between two people might be replaced by formal turn taking in large-group discussions. When working in classroom or workplace teams, students should be able to ask questions that initiate thoughtful discussions, gain the floor in respectful ways, and build on the contributions of others to complete tasks or reach consensus.

B. **Varied Disciplinary Content:** Students must adapt their speaking and listening to a range of disciplines to communicate effectively. Each academic discipline and industry has its own vocabulary and conventions; for instance, evidence is handled and discussed differently in literary analysis than in history or medicine or the sciences. College- and career-ready students must develop a foundation of disciplinary knowledge and conventions in order not only to comprehend the complexity of information and ideas but also to present and explain them.

C. **Multimedia Comprehension:** New technologies expand the role that speaking and listening skills will play in acquiring and sharing knowledge. Students will need to view and listen to diverse media to gain knowledge and also must integrate this information with what they learn through reading text online as well as in print. When speaking, students can draw on media to illustrate their points, make data and evidence vivid, and engage their audience. Multimedia accelerates the speed at which connections between reading, writing, speaking, and listening can be made, requiring students to be ready to use these skills nearly simultaneously.

Core Standards for Speaking and Listening

Standards for Student Performance

1. Select and use a format, organization, and style appropriate to the topic, purpose, and audience.
2. Present information, findings, and supporting evidence clearly and concisely.
3. Make strategic use of multimedia elements and visual displays of data to gain audience attention and enhance understanding.
4. Demonstrate command of formal Standard English when appropriate to task and audience.
5. Listen to complex information, and discern the main ideas, the significant details, and the relationships among them.
6. Follow the progression of the speaker's message, and evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.
7. Ask relevant questions to clarify points and challenge ideas.
8. Respond constructively to advance a discussion and build on the input of others.

Note: "Style appropriate to the topic, purpose, and audience" includes word choice specific to the demands of the discipline as well as delivery techniques such as gestures and eye contact that contribute to effective message delivery.

"Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric" includes distinguishing facts from opinions and determining whether the speaker is biased and evidence has been distorted.

Application of the Core: Research

The Core Standards for Reading, Writing, and Speaking and Listening have been designed to include the essential skills and knowledge that students need to apply to college and career tasks such as research. This section shows how standards in the core incorporate the skills of research.

To be college and career ready, students must engage in research and present their findings in writing and orally, in print and online. The ability to conduct research independently and effectively plays a fundamental role in gaining knowledge and insight in college and the workplace.

Research as described here is not limited to the formal, extended research paper nor simply to gathering information from books; rather, research encompasses a flexible yet systematic approach to resolving questions and investigating issues through the careful collection, analysis, synthesis, and presentation of information from a wide range of print and digital sources, such as historical archives and online interviews. With well-developed research skills, students have the tools to engage in sustained inquiry as well as the sort of short, focused research projects that typify many assignments in college and the workplace.

Research in the digital age offers new possibilities as well as new or heightened challenges. While the Internet provides ready access to unprecedented amounts of primary and secondary source material (such as oral histories, historical documents, maps, and scientific reports), students sorting through this wealth of data must be skilled at and vigilant in determining the origin and credibility of these sources.

The following Core Standards pertain to elements of the research process and particular research skills required for college and career readiness:

Formulate research questions:
- Establish and refine a topic or thesis that addresses the specific task and audience. (W-1)
- Establish a substantive claim, distinguishing it from alternate or opposing claims. (W-16)

Gather and evaluate relevant information from a range of sources:
- Gather the information needed to build an argument, provide an explanation or address a research question. (W-2)
- Extract key information efficiently in print and online using text features and search techniques. (R-12)
- Ascertain the origin, credibility, and accuracy of print and online sources. (R-13)
- Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing whether the evidence provided is relevant and sufficient. (R-14)
- Follow the progression of the speaker's message and evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric. (S&L-6)

Analyze research sources:
- Delineate the main ideas or themes in the text and the details that elaborate and support them. (R-4)
- Listen to complex information and discern the main ideas, the significant details, and the relationships among them. (S&L-5)
- Discern the most important ideas, events, or information and summarize them accurately and concisely. (R-3)
- Synthesize data, diagrams, maps, and other visual elements with words in the text to further comprehension. (R-11)
- Synthesize information from multiple relevant sources, including graphics and quantitative information when appropriate, to provide an accurate picture of that information. (W-13)
- Analyze how two or more texts with different styles, points of view, or arguments address similar topics or themes. (R-15)
- Acknowledge competing arguments or information, defending or qualifying the initial claim as appropriate. (W-18)

Report findings:
- Link claims and evidence with clear reasons and ensure that the evidence is relevant and sufficient to support the claims. (W-17)
- Convey complex information clearly and coherently to the audience through purposeful selection and organization of the content. (W-14)
- Demonstrate understanding of the content by reporting the facts accurately and anticipating reader misconceptions. (W-15)
- Present information, findings, and supporting evidence, clearly and concisely. (S&L-2)
- Support and illustrate arguments and explanations with relevant details, examples, and evidence. (W-4)
- Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism. (W-10)

Application of the Core: Media

The Core Standards for Reading, Writing, and Speaking and Listening have been designed to include the essential skills and knowledge that students need to apply to college and career tasks such as media analysis and creation. This section shows how standards in the core apply to media.

Rapidly evolving technologies are powerful tools—but only for those who have the skills to put them to work. As the capability of the technology grows, students' command of these skills must only increase.

At the core of media mastery are the same fundamental capacities as are required offline in traditional print forms: an ability to access, understand, and evaluate complex materials and messages and to produce clear, effective communications. Media mastery does, however, call upon students to apply these core skills in new ways and contexts. Media enable students to communicate quickly with a large, often unknown, and broadly diverse audience. Whereas in the past, students may have had days or weeks to digest new information and formulate a response, the online environment pushes students to exercise judgment and present their responses in a matter of minutes.

Speed is not the only new factor. In the electronic world, reading, writing, speaking, and listening are uniquely intertwined. Multimedia forms force students to engage with constantly changing combinations of elements, such as graphics, images, hyperlinks, and embedded video and audio. The technology itself is changing quickly, creating new urgency for adaptation and flexibility on the part of students.

The following Core Standards describe the particular reading, writing, speaking, and listening skills that students will need in order to use media effectively in college and careers:

Standards for Range and Content drawn from each strand

Multimedia Sources: Students must be able to integrate what they learn from reading text with what they learn from audio, video, and other digital media. Many of the same critical issues that students face when reading traditional printed texts will arise as they seek to comprehend multimedia, such as determining where the author has chosen to focus, evaluating evidence, and comparing different accounts of similar subjects. [R-D]

Technology and Collaboration: Technology offers students powerful tools for producing, editing, and distributing writing as well as for collaboration. Especially in the workplace, writers often use technology to produce documents and to provide feedback. [W-D]

Multimedia Comprehension: New technologies expand the role that speaking and listening skills will play in acquiring and sharing knowledge. Students will need to view and listen to diverse media to gain knowledge and integrate this information with what they learn through reading text online as well as in print. When speaking, students can draw on media to illustrate their points, make data and evidence vivid, and engage their audiences. Multimedia accelerates the speed at which connections between reading, writing, and speaking and listening can be made, requiring students to be ready to use these skills nearly simultaneously. [S&L-C]

Standards for Student Performance drawn from each strand

Gather information from a wide array of electronic sources and multimedia:
- Extract key information efficiently in print and online using text features and search techniques. (R-12)
- Synthesize data, diagrams, maps, and other visual elements with words in the text to further comprehension. (R-11)
- Listen to complex information and discern the main ideas, the significant details, and the relationships among them. (S&L-5)

Evaluate information from digital media:
- Ascertain the origin, credibility, and accuracy of print and online sources. (R-13)
- Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing whether the evidence provided is relevant and sufficient. (R-14)
- Follow the progression of the speaker's message and evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric. (S&L-6)

Create and distribute media communications:
- Use technology as a tool to produce, edit, and distribute writing. (W-12)
- Synthesize information from multiple relevant sources, including graphics and quantitative information when appropriate, to provide an accurate picture of that information. (W-13)
- Make strategic use of multimedia elements and visual displays of data to gain audience attention and enhance understanding. (S&L-3)

Illustrative Texts

Exemplars of Reading Text Complexity

As described in the Standards for the Range and Content of Student Reading, college- and career-ready students must be able to read texts of sufficient complexity on their own. Studies show that many students who are unable to read sufficiently challenging texts independently by the end of high school struggle with the reading demands of college; many twenty-first-century careers likewise demand that people be able to obtain, search through, and comprehend large amounts of often technical information.

To develop that ability, students should engage with high-quality texts that provide strong models of thinking and writing, that challenge them intellectually, and that introduce them to rich content, sophisticated vocabulary, and examples of exceptional craft. The reading students do should be broad and deep, allowing them to extend their knowledge of particular subjects as well as learn about the features of texts written for different disciplines, audiences, and purposes. While no sampling can do justice to the numerous ways in which different authors craft complex prose, as a collection the exemplar texts below illustrate the level of complexity that college- and career-ready students should be able to handle independently by the end of high school. Texts in translation have not been included in this draft but will be part of future drafts.

How Text Complexity was Determined

In addition to surveys of required reading in twelfth grade and the first year of college as well as consultations with experts, two leading measurement systems were used to help make the selections below. The first system—a methodology described by Jeanne Chall and her coauthors in *The Qualitative Assessment of Text Difficulty*—employs trained raters to measure the sophistication of vocabulary, density of ideas, and syntactic complexity in a text as well as the general and subject-specific knowledge and the level of reasoning required for understanding it. The second system, Coh-Metrix, incorporates into its computer-based analysis more than sixty specific indices of syntax, semantics, readability, and cohesion to assess text complexity. Central to its assessment are measures of text cohesiveness, which is the degree to which the text uses explicit markers to link ideas. By analyzing the degree to which those links are missing in a text—and therefore the degree to which a reader must make inferences to connect ideas—this measure gauges a key factor in the comprehension demand of a text.

The two methods described above have limitations. The complexity of poems (such as "O Captain! My Captain!") cannot be assessed by Coh-Metrix because poetry adheres to different rules of construction than does prose. Similarly, while individual stories in the sample *New York Times* front pages can be measured for complexity by Coh-Metrix, the method does not capture how the electronic environment enhances or detracts from readability. However, for those exemplar texts whose complexity could be measured by both systems, comparable results were yielded by Coh-Metrix and the Chall method.

Note: The samples of complex text are supplemented by brief performance examples that further clarify the meaning of the standards. These illustrate specifically the application of the performance standards to texts of sufficient complexity, quality, and range. Relevant standards are noted in brackets following each sample performance.

Notes on Illustrative Text #1

Pride and Prejudice by Jane Austen

Jane Austen's *Pride and Prejudice* is a sophisticated literary text featuring multiple plotlines, a style and word choice reflective of its time period and setting, and subtle relationships among characters; the excerpt here can only illustrate some of the complexities that readers of the full work will encounter. The novel's opening sentence—"It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife"—signals that today's readers will need to employ literary imagination and historical context to re-create for themselves a world largely in the past. The novel's style is elaborate, with many lengthy and, to the modern ear, formal-sounding sentences typical of the period during which the novel was written. While the dialogue is less formal than much of the surrounding text, words and phrases such as *let* (to mean "rent" or "lease") and *chaise and four* (referring to a type of carriage) mark the novel's setting. The excerpt suggests also the kind of close reading of the subtleties of character that readers must perform. The banter between Mr. and Mrs. Bennet reveals both affection and difference of opinion, and it offers clues to the mores of well-to-do English society in the early nineteenth century.

Sample performance aligned with the Core Standards

Students analyze the first impressions given of Mr. and Mrs. Bennet in the first chapter of *Pride and Prejudice* based on how the characters are described, what they say and do, and how they interact. Students compare these first impressions with their later understanding based on how the characters develop throughout the novel. [R-6]

Illustrative Text #1

from *Pride and Prejudice*

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 some one 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 any thing 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 chuses 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 develope. 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.

Notes on Illustrative Text #2

"O Captain! My Captain!" by Walt Whitman

Though poetry's complexity cannot be assessed by the measures of readability used for the prose exemplars, "O Captain! My Captain!" by Walt Whitman clearly has many of the features of complex texts listed in the Standards for the Range and Content of Student Reading. Modern readers must work to understand what would have been obvious to readers in 1865: "O Captain! My Captain!" is an extended-metaphor poem intended to convey Whitman's and the North's grief over the assassination of Abraham Lincoln so near the conclusion of hostilities in the Civil War. Every element in the poem stands for something else, with the captain representing Lincoln, the ship representing the Union (or the "ship of state"), the voyage representing the war, and so on. Historical context, along with skill in reading literature, is thus particularly important to interpreting this text.

Sample performance aligned with the Core Standards

Students apply knowledge gained from reading the *New York Times* articles on Lincoln's assassination to their understanding of the poem "O Captain! My Captain!" Specifically, students draw on the description of the crowd's response to the attack on Lincoln to inform their understanding of Whitman's poem. [R-17]

Illustrative Text #2

"O Captain! My Captain!" by Walt Whitman

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.

Notes on Illustrative Text #3

The front page of the *New York Times*, April 15, 1865

The challenge posed to a modern reader by the front page of the *New York Times* on April 15, 1865, is significant in terms of format, timeliness, and point of view. Unlike the graphically heavy front page of modern newspapers, this 1865 *New York Times* front page is mostly uninterrupted columns of text. The reader is obviously expected to proceed from top to bottom and left to right across the page, but little other guidance is provided. Because the assassination of Lincoln was still "breaking news" as this edition of the *Times* would have gone to press, some details of the event would have not yet been known; readers will have to sort out what they know about the assassination from what the people reading the paper on that Saturday morning would just have been learning. Three accounts of the events rather than one are provided here, and the sourcing and tone vary greatly. Certain details found in one place are contradicted in another: the "Detail of the Occurrence," for example, suggests that Lincoln may not have been mortally wounded, but the main headline in the top left-hand corner of the page states "No Hopes Entertained of His Recovery." While the first two accounts aim at a certain objectivity, the third begins with a flourish that may surprise readers more used to a restrained style of journalism: "A stroke from Heaven laying the whole of the city in instant ruin could not have startled us as did the word that broke from Ford's Theatre a half hour ago that the President had been shot."

Sample performance aligned with the Core Standards

Students analyze how the three different accounts on the front page portray Lincoln's assassination, including which details are similar or different. [R-15]

Illustrative Text #3: The front page of the *New York Times*, April 15, 1865

http://timesmachine.nytimes.com/browser/1865/04/15/P1

The New-York Times.

NEW-YORK, SATURDAY, APRIL 15, 1865. PRICE FOUR CENTS.

AWFUL EVENT.

President Lincoln Shot by an Assassin.

The Deed Done at Ford's Theatre Last Night.

THE ACT OF A DESPERATE REBEL.

The President Still Alive at Last Accounts.

No Hope Entertained of His Recovery.

Attempted Assassination of Secretary Seward.

DETAILS OF THE DREADFUL TRAGEDY.

[OFFICIAL.]

War Department, Washington, April 15- 1:30 A.M.

Maj.-Gen. Dix:

This evening at about 9:30 P.M., at Ford's Theater, the President, while sitting in his private box with Mrs. Lincoln, Mrs. Harris, and Major Rathburn, was shot by an assassin, who suddenly entered the box and approached behind the President.

The assassin then leaped upon the stage, brandishing a large dagger or knife, and made his escape in the rear of the theater.

EUROPEAN NEWS.

ANOTHER ACCOUNT.

Special Dispatch to the New-York Times.

Washington, Friday, April 14, 11:15 P.M.

A stroke from Heaven laying the whole of the city in instant ruin could not have startled us as did the word that broke from Ford's Theater a half hour ago that the President had been shot. It flew everywhere in five minutes, and set five thousand people in swift and excited motion on the instant.

DETAIL OF THE OCCURRENCE.

Washington, Friday, April 14- 12:30 A.M.

The President was shot in a theater tonight, and is, perhaps, mortally wounded. Secretary Seward was also assassinated.

SECOND DISPATCH.

Washington, Friday, April 14. President Lincoln and wife, with other friends, this evening visited Ford's Theater for the purpose of witnessing the performance of the "American Cousin."

Notes on Illustrative Text #4

The Declaration of Independence

The Declaration of Independence represents the kind of rich primary source material students should be able to read on their own by the end of high school. Though some of the lines ("We hold these truths . . .") are familiar to most American readers, the case against Great Britain that the Declaration lays out, expressed in elevated, sometimes archaic language (*unalienable*, *hath*, *usurpations*), requires careful examination to follow in its particulars. The beginning of the document, excerpted here, poses a reading challenge partly because of its philosophical abstractness. The first three sentences, although formally divided, are one continuous list of propositions ("truths") about the nature of government and the rights of the people. Further complicating the reading is that there is little explicit cohesion between sentences—links supplied by words and phrases such as "for example," "moreover," or "in addition"—to help readers understand the relationship between the ideas being expressed.

Sample performance aligned with the Core Standards

Students compare the argument that the Declaration makes justifying revolution to Martin Luther King, Jr.'s defense of civil disobedience in *Letter from Birmingham Jail*. [R-15]

Illustrative Text #4

from The Declaration of Independence

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 to 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 shewn, 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.

Notes on Illustrative Text #5

Letter from Birmingham Jail by Martin Luther King, Jr.

Martin Luther King, Jr.'s, *Letter from Birmingham Jail* presents many challenges to the reader in terms of its format, purpose, tone, use of allusions, and language. Apart from letters to the editor (most of which are relatively short), public letters such as King's are uncommon today. The purpose of the text may also be confusing: King is ostensibly addressing his "Fellow Clergymen," but skilled readers will reasonably infer that King's message is intended for a broader audience. Though the tone of the text is measured, King's passion for his cause comes through. The author frequently points outside the *Letter* itself through allusions to other texts, including the Hebrew and Christian scriptures. Moreover, King uses sophisticated vocabulary (*cognizant*, *mutuality*, *provincial*, *gainsaying*) and figurative language (*garment of destiny*) throughout his text. However, the piece is both coherent in that its sequence is signaled ("While confined here . . . But more basically . . . Moreover, I am cognizant . . .") and cohesive in that its clauses and sentences are logically linked for the reader ("Just as the prophets . . . and just as the Apostle Paul . . . so am I compelled . . .").

Sample performance aligned with the Core Standards

Students evaluate the reasoning and rhetoric of the three very different arguments King makes to defend his being in Birmingham. Students assess the different kinds of evidence he uses to support each argument. [R-14]

Illustrative Text #5

from *Letter from Birmingham Jail**

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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.

*As reprinted in *Why We Can't Wait* by King, Jr., M. L. (2000). New York City: Signet Classics.

Notes on Illustrative Text #6

Toni Morrison's Nobel lecture, 1993

Toni Morrison's Nobel lecture, though originally delivered orally, can be read on the page as a complex work of analysis and criticism. Its structure, syntax, imagery, language, and density of ideas contribute to the challenge of studying it in this manner. As this excerpt shows, Morrison begins with a folktale. While the "once upon a time" opening may lead readers into thinking that the lecture will primarily be in narrative form, Morrison uses the tale mainly as a springboard for an abstract, allegorical discussion of language, writing, and those who have no voice in society. Morrison often employs sophisticated sentences that require patience and concentration to follow. Readers may recognize places where Morrison varies sentence patterns to change pace and rhythm—particularly important to the oral delivery of the text. The images Morrison creates are powerful and poetic, the diction is elevated and academic, and the word choice is metaphorical and unconventional: "Official language smitheryed to sanction ignorance and preserve privilege is a suit of armor polished to shocking glitter, a husk from which the knight departed long ago." The richness and abstractness of the ideas in the lecture mean that rereadings may be necessary to comprehend and evaluate the ideas fully.

Sample performance aligned with the Core Standards

Students determine what Morrison means when she compares language to "a bird in the hand," including the different connotations of this phrase that she develops throughout the lecture. Students also explore what Morrison means by saying that both the bird and language can be "dead or alive." [R-7]

Illustrative Text #6

from Toni Morrison's Nobel lecture, 1993

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"Once upon a time there was an old woman. Blind but wise." Or was it an old man? A guru, perhaps. Or a griot soothing restless children. I have heard this story, or one exactly like it, in the lore of several cultures.

"Once upon a time there was an old woman. Blind. Wise."

In the version I know the woman is the daughter of slaves, black, American, and lives alone in a small house outside of town. Her reputation for wisdom is without peer and without question. Among her people she is both the law and its transgression. The honor she is paid and the awe in which she is held reach beyond her neighborhood to places far away; to the city where the intelligence of rural prophets is the source of much amusement.

One day the woman is visited by some young people who seem to be bent on disproving her clairvoyance and showing her up for the fraud they believe she is. Their plan is simple: they enter her house and ask the one question the answer to which rides solely on her difference from them, a difference they regard as a profound disability: her blindness. They stand before her, and one of them says, "Old woman, I hold in my hand a bird. Tell me whether it is living or dead."

She does not answer, and the question is repeated. "Is the bird I am holding living or dead?"

Still she doesn't answer. She is blind and cannot see her visitors, let alone what is in their hands. She does not know their color, gender or homeland. She only knows their motive.

The old woman's silence is so long, the young people have trouble holding their laughter.

Finally she speaks and her voice is soft but stern. "I don't know", she says. "I don't know whether the bird you are holding is dead or alive, but what I do know is that it is in your hands. It is in your hands."

Her answer can be taken to mean: if it is dead, you have either found it that way or you have killed it. If it is alive, you can still kill it. Whether it is to stay alive, it is your decision.

Whatever the case, it is your responsibility.

For parading their power and her helplessness, the young visitors are reprimanded, told they are responsible not only for the act of mockery but also for the small bundle of life sacrificed to achieve its aims. The blind woman shifts attention away from assertions of power to the instrument through which that power is exercised.

Speculation on what (other than its own frail body) that bird-in-the-hand might signify has always been attractive to me, but especially so now thinking, as I have been, about the work I do that has brought me to this company. So I choose to read the bird as language and the woman as a practiced writer. She is worried about how the language she dreams in, given to her at birth, is handled, put into service, even withheld from her for certain nefarious purposes. Being a writer she thinks of language partly as a system, partly as a living thing over which one has control, but mostly as agency—as an act with consequences. So the question the children put to her: "Is it living or dead?" is not unreal because she thinks of language as susceptible to death, erasure; certainly imperiled and salvageable only by an effort of the will. She believes that if the bird in the hands of her visitors is dead the custodians are responsible for the corpse. For her a dead language is not only one no longer spoken or written, it is unyielding language content to admire its own paralysis. Like statist language, censored and censoring. Ruthless in its policing duties, it has no desire or purpose other than maintaining the free range of its own narcotic narcissism, its own exclusivity and dominance. However moribund, it is not without effect for it actively thwarts the intellect, stalls conscience, suppresses human potential. Unreceptive to interrogation, it cannot form or tolerate new ideas, shape other thoughts, tell another story, fill baffling silences. Official language smitheryed to sanction ignorance and preserve privilege is a suit of armor polished to shocking glitter, a husk from which the knight departed long ago. Yet there it is: dumb, predatory, sentimental. Exciting reverence in schoolchildren, providing shelter for despots, summoning false memories of stability, harmony among the public.

Notes on Illustrative Text #7

Inquiry into Life, 12th edition, by Sylvia S. Mader

These excerpts, and the prominent college-level biology textbook from which they are drawn, represent some of the challenges presented by complex writing in natural science, including discipline-specific terms (*covalent bond*, *plasma membrane*, *neurotransmitter*), everyday language used in specialized ways (*shell*, *channel*), abbreviations (H^+, *AChE*), and chains of cause-effect relationships that together describe sometimes elaborate processes. Although the figures the author, Sylvia S. Mader, refers to in the text are not included with these excerpts, students reading the larger work will have to integrate words, illustrations, and diagrams to make full sense of the ideas and concepts she describes. For these reasons and others, comprehension may be difficult for readers who have not had experience independently reading similar kinds of text and who lack a knowledge base in the subject. The author does employ a number of cohesive features to help readers understand the terminology and to link ideas. She repeats content words to let readers follow the flow of ideas; she sets up contrastive situations to illustrate the ideas (within, for example, the first and the third paragraphs below); and she uses transitional links ("In some synapses . . . In other synapses . . .") to help readers construct meaning.

Sample performance aligned with the Core Standards

Students discern the most important information in the description of covalent bonding and provide an accurate summary of the concept. [R-3]

Illustrative Text #7

from *Inquiry into Life*, 12th edition

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A **covalent bond** results when two atoms share electrons in such a way that each atom has an octet of electrons in the outer shell. In a hydrogen atom, the outer shell is complete when it contains two electrons. If hydrogen is in the presence of a strong electron acceptor, it gives up its electron to become a hydrogen ion (H^+). But if this is not possible, hydrogen can share with another atom and thereby have a completed outer shell. For example, one hydrogen atom will share with another hydrogen atom. Their two orbitals overlap, and the electrons are shared between them. Because they share the electron pair, each atom has a completed outer shell.

* * * * * * * *

The passage of salt (NaCl) across a plasma membrane is of primary importance to most cells. The chloride ion (Cl^-) usually crosses the plasma membrane because it is attracted by positively charged sodium ions (Na^+). First sodium ions are pumped across a membrane, and then chloride ions simply diffuse through channels that allow their passage.

As noted in Figure 4.2*a*, the genetic disorder cystic fibrosis results from a faulty chloride channel. Ordinarily, after chloride ions have passed though the membrane, sodium ions (Na^+) and water follow. In cystic fibrosis, Cl^- transport is reduced, and so is the flow of Na^+ and water.

* * * * * * * *

Once a neurotransmitter has been released into a synaptic cleft and has initiated a response, it is removed from the cleft. In some synapses, the postsynaptic membrane contains enzymes that rapidly inactivate the neurotransmitter. For example, the enzyme **acetylcholinesterase (AChE)** breaks down acetylcholine. In other synapses, the presynaptic membrane rapidly reabsorbs the neurotransmitter, possibly for repackaging in synaptic vesicles or for molecular breakdown. The short existence of neurotransmitters at a synapse prevents continuous stimulation (or inhibition) of postsynaptic membranes.

Notes on Illustrative Text #8

Sample business memo (ACT WorkKeys Reading for Information Test)

Though not a typical kind of reading in high school classrooms, the business communication, such as the one sampled here, is a form that career-ready students will need to be able to comprehend independently. This text, taken from ACT's WorkKeys Reading for Information Test, is challenging in large part because, like many such communications, it contains important, detailed information intended for a specialized audience. Structurally, the text offers little guidance on how it should be read. Potentially vital details appear throughout and are mingled with other details irrelevant to some readers (e.g., those without children). Even the paragraphing is somewhat inconsistent, especially between the first and second paragraphs. While the sentences are not particularly long and the language is not overly technical, the density of information and its lack of prioritization make this a complex text.

Sample performance aligned with the Core Standards

Students infer from the memo the conditions under which children who are under nineteen are not covered by the health plan. [R-1]

Illustrative Text #8

Sample business memo

WorkKeys Reading for Information Test has been reproduced with permission of ACT, Inc.

DETERMINING ELIGIBILITY FOR MEDICAL COVERAGE

All full-time employees of the company who work an average of at least 30 hours per week are eligible under this plan. Coverage begins on the first day of the month following the 30 days of active full-time employment. If employees enroll within 31 days of the date they are eligible, medical evidence of good health is not required. Temporary and part-time employees are not eligible. Employees are no longer eligible under this plan one month after the date they begin active duty in the armed forces of any country and continuing for the duration of their service.

If employees enroll their dependents within 31 days of the date they become eligible, medical evidence of good health is not required. If they do not, they will be required to submit evidence of good health for each dependent, at their expense, which is satisfactory to the company.

The following dependents are eligible under this plan: employees' spouses, employees' unmarried children under age 19, employees' unmarried dependent children under age 23 who are attending trade school, college, or university on a full-time basis, or employees' unmarried disabled children age 19 and over. Coverage ceases when spouses or children cease to be dependent upon employees for support. In the case of employees' spouses this is if they are legally separated or divorced. In the case of disabled children, this is when they are no longer disabled. Coverage will cease when dependents have served in the armed forces of any country for more than one month, or when maximum benefits have been paid.

Notes on Illustrative Text #9

FedViews, July 9, 2009, by Mary C. Daly
(The Federal Reserve Bank of San Francisco's Web site)

This text illustrates some of the difficulties posed by integrating information gained from words and graphics. This sort of challenge is common in writing designed to inform or explain, including writing in the workplace. The bullet point format used here means that the kind of explicit transitions between ideas typically found in prose are missing; readers will have to infer relationships between the points made by the author, Mary C. Daly, and synthesize the information into a coherent whole. Readers will furthermore have to analyze both the words and the graphics, integrate the information, and check to see whether each source of information supports the other. Daly also uses a great deal of specialized language; the terms *feedback loop*, *credit availability*, and *barriers to credit* all appear in just the first bullet point here.

Sample performance aligned with the Core Standards

Students synthesize information drawn from the text as well as the graphs in order to gain an overarching view of the economy on July 9, 2009. [R-11]

Illustrative Text #9

from FedViews, July 9, 2009

Reprinted from the Federal Reserve Bank of San Francisco's FedViews of July 9, 2009. The opinions expressed in this article do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System.

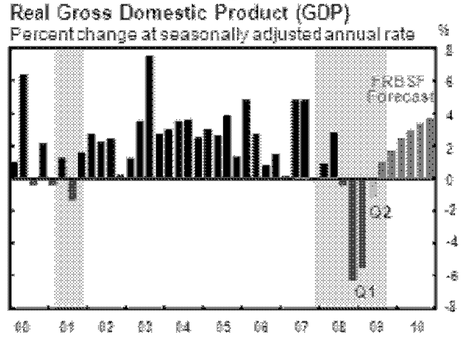
Mary C. Daly, vice president and director of the Center for the Study of Innovation and Productivity at the Federal Reserve Bank of San Francisco, states her views on the current economy and the outlook.

- Financial markets are improving, and the crisis mode that has characterized the past year is subsiding. The adverse feedback loop, in which losses by banks and other lenders lead to tighter credit availability, which then leads to lower spending by households and businesses, has begun to slow. As such, investors' appetite for risk is returning, and some of the barriers to credit that have been constraining businesses and households are diminishing.
- Income from the federal fiscal stimulus, as well as some improvement in confidence, has helped stabilize consumer spending. Since consumer spending accounts for two-thirds of all economic activity, this is a key factor affecting our forecast of growth in the third quarter.
- The gradual nature of the recovery will put additional pressure on state and local budgets. Following a difficult 2009, especially in the West, most states began the 2010 fiscal year on July 1 with even larger budget gaps to solve.
- Still, many remain worried that large fiscal deficits will eventually be inflationary. However, a look at the empirical link between fiscal deficits and inflation in the United States shows no correlation between the two. Indeed, during the 1980s, when the United States was running large deficits, inflation was coming down.

Modest recovery to begin in Q3

Real Gross Domestic Product (GDP)

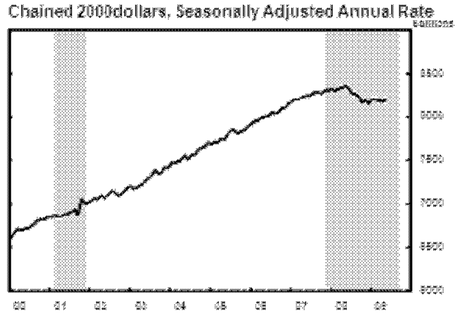
Percent change at seasonally adjusted annual rate



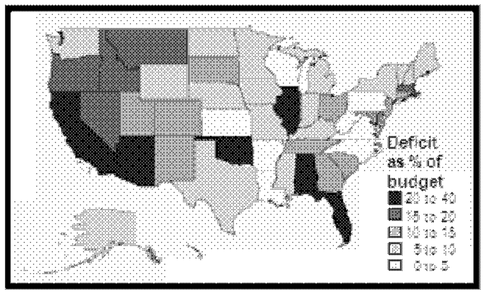
Consumers hanging on

Real Personal Consumption Expenditures

Chained 2000dollars, Seasonally Adjusted Annual Rate



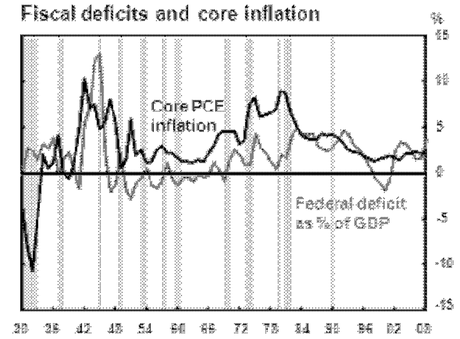
State budget gaps pervasive in 2009



27

No link between deficits and inflation

Fiscal deficits and core inflation



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Notes on Illustrative Text #10

The front page of the *New York Times*, Web version, August 18, 2009, 9:03 a.m. ET

The challenge offered by this online text and others like it is very different from that offered by a complex continuous text in, say, the sciences. The brief passages are not conceptually difficult, the language is not technical or esoteric, and the sentences are not particularly complex. But these characteristics belie the complexity of the reading task. An online text of this kind requires readers to apply their print-reading skills in tandem with their knowledge of how to use online periodicals. The editors and designers have assigned levels of importance to individual stories and images, as measured by their size and position in the layout. The page itself uses words, numbers, icons, and other visual elements (e.g., line, color, and shape) to guide readers further. Headings in various colors direct readers to particular sections (OPINION, MARKETS, HEALTH), while links direct readers to particular stories ("Taliban Talks Are Key Issue in Afghan Vote"). Time markers ("3 minutes ago") help readers assess how new the information in a given story is. The text requires readers to make choices about which links to follow based on their understanding of how online text is typically structured and on a minimum of additional information (e.g., an icon of a camera, a drop-down menu in an ad).

Sample performance aligned with the Core Standards

Students select an article and use search terms and other features of the online text to research a specific aspect of the subject in more depth. [R-12]

Illustrative Text #10

The front page of the *New York Times*, Web version, August 18, 2009, 9:03 a.m. ET

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Sample of Works Consulted

I. College Readiness

A. Achieve, Inc. (2004). The American Diploma Project, *Ready or Not: Creating a High School Diploma that Counts*. Washington, DC: Achieve, Inc. (PDF)

B. Achieve, Inc. (2008) *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up*. Washington, DC: Achieve, Inc. (PDF)

C. ACT. (2009). *ACT College Ready English Standards*. Iowa City, IA: ACT. (PDF)

D. ACT. (2006). *ACT National Curriculum Survey 2005-2006*. Iowa City, IA: ACT. (PDF)

E. ACT. (2007). *Aligning Postsecondary Expectations and High School Practice: The Gap Defined (Policy Implications of the ACT National Curriculum Survey Results 2005-2006)*. Iowa City, IA: ACT. (PDF)

F. ACT. (2006). *Reading Between the Lines: What the ACT Reveals about College Readiness in Reading.* Iowa City, IA: ACT. (PDF)

G. ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (PDF)

H. ACT. (2007). *Rigor at Risk: Reaffirming Quality in the High School Core Curriculum.* Iowa City, IA: ACT. (PDF)

I. College Board (2008) *AP English Language and Composition and English Literature and Composition Course Description.* New York, NY: College Board. (PDF)

J. College Board (2009) *AP European History Course Description*, New York, NY: College Board. (PDF)

K. College Board (2009) *AP World History Course Description*, New York, NY: College Board. (PDF)

L. College Board. (2006). *College Board Standards for College Success.* New York, NY: College Board. (PDF)

M. Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research.

N. Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (PDF)

O. Marzano, R.J. and Kendall, J.S. (2007). *The New Taxonomy of Educational Objectives.* Second Edition. Thousand Oaks, CA: Corwin Press.

P. Morreale, S. & Pearson, J. (2008) "Why communication education is important: The centrality of the discipline in the 21st century." *Communication Education*, 57(2), 224-240.

Q. Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board. (PDF)

R. *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (Achieve).

II. Career Readiness

A. Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts*. Washington, DC: Achieve, Inc. (PDF)

B. ACT. (2007). *Aligning Postsecondary Expectations and High School Practice: The Gap Defined (Policy Implications of the ACT National Curriculum Survey Results 2005-2006)*. Iowa City, IA: ACT. (PDF)

C. ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (PDF)

D. ACT. (2007). *Rigor at Risk: Reaffirming Quality in the High School Core Curriculum*. Iowa City, IA: ACT. (PDF)

E. Casner-Lotto, J., Rosenblum, E., and Wright, M., (2009). *The Ill-Prepared Workforce: Exploring the Challenges of Employer-Provided Workforce Readiness Training.* The Conference Board.

F. Florida American Diploma Project Survey Results. (Achieve).

G. Hawai'i Career Ready Study. (2007). Commissioned by the Hawai'i P-20 Initiative.(PDF)

H. *Missouri Career Prep Certificate Program Planning Guide,* Missouri Department of Elementary and Secondary Education. (PDF)

I. Morreale, S. & Pearson, J. (2008) "Why communication education is important: The centrality of the discipline in the 21st century." *Communication Education*, 57(2), 224-240.

J. National Alliance of Business. (2002).*The American Diploma Project Workplace Study*. Washington, DC.

K. Partnership for 21st Century Skills. (2009). *Framework for 21st Century Learning*. Tucson, AZ.

L. Qualifications and Curriculum Authority. (2007). *Functional Skills and Standards.* (PDF)

M. The Conference Board. (2008). *New Graduates' Workforce*

Readiness.

III. International Documents

A. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003. (PDF)

B. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007. (PDF)

C. **British Columbia:** English Literature 12, Integrated Resource Package, 2003. (PDF)

D. **England:** *English Programme of Study for Key stage 4*, 2007. (PDF)

E. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003. (PDF)

F. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (PDF)

G. **Hong Kong:** Hong Kong Examinations and Assessment Authority, 2007 HKCEE English Language, Recommended Texts for the School-Based Assessment Component. (PDF)

H. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level.* (PDF)

I. **Ireland:** Prescribed Material for English in the Leaving Certificate Examination in 2009. (PDF)

J. **New South Wales:** *English Stage 6 Syllabus, 1999.* (PDF)

K. **New South Wales**: 2009-2012 HSC, Prescribed Area of Study, Electives and Texts. (PDF)

L. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007. (PDF)

M. **Singapore:** *English Language Syllabus 2001.* (PDF)

N. **Singapore:** O-Level Literature in English (Syllabus 2015), Prescribed Texts for 2009. (PDF)

O. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2006. (PDF)

P. **Victoria, Australia:** VCE English/ESL Text List 2008-2009, VCE Literature Text List 2008. (PDF)

Q. Achieve, Inc., National Governors Association, Council of Chief State School Officers. (2008). *Benchmarking for Success: Ensuring U.S. Students receive a World Class Education*. Washington, DC. (PDF)

R. Education Commission of the States. (2008). *From Competing to Leading: An International Benchmarking Blueprint*. Denver, CO. (PDF)

S. Education Commission of the States. (2009). *International Benchmarking Toolkit*. Denver, CO. (PDF)

T. Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills*. Paris, France. (PDF)

U. Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1.* [see Chapter 6 for reading assessment results] Paris, France. (PDF)

IV. State and Other Standards Documents

A. **California:** *English-Language Arts Content Standards for California Public Schools.* California Department of Education (1997). (PDF)

B. **Florida:** *2006 Sunshine State Standards K-12 Reading and Language Arts.* Florida Department of Education (2006). (PDF)

C. **Georgia:** Georgia ELA Standards (K-12).

D. **Indiana**: Reading List, Grades 9-12. (PDF)

E. **Massachusetts**: *English Language Arts Curriculum Framework.* Massachusetts Department of Education (June 2001). (PDF)

F. **Minnesota:** *Minnesota Academic Standards, Language Arts (K-12)*, (2003). (PDF)

G. **Texas:** *Texas College Readiness Standards*, (2008). (PDF)

H. National Council of Teachers of English and the International Reading Association. (1996). *Standards for the English Language Arts.* (PDF)

I. U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009*. Washington, DC: National Assessment Governing Board. (PDF)

J. U.S. Dept. of Education. (2007). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (MS Word Document)

V. Disciplinary Literacy Research

A. Carnegie Council on Advancing Adolescent Literacy. (2010). *Time to act: An agenda for advancing adolescent literacy for college and career success*. New York, NY: Carnegie Corporation of New York. (PDF)

B. Fang, Z., & Schleppegrell, M. J. (2008). *Reading in secondary content areas.* Ann Arbor: University of Michigan Press.

C. Lee, C.D., Spratley, A. (2010). *Reading in the disciplines: The challenges of adolescent literacy*. New York, NY: Carnegie Corporation of New York. (PDF)

D. Moje, E. B., Young, J. P., Readence, J. E., & Moore, D. W. (2000). Reinventing adolescent literacy for new times: Perennial and millennial issues. *Journal of Adolescent and Adult Literacy, 43*, 400–410.

E. Schleppegrell, M. J. (2004). *The language of schooling: A functional linguistics perspective.* Mahwah, NJ: Lawrence Erlbaum Associates.

F. Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review, 78,* 40–59.

College and Career Readiness Standards for Mathematics

Draft for Review and Comment

September 21, 2009

DRAFT

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Introduction

The *College and Career Readiness Standards for Mathematics* consist of three interconnected parts: a Standard for Mathematical Practice, ten Standards for Mathematical Content, and a set of Example Tasks.

The Standard for Mathematical Practice has six Core Practices that describe the way proficient students approach mathematics. Proficient students attend to precision, construct viable arguments, make sense of complex problems and persevere in solving them, look for hidden structure, note regularity in repeated reasoning, and use technology intelligently. This approach to mathematics is an essential part of being ready for college and career.

The Standards for Mathematical Content form the backbone of this document. Each of these ten standards consists of Core Concepts, Core Skills, and a description of the student's Coherent Understanding. Students who encounter the subject with a focus on coherence will be better able to learn more mathematics at a deeper level and be better able to access and apply the mathematics they know. The ten Standards for Mathematical Content pull together topics previously studied and look ahead toward topics in further coursework and training programs.

The Standards for Mathematical Content are designed to draw greater attention to powerful organizing principles in mathematics, such as functional relationships or the laws of arithmetic. They also allow important distinctions to be made more clearly, such as that between Expressions and Equations. And they surface the deep connections that often underlie mathematical coherence, such as the blending of algebra with geometry represented by Coordinates. These ten are not categories or buckets of topics to cover; they are standards. They describe the coherence students need and deserve as they go forward to their mathematical futures.

The third component of the *College and Career Readiness Standards for Mathematics* is a Web-based collection of Example Tasks that exemplifies the variety of performances required. High standards demand that students *use* their knowledge, skills and good practices to solve problems from a variety of contexts, both within mathematics and from the world outside. Example Tasks exemplify the range and variety of use that is expected. Teachers and designers of curriculum and assessment will find in the collection of examples a guide to what these standards mean. Over time, the collection of tasks will grow.

Together, these three components establish an evidence-based standard for college and career readiness. The *College and Career Readiness Standards for Mathematics* have been created with attention to the expectations of the highest achieving countries. They have focus and depth, emphasizing the understanding of and connections among topics that are most important for success regardless of a student's pathway after reaching these standards.

A primary goal of developing these standards is to enable students to achieve *mathematical proficiency* (see sidebar). Students are expected to understand the knowledge described in the Core Concepts and in the Coherent Understandings at a depth that enables them to reason with that knowledge—to analyze, interpret and evaluate mathematical problems, make deductions, and justify results. The Core Skills are meant to be used strategically and adaptively to solve problems. Students' knowledge and skills come to life and take their value when melded with the ways they approach mathematics—as described by the Core Practices.

The specific verbs used to describe concepts and skills in these standards are not meant to limit or indicate levels of any taxonomy. Although using verbs to indicate levels of depth has been a common practice in this country's standards writing, high performing nations do not use verbs in this way. They describe depth and practices first in separate sections of their syllabi. We have adopted the high performing countries' practice of focusing on a clear statement of what mathematics should be learned when writing standards for knowledge and skills.

Instruction, curriculum and assessment designed to achieve these standards should range over all strands of proficiency in *Adding It Up*, all depths of knowledge in Norman L. Webb's Depth of Knowledge taxonomy, all levels of Bloom's Taxonomy, and all levels of cognitive demand. In the Core Skills and Core Practices we have sometimes used terms like "explore" to indicate a lighter treatment with a goal of awareness and experience rather than proficiency. We have used Example Tasks to show the depth of knowledge and deployment of skills expected.

From *Adding it up: Helping children learn mathematics* (National Research Council, 2001, p. 116):

Recognizing that no term captures completely all aspects of expertise, competence, knowledge, and facility in mathematics, we have chosen mathematical proficiency to capture what we believe is necessary for anyone to learn mathematics successfully. Mathematical proficiency, as we see it, has five components, or strands:

- conceptual understanding—comprehension of mathematical concepts, operations, and relations
- procedural fluency—skill in carrying out procedures flexibly, accurately, efficiently, and appropriately
- strategic competence—ability to formulate, represent, and solve mathematical problems
- adaptive reasoning—capacity for logical thought, reflection, explanation, and justification
- productive disposition—habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy.

These standards are measurable; that is, they are observable and verifiable through the broad spectrum of student performances that may be assessed during classroom observation, school-based examinations and large-scale testing. The *College and Career Readiness Standards for Mathematics* can guide the development of assessment frameworks that distribute the assessment responsibilities across multiple levels of the educational system: state, district, school and teacher.

Students reaching these levels will be prepared for non-remedial college mathematics courses and will be prepared for training programs for career-level jobs; however, the *College and Career Readiness Standards for Mathematics* should not be construed as grade twelve exit standards. Students interested in STEM fields, and those who wish to go beyond for other reasons, will need to reach these standards before their senior year in order to have time to include additional mathematics. A number of pathways for advanced learning are possible and may be integrated throughout the high school experience and beyond.

The Common Core State Standards Initiative

The *College and Career Readiness Standards for Mathematics* will anchor the next phase of the Common Core State Standards Initiative: development of K–12 Mathematics Standards. Those K–12 Standards are in turn expected to guide the development of a next generation of assessments, developed collaboratively by multiple states. The K–12 Mathematics Standards will serve as a guide and tool for aligning instruction, curriculum, assessment, teacher supports, and systems of accountability. To ensure alignment, the Standard for Mathematical Practice, the Standards for Mathematical Content, and the Example Tasks should all be taken into account.

Overview of the Mathematical Practice Standard

Attend to precision.
Construct viable arguments.
Make sense of complex problems and persevere in solving them.
Look for structure.
Look for and express regularity in repeated reasoning.
Make strategic decisions about the use of technological tools.

Overview of the Mathematical Content Standards

Number. Procedural fluency in operations with real numbers and strategic competence in approximation are grounded in an understanding of place value. The rules of arithmetic govern operations on numbers and extend to operations in algebra.

Quantity. A quantity is an attribute of an object or phenomenon that can be specified using a number and a unit, such as 2.7 centimeters, 42 questions or 28 miles per gallon.

Expressions. Expressions use numbers, variables and operations to describe computations. The rules of arithmetic, the use of parentheses and the conventions about order of operations assure that the computation has a well-determined value.

Equations. An equation is a statement that two expressions are equal. Solutions to an equation are the values of the variables in it that make it true.

Functions. Functions model situations where one quantity determines another. Because nature and society are full of dependencies, functions are important tools in the construction of mathematical models.

Modeling. Modeling uses mathematics to help us make sense of the real world—to understand quantitative relationships, make predictions, and propose solutions.

Shape. From only a few axioms, the deductive method of Euclid generates a rich body of theorems about geometric objects, their attributes and relationships.

Coordinates. Applying a coordinate system to Euclidean space connects algebra and geometry, resulting in powerful methods of analysis and problem solving.

Probability. Probability assesses the likelihood of an event in a situation that involves randomness. It quantifies the degree of certainty that an event will happen as a number from 0 through 1.

Statistics. Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability in the data.

How Evidence Informed Decisions in Drafting the Standards

The Common Core State Standards Initiative builds on a generation of standards efforts led by states and national organizations. On behalf of the states, we have taken a step toward the next generation of standards that are aligned to college- and career-ready expectations and are internationally benchmarked. These standards are grounded in evidence from many sources that shows that the next generation of standards in mathematics must be focused on deeper, more thorough understanding of more fundamental mathematical ideas and higher mastery of these fewer, more useful skills.

The evidence that supports this new direction comes from a variety of sources. International comparisons show that high performing countries focus on fewer topics and that the U.S. curriculum is "a mile wide and an inch deep." Surveys of college faculty show the need to shift away from high school courses that merely survey advanced topics, toward courses that concentrate on developing an understanding and mastery of ideas and skills that are at the core of advanced mathematics. Reviews of data on student performance show the large majority of U.S. students are not mastering the mile wide list of topics that teachers cover.

The evidence tells us that in high performing countries like Singapore, the gap between what is taught and what is learned is relatively smaller than in Malaysia or the U.S. states. Malaysia's standards are higher than Singapore's, but their performance is much lower. One could interpret the narrower gap in Singapore as evidence that they actually use their standards to manage instruction; that is, Singapore's standards were set within the reach of hard work for their system and their population. Singapore's Ministry of Education flags its webpage with the motto, "Teach Less, Learn More." We accepted the challenge of writing standards that could work that way for U.S. teachers and students: By providing focus and coherence, we could enable more learning to take place at all levels.

However, a set of standards cannot be simplistically "derived" from any body of evidence. It is more accurate to say that we used evidence to inform our decisions. A few examples will illustrate how this was done.

For example, systems of linear equations are covered by all states, yet students perform surprisingly poorly on this topic when assessed by ACT. We determined that systems of linear equations have high coherence value, mathematically; that this topic is included by all high performing nations; and that it has moderately high value to college faculty. Result: We included it in our standards.

A different and more complex pattern of evidence appeared with families of functions. Again we found that students performed poorly on problems related to many advanced functions (trigonometric, logarithmic, quadratic, exponential, and so on). Again we found that a number of states cover them, even though college faculty rated them lower in value. High performing countries include this material, but with different degrees of demand. We decided that we had to carve a careful line through these topics so that limited teaching resources could focus where most important. We decided that students should

develop deep understanding and mastery of linear and exponential functions. They should also have familiarity with other families of functions, and apply their algebraic, modeling and problem solving skills to them—but not develop in-depth technical mastery and understanding. Thus we defined two distinct levels of attention and identified which families of functions got which level of attention.

Why were exponential functions selected for intensive focus in the Functions standard instead of, say, quadratic functions? What tipped the balance was the high coherence value of exponential functions in supporting modeling and their wide utility in work and life. Quadratic functions were also judged to be well supported by expectations defined under Expressions and Equations.

These examples indicate the kind of reasoning, informed by evidence, that it takes to design standards aligned to the demands of college and career readiness in a global economy. We considered inclusion in international standards, requirements of college and the workplace, surveys of college faculty and the business community, and other sources of evidence. As we navigated these sometimes conflicting signals, we always remained aware of the finiteness of instructional resources and the need for deep mathematical coherence in the standards.

At the end of this document, there is a listing of a number of sources that played a role in the deliberations described above and more generally throughout the process to inform our decisions. A hyperlinked version of the bibliography can be found online at www.corestandards.org.

College and Career Readiness Standards for Mathematics

Mathematical Practice

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 Practices · 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 $5 - 3(x - y)^2$ 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 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.

(a) For the importance of students' beliefs about effort, see the National Mathematics Advisory Panel's Report of the Task Group on Learning Processes, p. 4-10 (2008). (b) Cuoco, A., Goldenberg, E. P., and Mark, J., *Journal of Mathematical Behavior*, 15 (4), 375-402, 1996; *Focus in High School Mathematics*. Reston, VA: NCTM, in press; Harel, G., What is Mathematics? A Pedagogical Answer to a Philosophical Question. In R. B. Gold & R. Simons (Eds.), *Current Issues in the Philosophy of Mathematics From the Perspective of Mathematicians*, Mathematical Association of America, 2008.

Number

Core Concepts · Students understand that:

A The real numbers include the rational numbers and are in one-to-one correspondence with the points on the number line.

B Quantities can be compared using division, yielding rates and ratios.

C A fraction can represent the result of dividing the numerator by the denominator; equivalent fractions have the same value.

D Place value and the rules of arithmetic form the foundation for efficient algorithms.

A Coherent Understanding of Number. Procedural fluency in operations with real numbers and strategic competence in approximation are grounded in an understanding of place value. The rules of arithmetic govern operations on numbers and extend to operations in algebra:

- Numbers can be added in any order with any grouping and multiplied in any order with any grouping.
- Adding 0 and multiplying by 1 both leave a number unchanged.
- All numbers have additive inverses, and all numbers except zero have multiplicative inverses.
- Multiplication distributes over addition.

Subtraction and division are defined in terms of addition and multiplication, so are also governed by these rules.

The place value system bundles units into 10s, then 10s into 100s, and so on, providing an efficient way to name large numbers. Subdividing in a similar way extends this to the decimal system, which provides an address system for locating all real numbers on the number line with arbitrarily high accuracy. Place value is the basis for efficient algorithms, reducing much computation to single-digit arithmetic. Mental computation strategies also make opportunistic use of the rules of arithmetic, as when the product $5 \times 177 \times 2$ is computed at a glance to obtain 1770, rather than methodically working from left to right.

An estimate may be more appropriate than an exact value, for example, when you want to know the number of calories in a meal. Often a result is reported using fewer digits than were calculated. A mature number sense includes having rules of thumb about how much accuracy is appropriate and understanding that accuracy to more than a few decimal places often takes substantial effort. Estimation and approximation are also useful in checking calculations.

Rational numbers represented as fractions can be located on the number line by seeing them as numbers expressed in different units; for example, 3/5 is 3 units, where each unit is 1/5. However, rational numbers do not fill out the number line. There are also irrational numbers, such as π or $\sqrt{2}$. Each point on the number line then corresponds to a real number that is either rational or irrational.

Connections to Expressions, Functions and Coordinates. The rules of arithmetic govern the manipulations of expressions and functions. Two perpendicular number lines define the coordinate plane.

Core Skills · Students can and do:

1 Compare numbers and make sense of their magnitude.

Include positive and negative numbers expressed as fractions, decimals, powers, and roots. Limit to square and cube roots. Include very large and very small numbers and the use of scientific notation.

2 Know when and how to use standard algorithms, and perform them flexibly, accurately and efficiently.*

3 Use mental strategies and technology to formulate, represent and solve problems.**

4 Solve multi-step problems involving fractions and percentages.

Include situations such as simple interest, tax, markups/markdowns, gratuities and commissions, fees, percent increase or decrease, percent error, expressing rent as a percentage of take-home pay, and so on.

5 Use estimation and approximation to solve problems.

Include evaluating answers for their reasonableness, detecting errors, and giving answers to an appropriate level of precision.

* This aligns with the concept of procedural fluency as in the National Research Council report *Adding it up: Helping children learn mathematics*. Specifically, "*Procedural fluency* refers to knowledge of procedures, knowledge of when and how to use them appropriately, and skill in performing them flexibly, accurately, and efficiently" (p. 121).

** This aligns with the concept of strategic competence as described in *Adding it up*. "*Strategic competence* refers to the ability to formulate mathematical problems, represent them, and solve them" (p. 124).

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Quantity

Core Concepts · Students understand that:

A The value of a quantity is not specified unless the units are named or understood from the context.

B Quantities can be added and subtracted only when they are of the same type (length, area, speed, etc.).

C Quantities can be multiplied or divided to create new types of quantities, called derived quantities.

A Coherent Understanding of Quantity. A quantity is an attribute of an object or phenomenon that can be specified using a number and a unit, such as 2.7 centimeters, 42 questions or 28 miles per gallon.

The length of a football field and the speed of light are both quantities. If we choose units of miles per second, then the speed of light has a value of approximately 186,000 miles per second. But the speed of light need not be expressed in miles per second; it may be approximated by 3×10^8 meters per second or in any other unit of speed. Bare numerical values such as 186,000 do not describe quantities unless they are paired with units.

Speed (distance divided by time), rectangular area (length multiplied by length), density (mass divided by volume), and population density (number of people divided by land area) are examples of derived quantities, obtained by multiplying or dividing quantities.

It can make sense to add two quantities, such as when a child 51 inches tall grows 3 inches to become 54 inches tall. To be added or subtracted, quantities must be of the same type (length, area, speed, etc.); to add or subtract their values, the quantities must be expressed in the same units. Converting quantities to have the same units is like converting fractions to have a common denominator before adding or subtracting. But, even when quantities have the same units it does not always make sense to add them. For example, if a wooded park with 300 trees per acre is next to a field with 30 trees per acre, they do not have 330 trees per acre.

Doing algebra with units in a calculation reveals the units of the answer, and can help reveal a mistake if, for example, the answer comes out to be a distance when it should be a speed.

Connections to Number, Expressions, Equations, Functions, Modeling and Statistics. Operations described under Number and Expressions govern the operations one performs on quantities, including the units involved. Quantity is an integral part of any application of mathematics, and has connections to solving problems using data, equations, functions and modeling.

Core Skills · Students can and do:

1 Know when and how to convert units in computations.

Include the addition and subtraction of quantities of the same type expressed in different units; averaging data given in mixed units; converting units for derived quantities such as density and speed.

2 Use and interpret quantities and units correctly in algebraic formulas.

Include specifying units when defining variables and attending to units when writing expressions and equations.

3 Use and interpret quantities and units correctly in graphs and data displays.

Include function graphs, data tables, scatterplots and other visual displays of dimensioned data.

4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Include examples such as acceleration; currency conversions; people-hours; social science measures, such as deaths per 100,000; and general rates, such as points per game.

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Expressions

Core Concepts · Students understand that:

A Expressions are constructions built up from numbers, variables, and operations, which have a numerical value when each variable is replaced with a number.

B Complex expressions are made up of simpler expressions.

C The rules of arithmetic can be applied to transform an expression without changing its value.

D Rewriting expressions in equivalent forms serves a purpose in solving problems.

A Coherent Understanding of Expressions. Expressions use numbers, variables and operations to describe computations. The rules of arithmetic, the use of parentheses and the conventions about order of operations assure that the computation has a well-determined value.

Reading an expression with comprehension involves analysis of its underlying structure, which may suggest a different but equivalent way of writing it that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price p. But rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying by a constant factor.

Algebraic manipulations are based on the conventions of algebraic notation and the rules of arithmetic. Heuristic mnemonic devices are not a substitute for procedural fluency. For example, factoring, expanding, collecting like terms, the rules for interpreting minus signs next to parenthetical sums, and adding fractions with a common denominator are all instances of the distributive law; the definitions for negative and rational exponents are based on the extension of the exponent laws for positive integers. The laws of exponents connect multiplication of numbers to addition of exponents and thus express the deep relationship between addition and multiplication captured by the parallel nature of the rules of arithmetic for these operations.

Complex expressions are made up of simpler expressions using arithmetic operations and substitution. When simple expressions within more complex expressions are treated as single quantities, or chunks, the underlying structure of the larger expression may be more evident.

Connections to Equations and Functions. Setting expressions equal to each other leads to equations. Expressions can define functions of the variables that appear in them, with equivalent expressions defining the same function.

Core Skills · Students can and do:

1 See structure in expressions.

For example, recognize: that the expressions $x^4 - y^4$ and $(x+y)^2 - (x-y)^2$ are differences of squares; that there are different ways to rewrite the latter expression, e.g., by expanding and collecting like terms or by factoring as a difference of squares; that p is a common factor in $p + 0.025p$; that an expression in the form $(x-3)^2 + 14$ reveals its minimum value.

2 Manipulate simple expressions.

Show procedural fluency in the following cases: factoring out common terms; factoring expressions with quadratic structure; writing in standard form sums, differences, and products of polynomials. Include completing the square and rewriting in standard form sums, differences, products, and quotients of simple rational expressions; rewriting expressions with negative exponents and those involving square or cube roots of a single term involving exponents.

3 Define variables and write an expression to represent a quantity in a problem.

Include contextual problems.

4 Interpret an expression that represents a quantity in terms of the context.

Include interpreting parts of an expression, such as terms, factors and coefficients.

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Equations

Core Concepts · Students understand that:

A An equation is a statement that two expressions are equal.

B The solutions of an equation are the values of the variables that make the resulting numerical statement true.

C The steps in solving an equation are guided by understanding and justified by logical reasoning.

D Equations not solvable in one number system may have solutions in a larger number system.

A Coherent Understanding of Equations. An equation is a statement that two expressions are equal. Solutions to an equation are the values of the variables in it that make it true. If the equation is true for all values of the variables, then we call it an identity; identities are often discovered by manipulating one expression into another.

The solutions of an equation in one variable form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs, which can be graphed in the plane. Equations can be combined into systems to be solved simultaneously.

An equation can be solved by successively transforming it into one or more simpler equations. The process is governed by deductions based on the properties of equality. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, stimulating the formation of expanded number systems (integers, rational numbers, real numbers and complex numbers).

A formula is a type of equation. The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = \left(\frac{b_1+b_2}{2}\right)h$, can be solved for h using the same deductive process.

Inequalities can be solved in much the same way as equations. Many, but not all, of the properties of equality extend to the solution of inequalities.

Connections to Functions, Coordinates, and Modeling. Equations in two variables may define functions. Asking when two functions have the same value leads to an equation; graphing the two functions allows for the approximate solution of the equation. Equations of lines involve coordinates, and converting verbal descriptions to equations is an essential skill in modeling.

Core Skills · Students can and do:

1 Understand a problem and formulate an equation to solve it.

Extend to inequalities and systems.

2 Solve equations in one variable using manipulations guided by the rules of arithmetic and the properties of equality.

Solve linear equations with procedural fluency. For quadratic equations, include solution by inspection, by factoring, or by using the quadratic formula. Understand that the quadratic formula comes from completing the square. Include simple absolute value equations solvable by direct inspection and by understanding the interpretation of absolute value as distance.

3 Rearrange formulas to isolate a quantity of interest.

Exclude cases that require extraction of roots or inverse functions.

4 Solve systems of equations.

Focus on pairs of simultaneous linear equations in two variables. Include algebraic techniques, graphical techniques and solving by inspection.

5 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.

6 Graph the solution set of a linear inequality in two variables on the coordinate plane.

Emphasize graphing the associated equation, using a dashed or solid line as appropriate and shading to indicate the half-plane on which the solutions to the inequality lie.

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Functions

Core Concepts · Students understand that:

A A function is a rule, often defined by an expression, that assigns a unique output for every input.

B The graph of a function f is a set of ordered pairs $(x, f(x))$ in the coordinate plane.

C Functions model situations where one quantity determines another.

D Common functions occur in families where each member describes a similar type of dependence.

A Coherent Understanding of Functions. Functions model situations where one quantity determines another. For example, the return on $10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because nature and society are full of dependencies between quantities, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a plane to fly 1000 miles is a function of the plane's average ground speed in miles per hour, v; the rule $T(v) = 1000/v$ expresses this relationship algebraically and defines a function whose name is T.

The set of possible inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context. The graph of a function is a useful way of visualizing the relationship the function models, and manipulating the expression for a function can throw light on the function's properties.

Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with an initial value of zero describe proportional relationships.

Connections to Expressions, Equations, Modeling and Coordinates. Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. The graph of a function f is the same as the solution set of the equation $y = f(x)$. Questions about when two functions have the same value lead to equations, whose solutions can be visualized from the intersection of the graphs. Since functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be modeled effectively using a spreadsheet or other technology.

Core Skills · Students can and do:

1 Recognize proportional relationships and solve problems involving rates and ratios.

Include being able to express proportional relationships as functions.

2 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, polynomial, simple rational, exponential, logarithmic, sine and cosine, absolute value and step functions.

3 Analyze functions using symbolic manipulation.

Include slope-intercept and point-slope form of linear functions; vertex form of quadratic functions to identify symmetry and find maximums and minimums; factored form to find zeros. Use manipulations as described under Expressions.

4 Use the families of linear and exponential functions to solve problems.

For linear functions $f(x) = mx + b$, understand b as the intercept or initial value and m as the slope or rate of change. For exponential functions $f(x) = a \cdot b^x$, understand a as the intercept or initial value and b as the growth factor.

5 Find and interpret rates of change.

Compute the rate of change of linear functions and make qualitative observations about how the rate of change varies for nonlinear functions.

Modeling

Core Concepts · Students understand that:

A Mathematical models involve choices and assumptions that abstract key features from situations to help us solve problems.

B Even very simple models can be useful.

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.

Connections to Quantity, Equations, Functions, Shape, Coordinates and Statistics. Modeling makes use of shape, data, graphs, equations and functions to represent real-world quantities and situations.

Core Skills · Students can and do:

1 Model numerical situations.

Include readily applying the four basic operations in combination to solve multi-step quantitative problems with dimensioned quantities; making estimates to introduce numbers into a situation and get problems started; recognizing proportional or near-proportional relationships and analyzing them using characteristic rates and ratios.

2 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.

3 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.

4 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.

5 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.

6 Interpret the results of applying a model and compare models for a particular situation.

Include realizing that models seldom fit exactly and so there can be error; identifying simple sources of error and being careful not to over-interpret models. Include recognizing that there can be many models that relate to a situation, that they can capture different aspects of the situation, that they can be simpler or more complex, and that they can have a better or worse fit to the situation and the questions being asked.

Shape

Core Concepts · Students understand that:

A Shapes and their parts, attributes, and measurements can be analyzed deductively.*

B Congruence, similarity, and symmetry can be analyzed using transformations.

C Mathematical shapes model the physical world, resulting in practical applications of geometry.

D Right triangles and the Pythagorean theorem are central to geometry and its applications, including trigonometry.

A Coherent Understanding of Shape. From only a few axioms, the deductive method of Euclid generates a rich body of theorems about geometric objects, their attributes and relationships. Once understood, those attributes and relationships can be applied in diverse practical situations—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Understanding the attributes of geometric objects often relies on measurement: a circle is a set of points in a plane at a fixed distance from a point; a cube is bounded by six squares of equal area; when two parallel lines are crossed by a transversal, pairs of corresponding angles are congruent.

The concepts of congruence, similarity and symmetry can be united under the concept of geometric transformation. Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent. Applying a scale transformation to a geometric figure yields a similar figure. The transformation preserves angle measure, and lengths are related by a constant of proportionality. If the constant of proportionality is one, distances are also preserved (so the transformation is a rigid transformation) and the figures are congruent.

The definitions of sine, cosine and tangent for acute angles are founded on right triangle similarity, and, with the Pythagorean theorem, are fundamental in many practical and theoretical situations.

Connections to Coordinates, Functions and Modeling. The Pythagorean theorem is a key link between geometry, measurement and distance in the coordinate plane. Parameter changes in families of functions can be interpreted as transformations applied to their graphs and those functions, as well as geometric objects in their own right, can be used to model contextual situations.

*In this document, deductive analysis aligns with the notion of adaptive reasoning as defined in *Adding it Up*, and includes empirical exploration, informal justification, and formal proof.

Core Skills · Students can and do:

1 Use multiple geometric properties to solve problems involving geometric figures.

Properties include: measures of interior angles of a triangle sum to 180°; 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; and a line tangent to a circle is perpendicular to the radius meeting it.

2 Prove theorems, test conjectures and identify logical errors.

Include theorems establishing the properties in Core Skill 1 and other theorems about angles, parallel and perpendicular lines, similarity and congruence of triangles.

3 Construct and interpret representations of geometric objects.

Include classical construction techniques and construction techniques supported by modern technologies. Include moving between two-dimensional representations and the three-dimensional objects they represent, such as in schematics, assembly instructions, perspective drawings and multiple views.

4 Solve problems involving measurements.

Include measurement (length, angle measure, area, surface area, and volume) of a variety of figures and shapes in two- and three-dimensions. Compute measurements using formulas and by decomposing complex shapes into simpler ones.

5 Solve problems involving similar triangles and scale drawings.

Include computing actual lengths, areas and volumes from a scale drawing and reproducing a scale drawing at a different scale.

6 Apply properties of right triangles and right triangle trigonometry to solve problems.

Include using the Pythagorean theorem and properties of special right triangles, and applying sine, cosine and tangent to determine lengths and angle measures of right triangles. Use right triangles and their properties to solve real-world problems. Limit angle measures to degrees.

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Coordinates

Core Concepts · Students understand that:

A Locations in the plane or in space can be specified by pairs or triples of numbers called coordinates.

B Coordinates link algebra with geometry and allow methods in one domain to solve problems in the other.

C The set of solutions to an equation in two variables forms a curve in the coordinate plane—such as a line, parabola, circle—and the solutions to systems of equations correspond to intersections of these curves.

A Coherent Understanding of Coordinates. Applying a coordinate system to Euclidean space connects algebra and geometry, resulting in powerful methods of analysis and problem solving.

Just as the number line associates numbers with locations in one dimension, a pair of perpendicular axes associates pairs of numbers with locations in two dimensions. This correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling and proof.

Coordinate geometry is a rich field for exploration. How does a geometric transformation such as a translation or reflection affect the coordinates of points? How is the geometric definition of a circle reflected in its equation?

Adding a third perpendicular axis associates three numbers with locations in three dimensions and extends the use of algebraic techniques to problems involving the three-dimensional world we live in.

Connections to Shape, Quantity, Equations and Functions. Coordinates can be used to reason about shapes. In applications, coordinate values often have units (such as meters and bushels). A one-variable equation of the form $f(x) = g(x)$ may be solved in the coordinate plane by finding intersections of the curves $y = f(x)$ and $y = g(x)$.

Core Skills · Students can and do:

1 Translate fluently between lines in the coordinate plane and their equations.

Include predicting visual features of lines by inspection of their equations, determining the equation of the line through two given points, and determining the equation of the line with a given slope passing through a given point.

2 Identify the correspondence between parameters in common families of equations and the location and appearance of their graphs.

Include common families of equations—the graphs of $Ax + By = C$, $y = mx + b$ and $x = a$ are straight lines; the graphs of $y = a(x - h)^2 + k$ and $y = Ax^2 + Bx + C$ are parabolas; and the graph of $(x - h)^2 + (y - k)^2 = r^2$ is a circle.

3 Use coordinates to solve geometric problems.

Include proving simple 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.

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Probability

Core Concepts · Students understand that:

A Probability models outcomes for situations in which there is inherent randomness, quantifying the degree of uncertainty in terms of relative frequency of occurrence.

B The law of large numbers provides the basis for estimating certain probabilities by use of empirical relative frequencies.

C The laws of probability govern the calculation of probabilities of combined events.

D Interpreting probabilities contextually is essential to rational decision-making in situations involving randomness.

A Coherent Understanding of Probability. Probability assesses the likelihood of an event in a situation that involves randomness. It quantifies the degree of certainty that an event will happen as a number from 0 through 1. This number is generally interpreted as the relative frequency of occurrence of the event over the long run.

The structure of a probability model begins by listing or describing the possible outcomes for a random situation (the sample space) and assigning probabilities based on an assumption about long-run relative frequency. In situations such as flipping a coin, rolling a number cube, or drawing a card, it is reasonable to assume various outcomes are equally likely.

Compound events constructed from these simple ones can be represented by tree diagrams and by frequency or relative frequency tables. The probabilities of compound events can be computed using these representations and by applying the additive and multiplicative laws of probability. Interpreting these probabilities relies on an understanding of independence and conditional probability, approachable through the analysis of two-way tables.

Converting a verbally-stated problem into the symbols and relations of probability requires careful attention to words such as *and*, *or*, *if*, and *all*, and to grammatical constructions that reflect logical connections. This is especially true when applying probability models to real-world problems, where simplifying assumptions are also usually necessary in order to gain at least an approximate solution.

Connections to Statistics and Expressions. Probability is the foundation for drawing valid conclusions from sampling or experimental data. Counting has an advanced connection with Expressions through Pascal's triangle and binomial expansions.

Core Skills · Students can and do:

1 Compute theoretical probabilities by systematically counting points in the sample space.

Make use of symmetry and equally likely outcomes. Include permutation and combination problems as long as small numbers are involved or technology is used, so that formulas are not required.

2 Interpret probabilities of compound events using concepts of independence and conditional probability.

Include reading conditional probabilities from two-way tables.

3 Compute probabilities of compound events.

Make use of the additive and multiplicative laws of probability, tree diagrams and frequency or relative frequency tables in real contexts. Do not emphasize fluency with the related formulas

4 Estimate probabilities empirically.

Include using data from simulations carried out with technology to estimate probabilities.

5 Identify and explain common misconceptions regarding probability.

Include misconceptions about long-run versus short-run behavior of relative frequencies (the law of large numbers). Include attention to the use and misuse of probability in the media, especially in terms of interpreting charts and tables and in the contextual meaning of terms connected to probability, such as 'odds' or 'risk.'

6 Adapt probability models to solve real-world problems.

Include the use of conditional probability to assess subsets of data (e.g., what does the data say about males and females separately). Include the use of independence as a simplifying assumption (e.g., find the probability that two students both contract the disease this year).

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Statistics

Core Concepts · Students understand that:

A Statistical methods take variability into account to support making informed decisions based on quantitative studies designed to answer specific questions.

B Visual displays and summary statistics condense the information in data sets into usable knowledge.

C Randomness is the foundation for using statistics to draw conclusions when testing a claim or estimating plausible values for a population characteristic.

D The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions.

A Coherent Understanding of Statistics. Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability in the data. Statistics provides tools for describing variability in data and for making informed decisions that take variability into account.

Data are gathered, displayed, summarized, examined and interpreted to discover patterns. Data can be summarized by a statistic measuring center, such as mean or median, and a statistic measuring spread, such as interquartile range or standard deviation. Different distributions can be compared numerically using these statistics or visually using plots. Which statistics to compare, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance and this can be evaluated only under the condition of randomness.

In critically reviewing uses of statistics in public media and other reports, it is important to consider the study design, how the data were collected, and the analyses employed as well as the data summaries and the conclusions drawn.

Connections to Probability, Functions and Modeling. Valid conclusions about a population depend on designed simulations or other statistical studies using random sampling or assignment and rely on probability for their interpretation. Functional models may be used to approximate data. If the data are approximately linear, the relationship may be modeled with a trend line and the strength and direction of such a relationship may be expressed through a correlation coefficient. Technology facilitates the study of statistics by making it possible to simulate many possible outcomes in a short amount of time, and by generating plots, function models, trend lines and correlation coefficients.

Core Skills · Students can and do:

1 Formulate questions that can be addressed with data. Identify the relevant data, collect and organize it to respond to the question.

Include determining whether a question can best be addressed through a sample survey, randomized experiment or observational study. Include unbiased selection for a sample and randomization of assignment to treatment for an experiment.

2 Use appropriate displays and summary statistics for data.

Include univariate, bivariate, categorical and quantitative data. Include the thoughtful selection of displays and measures of center and spread to summarize data.

3 Interpret data displays and summaries critically; draw conclusions and develop recommendations.

Include paying attention to the context of the data, interpolating or extrapolating judiciously, and examining the effects of extreme values of the data on summary statistics of center and spread. Include data sets that follow a normal distribution. Include observing and interpreting linear trends in bivariate quantitative data.

4 Draw statistical conclusions involving population means or proportions using sample data.

Conclusions should be based on simulations or other informal techniques, rather than formulas.

5 Evaluate reports based on data.

Include looking for bias or flaws in the way the data were gathered or presented, as well as unwarranted conclusions, such as claims that confuse correlation with causation.

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Sample of Works Consulted

I. National Reports and Recommendations

A. *Adding it Up: Helping Children Learn Mathematics*. National Council of Teachers of Mathematics, Mathematics Learning Study Committee, 2001.

B. *Crossroads in Mathematics*, 1995 and *Beyond Crossroads, 2006*. American Mathematical Association of Two-Year Colleges (AMATYC).

C. *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence*. National Council of Teachers of Mathematics, 2006.

D. *Foundations for Success: Final Report of the National Mathematics Advisory Panel* (NMAP), 2008.

E. *Guidelines for Assessment and Instruction in Statistics Education (GAISE) project* http://www.amstat.org/education/gaise/.

F. *Habits of Mind: An Organizing Principle for a Mathematics Curriculum*. Cuoco, A. , Goldenberg, E. P., and Mark, J. (1996). Journal of Mathematical Behavior, 15 (4), 375-402. Last retrieved July 15, 2009, from http://www2.edc.org/CME/showcase/HabitsOfMind.pdf.

G. *How People Learn: Brain, Mind, Experience, and School.* Bransford, J.D., A.L. Brown and R.R. Cocking, eds.. Committee on Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education, National Research Council, 1999.

H. *Mathematics and Democracy, The Case for Quantitative Literacy*, edited by Lynn Arthur Steen. National Council on Education and the Disciplines, 2001.

I. *The Opportunity Equation: Transforming Mathematics and Science Education for Citizenship and the Global Economy*. The Carnegie Corporation of New York and the Institute for Advanced Study, 2009. Online: http://www.opportunityequation.org/

J. *Principles and Standards for School Mathematics*. National Council of Teachers of Mathematics, 2000.

K. *Quantitative Literacy and Mathematical Competencies*. Niss, Mogen. Last retrieved July 15, 2009, from http://www.maa.org/QL/pgs215_220.pdf

L. *A Research Companion to Principles and Standards for School Mathematics*. National Council of Teachers of Mathematics, 2003.

M. *Focus in High School Mathematics: Reasoning and Sense Making*. National Council of Teachers of Mathematics. Reston, VA: NCTM, in press.

N. *What is Mathematics? A Pedagogical Answer to a Philosophical Question.* Harel, G.. In R. B. Gold & R. Simons (Eds.), *Current Issues in the Philosophy of Mathematics from the Perspective of Mathematicians*, Mathematical Association of America, 2008.

O. Blum, W., Galbraith, P. L., Henn, H-W. and Niss, M. (Eds) *Applications and Modeling in Mathematics Education*, ICMI Study 14. Amsterdam: Springer.

II. College Readiness

A. ACT College Readiness Benchmarks™ last retrieved July 14, 2009, from http://www.act.org/research/policymakers/pdf/benchmarks.pdf

B. ACT College Readiness Standards™

C. ACT National Curriculum Survey™

D. Adelman, Cliff. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*, 2006. http://www.ed.gov/rschstat/research/pubs/toolboxrevisit/index.html

E. *Advanced Placement Calculus, Statistics and Computer Science Course Descriptions. May 2009, May 2010.* College Board, 2008.

F. *Aligning Postsecondary Expectations and High School Practice: The Gap Defined* (Policy Implications of the ACT National Curriculum Survey Results 2005-2006). Last retrieved July 14, 2009, from www.act.org/research/policymakers/pdf/NCSPolicyBrief.pdf

G. *Condition of Education, 2004: Indicator 30, Top 30 Postsecondary Courses, U.S. Department of Education,* 2004.

H. *Condition of Education, 2007: High School Course-Taking*. U.S. Department of Education, 2007.

I. Conley, D.T. *Knowledge and Skills for University Success*, 2008.

J. Conley, D.T. *Toward a More Comprehensive Conception of College Readiness*, 2007.

K. *Crisis at the Core: Preparing All Students for College and Work.* ACT, Last retrieved July 14, 2009, from www.act.org/research/policymakers/pdf/crisis_report.pdf

L. Achieve, Inc., Florida Postsecondary Survey, 2008.

M. Golfin, Peggy, et. al. CNA Corporation. *Strengthening Mathematics at the Postsecondary Level: Literature Review and Analysis*, 2005.

N. Camara, W.J., Shaw, E., and Patterson, B. (June 13, 2009). First Year English and Math College Coursework. College Board: New York, NY (Available from authors).

O. CLEP Precalculus Curriculum Survey: Summary of Results. The College Board, 2005.

P. College Board Standards for College Success: Mathematics and Statistics. College Board, 2006. http://www.collegeboard.com/prod_downloads/about/association/academic/mathematics-statistics_cbscs.pdf.

Q. Miller, G.E., Twing, J., and Meyers, J. "Higher Education Readiness Component (HERC) Correlation Study." Austin, TX: Pearson.

R. *On Course for Success: A Close Look at Selected High School Courses That Prepare All Students for College and Work.* ACT. Last retrieved July 14, 2009, from www.act.org/research/policymakers/pdf/success_report.pdf

S. *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up*. Achieve, 2008.

T. *Ready for College and Ready for Work: Same or Different?* ACT. Last retrieved July 14, 2009, from www.act.org/research/policymakers/pdf/ReadinessBrief.pdf

U. *Ready or Not: Creating a High School Diploma That Counts.* American Diploma Project, 2004. http://www.achieve.org/ReadyorNot

V. Rigor at Risk: Reaffirming Quality in the High School Core Curriculum. ACT, Last retrieved July 14, 2009, from www.act.org/research/policymakers/pdf/rigor_report.pdf

W. *The Forgotten Middle: Ensuring that All Students Are on Target for College and Career Readiness before High School.* ACT, Last retrieved July 14, 2009, from http://www.act.org/research/policymakers/reports/ForgottenMiddle.html

X. Achieve, Inc., Virginia Postsecondary Survey, 2004.

III. Career Readiness

A. ACT Job Skill Comparison Charts

B. Achieve's Mathematics at Work, 2008. http://www.achieve.org/mathatwork

C. *The American Diploma Project Workplace Study*. National Alliance of Business Study, 2002.

D. Carnevale, Anthony and Desrochers, Donna. *Connecting Education Standards and Employment: Course-taking Patterns of Young Workers,* 2002.

http://www.edroundtable.state.in.us/pdf/adp/ADPWorkplaceStudy.pdf

E. Colorado Business Leaders Top Skills, 2006.

F. *Hawai'i Career Ready Study: access to living wage careers from high school*, 2007.

G. *Ready or Not: Creating a High School Diploma That Counts.* American Diploma Project, 2004. http://www.achieve.org/ReadyorNot

H. States' Career Cluster Initiative. *Essential Knowledge and Skill Statements*, 2008.

I. WorkKeys Occupational Profiles™

http://www.act.org/workkeys/profiles/occuprof/index.html

IV. International Documents

STANDARDS [High performing countries/countries of interest]

A. Alberta

Alberta Learning, *Pure Mathematics 10–20–30 (Senior High)*, 2002. (Grades 10-12)

B. Belgium

Department for Educational Development: Core Curriculum. (Grades 9-10 and 11-12) Retrieved June 24, 2009 from http://www.ond.vlaanderen.be/dvo/english/corecurriculum/corecurriculum.htm

C. China

Compulsory mathematics curriculum for senior secondary, as submitted to the APEC consortium. (Grades 10-12) Last retrieved July 13, 2009, from http://www.apecknowledgebank.org/file.aspx?id=1895

D. Chinese Taipei

- Curriculum Guidelines for the Required Subject Math in Senior High Schools, as submitted to the APEC consortium. (Grades 10-11) Last retrieved July 13, 2009 from http://www.apecknowledgebank.org/file.aspx?id=1900
- Curriculum Guidelines for the Elective Subject Math (I) in Senior High Schools, as submitted to the APEC consortium. (Grades 12) Last retrieved July 13, 2009, from http://www.apecknowledgebank.org/file.aspx?id=1901

E. England

Qualifications and Curriculum Authority. *Programme of Study for Key Stage 4, National Curriculum,* 2007. (Grades 10-11)

F. Finland

Finnish National Board of Education. *National Core Curriculum For Upper Secondary Schools 2003*. (Grades 10-12)

G. Hong Kong

Learning Objectives for Key Stage 4. (Grades 10-11)

H. India

- *The National Curriculum Framework,* 2005. (Grades 9-12). National Council of Educational Research and Training. Last retrieved July 13, 2009, from http://ncert.nic.in/html/pdf/schoolcurriculum/framework05/prelims.pdf
- *Secondary School Curriculum, (2010)*. (Grades 9-10). Central Board of Education.
- *Senior School Curriculum, (2010)*. (Grades 11-12). Central Board of Secondary Education.

I. Ireland

- *Junior Certificate Mathematics Syllabus (Higher, Ordinary and Foundation Level)*. (Grades 7-9). National Council for Curriculum and Assessment, 2000.
- The Leaving Certificate *Mathematics Syllabus. (Higher, Ordinary and Foundation Level)*. (Grades 10-12). National Council for Curriculum and Assessment, 2000.

J. Japan

The Courses of Study in Japan, Provisional and Unofficial Translation, 2004, as submitted to the APEC consortium. (Grades 10-12). Last retrieved July 13, 2009, from http://www.apecknowledgebank.org/file.aspx?id=1896.

K. Korea

The Seventh National School Curriculum, as submitted to the APEC consortium. (Grades 7-10). Last retrieved July 13, 2009, from http://www.apecknowledgebank.org/file.aspx?id=1897 and http://www.apecknowledgebank.org/file.aspx?id=1898

L. Singapore

Secondary Mathematics Syllabuses, 2007, as submitted to the APEC consortium. (Grades ≈7-10/11). Last retrieved July 13, 2009, from http://www.moe.gov.sg/education/syllabuses/sciences/files/maths-secondary.pdf.

ASSESSMENTS [Key international assessments with global reach]

A. Program for International Student Assessment (PISA), 2006.

B. Trends in International Mathematics and Science Study (TIMSS), 2007.

C. International Baccalaureate, Mathematics Standard Level, 2006.

D. University of Cambridge International Examinations: General Certificate of Secondary Education in Mathematics, 2009.

E. EdExcel, General Certificate of Secondary Education, Mathematics, 2009.

F. Lundsgaard Hansen, Birthe and Vagn. Reference levels in School Mathematics, Education in Europe, National Presentation, Denmark, 2001. Last retrieved July 15, 2009, from http://www.emis.de/projects/Ref/doc_ems_pdf/EMS_NATIONAL_PRESENTATIONS/EMS_DENMARK.pdf

V. State Documents

A. California State Standards

B. Florida State Standards

C. Georgia State Standards

D. Massachusetts State Standards

E. Mathematics Curriculum Framework Revision Panel [Revised Progress Report]. Massachusetts Department of Elementary and Secondary Education, 2009. Last retrieved July 15, 2009, from http://www.doe.mass.edu/boe/docs/0509/item5_report.pdf.

F. Minnesota State Standards

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

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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.

[1] Less than two percent of the population of all students and less than 20% of the population of students with disabilities.

[2] See the Council of Chief State School Officers, (2003). *Training District and State Personnel on Accommodations: A Study of State Practices, Challenges, and Resources* at http://www.ccsso.org/publications/details.cfm?PublicationID=221 for further explanation and evidence around accommodations.

[3] According to the Individuals with Disabilities Act (IDEA), an IEP includes appropriate accommodations that are necessary to measure the individual achievement and functional performance of a child.

How to Read This Document

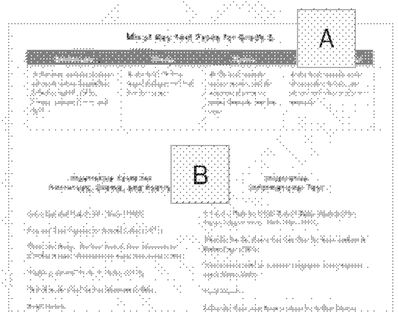
The *Standards* are divided into an ELA-specific document (*Standards for English Language Arts K–12*) and a literacy document for history and science (*Standards for Literacy in History and Science 6–12*). The ELA document includes standards for and examples of history and science reading in K–5.

The ELA-specific document is organized by grade (kindergarten and grades 1, 2, and 3) and grade band (grades 4–5, 6–8, 9–10, and 11–CCR). The *Standards for Literacy in History and Science* are organized by grade band (grades 4–5, 6–8, 9–10, and 11–CCR). Each grade/band is divided into strands—Reading, Writing, Speaking and Listening, and Language Development.

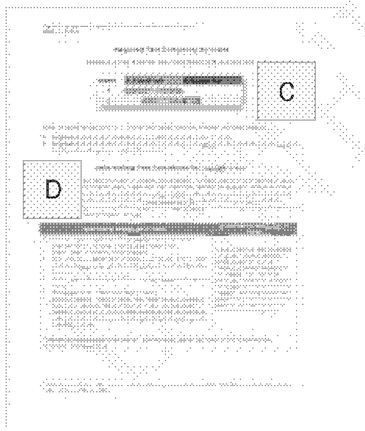
While all strands contain standards statements, each strand also has its own specific features.

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

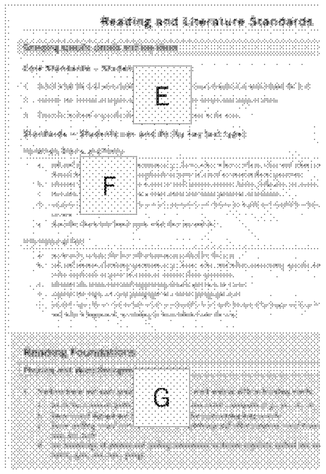
Kindergarten and grade 1 begin with the **mix of key text types (A)**, which identifies the genres and subgenres of reading material appropriate for each grade. This is followed by a list of **illustrative texts (B)** in the key text types. This list is suggestive of the sorts of texts appropriate for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



Grades 2, 3, 4–5, 6–8, 9–10, and 11–CCR include this information immediately after a graphic specifying **required text complexity by grade (C)**—in brief, the proportion of texts within and above grade band that students must read each year. (For example, 70% of the texts that grade 3 students read should come from the grades 2–3 text complexity band, while the other 30% should come from the grades 4–5 band.) An overview of the method for **determining text complexity (D)** in the particular grade band follows. (A fuller treatment is provided in Appendix A.)

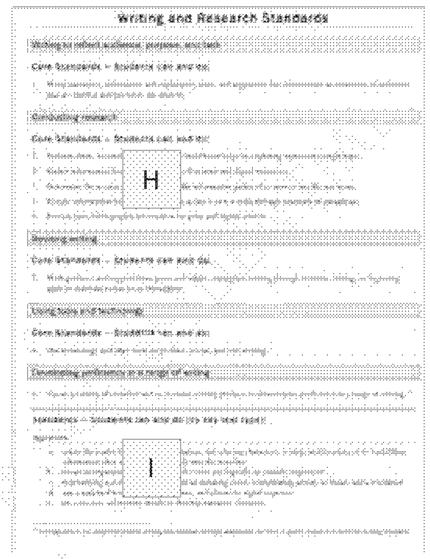


All grades/bands organize standards under a number of boxed subheadings (e.g., "Grasping specific details and key ideas"). The standards at all grade levels are divided into cross-cutting **Core Standards (E)**, which are numbered and applicable to many types of reading, and more specific **Standards (F)**, which are lettered and organized by text type (e.g., "Narratives, Drama, and Poetry"). Kindergarten and grades 1, 2, and 3 also include boxed sections of **reading foundations (G)**, which enumerate basic concepts of print and other foundational skills in reading that very young students must acquire.



Writing and Research

Cross-cutting **Core Standards (H)**, which are numbered and apply to many types of writing, are organized under a number of boxed subheadings (e.g., "Writing to reflect audience, purpose, and task"). **Standards (I)** specific to writing in particular text types—narrative, informative and explanatory text, and argument—are lettered and follow in a separate section. In kindergarten through grade 5, writing arguments takes the form of opinion writing, hence the parenthetical notation next to "Arguments" in those grades/bands.

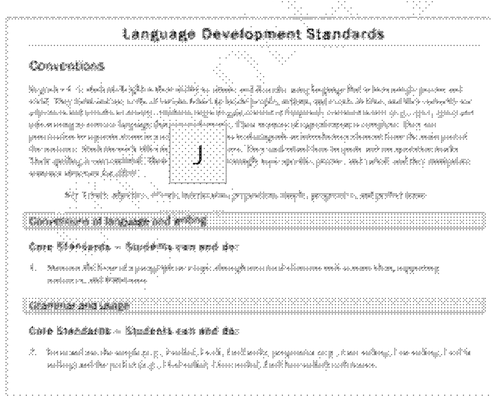


Speaking and Listening

Cross-cutting **Core Standards**, which are numbered and apply to speaking and listening in many situations, are grouped with lettered **Standards**, which set requirements for speaking and listening in key communication (e.g., "Presentation of Ideas and Information").

Language Development

This strand is organized differently in the ELA and history/science documents. The ELA strand comprises two full sections: Conventions and Vocabulary. Each section includes numbered **Core Standards** organized under a number of boxed subheadings (e.g., "Mechanics") and introduced by a brief summative paragraph and list of **key terms (J)** intended to be taught explicitly in grade-appropriate ways. ELA Vocabulary consists of three subsections—determining the meaning of words, understanding the nuances of words, and acquiring vocabulary—under each of which numbered Core Standards appear. Language Development in the history/science document consists of the summative paragraphs for Conventions and all of the Vocabulary section found in ELA except for nuances in word meaning.

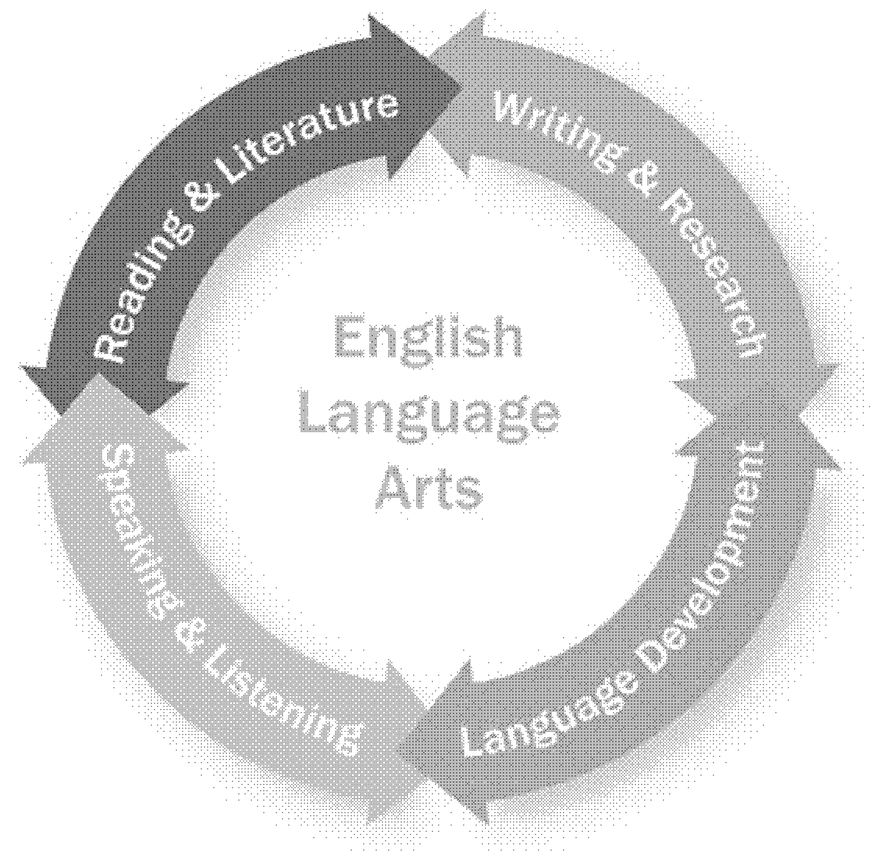


Focus for Instruction

Beginning with grade 4, a page summarizing grade-level responsibility, including grade-specific areas of focus, is provided to help distinguish responsibilities within multiyear bands.

English Language Arts

Kindergarten



Mix of Key Text Types for Kindergarten

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue and brief familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[4]

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

Put Me in the Zoo by Robert Lopshire (1960)

"Mix a Pancake" by Christina Rosetti (1986)

Wouldn't You?" by John Ciardi (1986)

Illustrative Informational Texts

My Five Senses by Aliki (1962)

Read Alouds:

Amazing Whales! by Sarah L. Thomson (2005)

The Year at Maple Hill Farm by Alice and Martin Provensen (1978)

[4] See Appendix B for other texts illustrative of Kindergarten-Grade 1 text complexity. This list includes read-alouds.

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Reading and Literature Standards[5]

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell key details and information drawn from the text.
2. Explain the subject of the text or the problem the characters face.
3. Answer questions about characters and events that take place in the text.

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

Narratives, Drama, and Poetry

a. retell the beginnings, middles, and endings of stories
b. ask and answer questions about details of a text
c. identify the problems that characters face in a story and the lessons learned
d. identify the feelings of characters and the reasons for their actions
e. differentiate between realistic and fantastical elements within a story

Informational Text

a. restate key information (e.g., events, subject, ideas) from a text
b. ask and answer questions about details of a text

Reading Foundations

Print Concepts

1. Students demonstrate understanding of the organization and basic features of print.
   a. identify basic features and conventions of books and other written texts (e.g., front cover, back cover, title, author)
   b. understand that print is left to right, top to bottom, and page by page
   c. understand that words are separated by spaces in print
   d. recognize and name all upper- and lowercase letters of the alphabet

Linguistic Awareness

2. Students gain awareness of spoken words, syllables, and phonemes.
   a. recognize, recite, and produce rhyming words
   b. count, pronounce, blend, and segment syllables in spoken words
   c. recognize, blend, and segment onset and rimes of spoken words [/*g*/ - /*oat*/, /*bl*/ - /*ock*/]
   d. count or place tokens for individual words in spoken phrases or simple sentences
   e. orally blend and segment individual phonemes in simple, one-syllable words
   f. demonstrate phonemic awareness by isolating and pronouncing the initial and final phonemes (sounds) in three-phoneme /CVC/ words without consonant blends (e.g., /*road*/, /*save*/, /*ham*/)
   g. add or substitute individual phonemes in simple, one-syllable words to make new words (e.g., /*at*/ → /*sat*/ → /*mat*/ → /*map*/)

[5] The expectation is that students can fulfill these standards with texts they read independently as well as texts that are read aloud to them.

Observing craft and structure

Core Standards — Students can and do:

4. Identify the meanings of words and phrases as they are used in the text.
5. Identify important parts or sections of texts.
6. Compare and contrast characters or events from different stories.

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

Narratives, Drama, and Poetry

a. identify words and phrases that suggest feelings or appeal to the senses
b. identify similarities in beginning and ending sounds of words in children's poems and songs
c. identify parts of a story and parts of a poem as well as sections of informational picture books and tell how they are different
d. identify common characteristics of folktales and fairy tales, including their use of rhyme, rhythm, and repetition
e. participate (e.g., react, speculate, read along, act out) when familiar texts are read aloud
f. compare and contrast characters or events from different stories written by the same author or written about similar subjects

Informational Text

a. identify basic text features and what they mean, including titles and subtitles, table of contents, and chapters

Reading Foundations, continued

Phonics and Word Recognition

3. Students know and apply grade-level phonics and word analysis skills in decoding words.

a. demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant
b. identify which letters represent the five major vowels and know the long and short sound of each
c. blend letter-sounds to decode short-vowel CVC words (e.g., *cat*, *mop*, *sun*)
d. read at least 25 very high frequency words by sight (e.g., *of*, *to*, *he*, *she*, *is*, *do*, *does*)

Developing Fluency

4. Students read with sufficient accuracy and fluency to support comprehension.

a. read rebus and preprimer texts with purpose and understanding
b. demonstrate increased accuracy and fluency on successive readings of a text

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Use text illustrations to predict or confirm what the text is about.
8. Identify words in a text that link ideas and events together.
9. Identify who is telling a story or providing information in the text.

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

Narratives, Drama, and Poetry

a. use pictures, illustrations, and context to make predictions about and confirm story content
b. identify words in a story that link events together (e.g., *first/second*, *then*, *next*, *before/after*, *later*, *finally*)
c. identify who is the speaker in a story or poem

Informational Text

a. identify words that link ideas together (e.g., *also*, *in addition*, *for example*, *but*)
b. identify the author and sources of information when provided by the text

Developing habits for reading text

Core Standards — Students can and do:

10. Begin to read independently and/or with a partner, sustaining effort necessary to build understanding.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, add details to strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

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

Narratives

a. establish a situation in time and/or place
b. recount several loosely linked actions in a short, familiar event, controlling for chronological order
c. provide a reaction to what happened

Informative and Explanatory Texts

a. establish the topic in a title or first sentence
b. supply facts and information relevant to the topic

Arguments (opinions)

a. introduce the topic directly, or use the title of a book when writing about a text
b. express preferences or opinions (e.g., *My favorite book is . . .*) relevant to the topic
c. provide a reason for preference or opinion (e.g., *It reminded me of when I met my friend Carlos*)
d. use linking words that express causality (e.g., *I like . . . because . . .*)

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in group activities requiring speaking and listening.
2. Listen closely to and sustain attention on texts read aloud as well as other sources of information presented orally, visually, or multi-modally and confirm understanding by restating the information and answering pertinent questions.

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

Classroom discussions and participating productively

a. initiate and participate in conversations with peers and adults through multiple exchanges, attending to the comments of others
b. confirm understanding by restating information or answering questions about what has been discussed
c. ask questions to get information, ask for help, or clarify something that is not understood
d. follow norms for conversation, such as listening to others and taking turns to speak

Exchanging information and speaking effectively

Core Standards — Students can and do:

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

3. Share experiences and ideas that demonstrate an awareness of their listeners.
4. Speak audibly and clearly.

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

Presentation of ideas and information

a. describe people, places, things, and events with relevant facts and examples
b. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

Language Development Standards

Conventions

In kindergarten, students learn to form letters and words in print and to relate sounds (phonemes) to one or more letters. They understand the notion of a sentence, that a sentence performs one of a few basic functions (make a statement, ask a question, or issue a command), and that end punctuation can signal the sentence's function or intensity. With prompting and assistance, they form and expand basic sentences in order to express thoughts, beginning the sentence with a capital letter. Students have a sense of what a noun is, of what singular and plural nouns are, and of how plural nouns are often formed. They also know how to use the most frequently occurring prepositions.

Key Terms: exclamation point, capital/uppercase and lowercase letter, singular and plural noun, period, punctuation, question mark, sentence

Conventions of language and writing

Core Standards — Students can and do:

1. Print all upper- and lowercase letters.
2. Write a letter or letters for each consonant and short-vowel sound (phoneme).

Grammar and usage

Core Standards — Students can and do:

3. Produce and expand complete sentences in shared writing and language activities.
4. Use and understand question words (e.g., *what, where, when, who, which, how*).
5. Form regular plural nouns by adding /s/ or /es/ (e.g., *dog, dogs; wish, wishes; baby, babies*).
6. Demonstrate understanding of the most frequently occurring prepositions (e.g., *to/from, in/out, on/off, for, of, by, with*).

Mechanics

Core Standards — Students can and do:

7. Capitalize the first word in a sentence and the pronoun *I*.
8. Identify end punctuation, including periods, question marks, and exclamation points.

9. Spell simple words phonetically using knowledge of sound-letter relationships.

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In kindergarten, students learn about words in terms of like versus unlike and "similar but not quite the same," using objects and movements as aids. They learn to use descriptive language to distinguish one object from another and order and position words to describe sequences and spatial relationships. They acquire new words through interactive language use, including informal talk, discussion, listening to and responding to texts read aloud as well as by being taught the words directly.

Determining the meaning of words

Core Standards — Students can and do:

1. Sort common objects into categories (e.g., shapes, foods).

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

2. Act out the meaning of verbs describing the same general action (e.g., *walk, march, strut, prance*) to gain a sense of their different meanings.
3. Demonstrate understanding of common adjectives by relating them to their opposites (antonyms).
4. Use common adjectives to distinguish objects (e.g., the *small blue* square, the *shy white* rabbit).

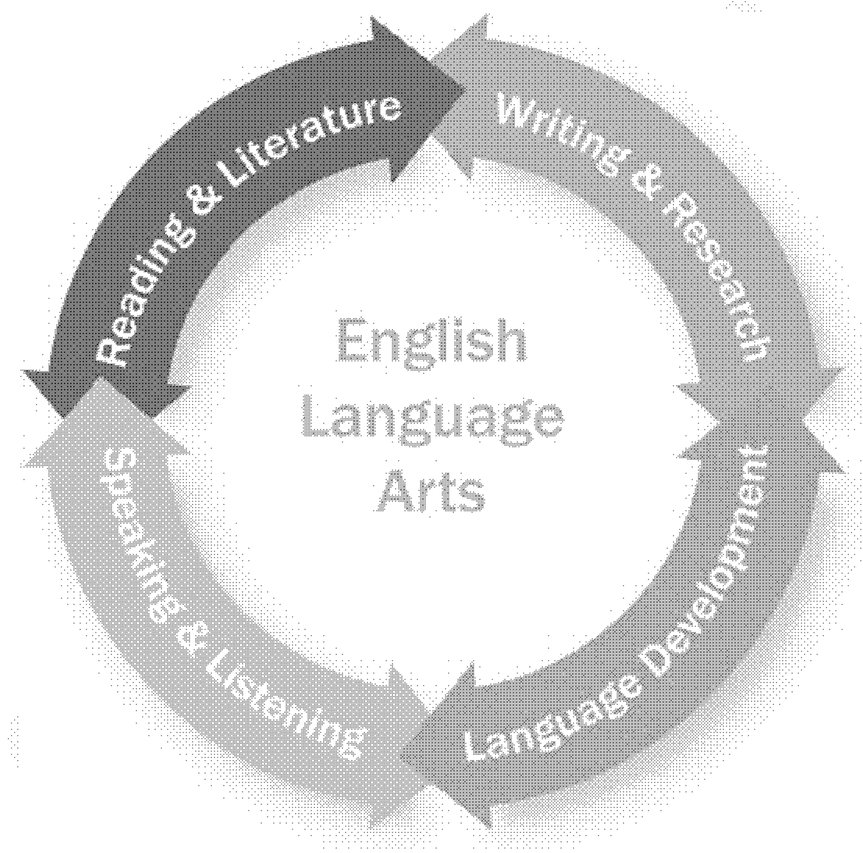
Acquiring vocabulary

Core Standards — Students can and do:

5. Demonstrate meaning of new vocabulary taught directly and gained through conversations and hearing texts read aloud.
6. Demonstrate understanding of words that express order and position (e.g., *first, middle, last; before, after; under, over*).

English Language Arts

Grade 1



Mix of Key Text Types for Grade 1

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue and brief, familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[7]

Green Eggs and Ham by Dr. Seuss (1960)

Frog and Toad Together by Arnold Lobel (1971)

Henry and Mudge: The First Book of Their Adventures by Cynthia Rylant, illustrated by Suçie Stevenson (1987)

"Halfway Down" by A. A. Milne (1924)

"It Fell in the City" by Eve Merriam (1986)

Read alouds:

Little House in the Big Woods by Laura Ingalls Wilder, illustrated by Garth Williams (1932)

Zin! Zin! Zin! a Violin by Lloyd Moss, illustrated by Marjorie Priceman (1995)

Illustrative Informational Texts

A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (text: 1960/illus: 2001)

What Do You Do With a Tail Like This? by Steve Jenkins & Robin Page (2003)

"Our Good Earth" in *National Geographic Young Explorer*, April (2009)

Read alouds:

Follow the Water from Brook to Ocean by Arthur Dorros (1991)

Living Sunlight: How Plants Bring the Earth to Life by Molly Bang & Penny Chisholm, illustrated by Molly Bang (2009)

[7] See Appendix C for other texts illustrative of Kindergarten-Grade 1 text complexity. This list includes read-alouds.

Reading and Literature Standards[8]

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell key details and information drawn from the text.
2. Explain the subject of the text or the problem the characters face.
3. Answer questions about characters and events that take place in the text.

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

Narratives, Drama, and Poetry

a. retell the beginnings, middles, and endings of stories
b. ask and answer questions about details of a text
c. identify the problems that characters face in a story and the lessons learned
d. identify the feelings of characters and the reasons for their actions
e. differentiate between realistic and fantastical elements within a story

Informational Text

a. restate key information (e.g., events, subject, ideas) from a text
b. ask and answer questions about details of a text

Reading Foundations

Linguistic Awareness

1. Students gain awareness of spoken words, syllables, and phonemes.
   a. aurally distinguish long from short vowel sounds in spoken single-syllable words (e.g., */cap/* vs. */cape/*, */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*, *-es*, *-ed*, *-ed*, *-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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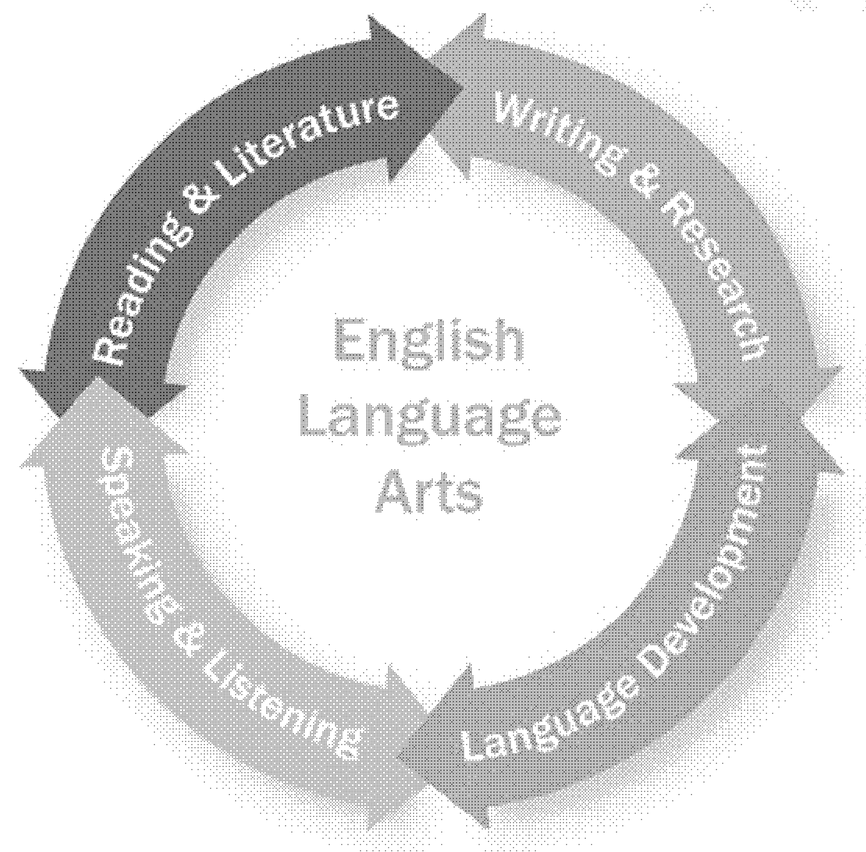
English Language Arts

Grade 2



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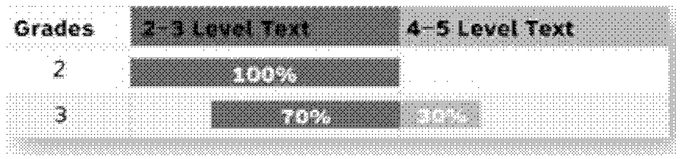
Required Text Complexity by Grade

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



While advancing through the grades, students must engage with texts of steadily increasing complexity.

- **In grade 2**, students focus on reading texts in the 2–3 grade band level with scaffolding likely required for texts at the high end of the range.

Determining Text Complexity for Grades 2–3

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts[10]	Quantitative Measures of Texts
• *Structure:* Explicit, simple, conventional; simple graphic representations are supplementary to meaning; texts are relatively short • *Purpose:* Single; explicitly stated • *Style and Language:* Familiar, accessible, plain; few literary devices; mostly clear, everyday language; limited use of Tier 2 and 3 words and figurative language • *Richness:* A few ideas/concepts; concrete; low information density • *Relationships:* A few connections; explicit • *Knowledge Demands:* Ability to handle simple themes and fantastical elements as well as draw upon common, everyday experiences; general background knowledge and familiarity with genre conventions required; some everyday and general content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

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

Mix of Key Text Types for Grade 2

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue, scenes, and brie, familiar scenes.*	*At this level, includes nursery rhymes and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[11]

Crow Boy by Taro Yashima (1955)

The Stories Julian Tells by Ann Cameron (1981)

Tops and Bottoms by Janet Stevens (1995)

"Grandpa's Stories" by Langston Hughes (1958)

"Weather" by Eve Merriam (1969)

Read alouds:

The Cricket in Times Square by George Selden, illustrated by Garth Williams (1960)

"Fireflies" by Paul Fleischman, illustrated by Eric Beddows (1988)

Illustrative Informational Texts

Maps & Globes by Jack Knowlton, pictures by Harriet Barton (1985)

Sunshine Makes the Seasons by Franklyn M. Branley (1985)

From Seed to Plant by Gail Gibbons (1991)

Boy, Were We Wrong About Dinosaurs by Kathleen V. Kudlinski, illustrated by S.D. Schindler (2005)

[11] See Appendix B for other texts illustrative of Grades 2-3 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell what the text says explicitly and make inferences required to understand the text.
2. Identify the lessons or topics of the text and the key details that support them.
3. Describe in detail a specific character, event, or topic in the text.

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

Narratives, Drama, and Poetry

a. ask and answer clarifying questions (e.g., how, why, where, when, who, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
b. identify or infer the moral or lesson in well-known stories, fables, folktales, or myths
c. describe how major events in a story often lead from problem to solution
d. examine a specific incident in a story, narrative, or drama in depth and establish when, where, and why it occurs
e. describe characters based upon what they say and do

Informational Text

a. accurately restate the key information provided by the text
b. ask and answer clarifying questions (e.g., how, why, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
c. identify the main idea and supporting details and facts in a text
d. explain the topic of each paragraph in a multi-paragraph text
e. identify specific events in historical or scientific texts and discuss what happened, as well as where, when, and why it happened, according to facts taken from the text

Reading Foundations

Phonics and Word Recognition

1. Students know and apply grade-level phonics and word analysis skills in decoding words.

a. know the common spelling-sound correspondences for consonants (e.g., *wr-*, *sh*, *-ck*, *-ll*)
b. know vowel digraph and final-e conventions for representing long vowels
c. know spelling-sound correspondences for diphthongs and other common vowel teams (e.g., *loud*, *cow*, *look*, *loop*, *boy*, *boil*)
d. use knowledge of phonics and spelling conventions to decode regularly spelled one-syllable words (e.g., *sick*, *march*, *sight*, *slice*, *bake*, *spring*)

Observing craft and structure

Core Standards — Students can and do:

4. Explain the meanings of words and phrases as they are used in the text.
5. Gain familiarity with different ways of presenting stories and information in text.
6. Compare and contrast different versions of the same story or informational texts on the same subject.

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

Narratives, Drama, and Poetry

a. recognize sensory details and how they are used to describe events, feelings, and objects
b. describe the different ways poets use rhyme, rhythm, and sensory images to convey a topic or message
c. identify repetitions in phrases, refrains, or sounds in poems and songs
d. describe story elements, including characters, setting, the problem, and how it is resolved
e. discuss stories written by the same author about similar characters or compare different versions of similar well-known tales and myths from various cultures

Informational Text

a. locate key words, facts, or other details using features of texts (e.g., captions, headings, glossaries, indexes, electronic menus, and icons)
b. distinguish between writing that is based on real events and writing that is based on fantasy or fictional events
c. combine information from two different parts of a text and identify how they are related (e.g., chronology, causation)
d. after reading two passages on the same subject, combine the information to more fully describe a topic

Reading Foundations, continued

Developing Fluency

2. Students read with sufficient accuracy and fluency to support comprehension.

a. demonstrate increased accuracy, fluency, and expression on successive readings of a text
b. use context to confirm or self-correct word recognition and understanding, rereading as necessary
c. read alone or with a partner at least 20 minutes each day, in school or out

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Locate and use information from graphs, illustrations, and electronic sources.
8. Identify and understand words and phrases that indicate logical relationships.
9. Identify who is telling the story or providing information at any given point in the text.

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

Narratives, Drama, and Poetry

a. efficiently navigate stories in print and electronic text and explain how images and illustrations connect to and clarify the content
b. identify who is telling the story or who is speaking in a drama

Informational Text

a. use information from visual elements of print and electronic texts (e.g., graphs, maps, charts, illustrations, photographs, diagrams) and explain how they help a reader understand the text
b. identify words (e.g., *such as*, *because*, *therefore*, *in order to*, *since*) that logically connect ideas in sentences and paragraphs

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding text.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[12]

Narratives

a. establish a situation in time and/or place that is appropriate for the sequence of events to follow
b. recount a single well-elaborated event or sequence of events, managing chronological sequence with temporal words, phrases, and clauses
c. tell what the narrator thought or felt
d. include dialogue if appropriate and specific details
e. provide closure through reaction, commentary, or summation

Informative and Explanatory Texts

a. produce a brief introduction
b. create an organizational structure that presents similar information together, frequently patterned after chapter book headings or picture books
c. use adequate and specific facts and definitions to develop points
d. use linking words, such as *also*, *another*, *and*, and *more*, to connect ideas within categories of information, and headers to signal groupings
e. include a concluding sentence or section

Arguments (opinions)

a. introduce the topic or book(s) directly
b. state opinion(s) relative to the topic
c. provide reasons for opinions and details to support them
d. create a list-like structure for organization
e. use words to link and organize opinions and reason(s) (e.g., *because*, *another*, *and*, *also*)
f. refer to the text(s) when writing about literature
g. close with a concluding statement or recommendation

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in small groups and as a class, engaging in a series of oral exchanges about texts and topics.

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

2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by paraphrasing the information.

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

Classroom discussions and participating productively

a. engage in conversations on familiar topics
b. paraphrase the key information or ideas of others presented orally or through other media
c. inquire about oral or visual presentations to deepen understanding or clarify comprehension
d. link additions to conversation to the previous remarks of others
e. participate productively by listening politely to the ideas of others, taking turns speaking, and extending their ideas in light of discussions

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences and ideas, thinking about the needs of their listeners.
4. Speak audibly and clearly at an understandable pace.

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

Presentation of ideas and information

a. recount stories or experiences with descriptive details by answering who, what, where, when, how, and why questions about them
b. report on a topic, including appropriate facts and details
c. use appropriate tone to express ideas, feelings, and needs clearly
d. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

Language Development Standards

Conventions

In grade 2, students create sentences of expanding length and complexity, though their control over these sentences is likely to be imperfect. Their command of noun and verb formation extends to common irregular forms. Students capitalize correctly in most situations. Their use of punctuation has grown to include commas in greetings and closings of letters as well as apostrophes to form contractions and to signal possession. Their spelling is increasingly conventional, and they now consult references, such as beginning dictionaries, to aid them when needed.

Key Terms: apostrophe, contraction, regular and irregular nouns and verb, possessive

Grammar and usage

Core Standards — Students can and do:

1. Generate and expand sentences with embedded, dependent, or conjoined clauses (e.g., *After we came home from school, I fed the gerbil and my sister cleaned the cage*).
2. Form common irregular plural nouns (e.g., *feet, children, teeth, mice, fish, women*).

3. Form the past tense of common irregular verbs (e.g., *sat, hid, told*).

Mechanics

Core Standards — Students can and do:

4. Capitalize holidays, product names, geographic names, and important words in titles.
5. Use commas in greetings and closings of letters.
6. Use apostrophes to punctuate contractions and to form common possessives.
7. Use conventional spelling for high-frequency and other studied words.
8. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge; boy* → *boil; paper* → *copper*).
9. Use spelling rules for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).
10. Consult reference materials, including beginning dictionaries, to check and correct spellings.

Vocabulary

In grade 2, students use a repertoire of strategies for dealing with unknown words. They can analyze the word itself, consider how it is used, consult reference materials, use the components of a compound word as clues to the word's meaning, or employ some combination of these strategies to determine or clarify word meanings. They figure out which meaning of a multiple-meaning word is most likely intended in a particular circumstance, and they differentiate among the connotations of related verbs and adjectives. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly.

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - identifying its base word when it has affixes (e.g., *happiness, finally, grimy, busily*)
   - determining how it is used in a sentence when reading, including whether it names or describes a thing or an action
   - consulting reference materials, including glossaries and beginning dictionaries, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Explain the meaning of grade-appropriate compound words (e.g., *birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark*).

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

4. Distinguish among related verbs (e.g., *toss, throw, hurl*) to gain a sense of their shadings of meaning.
5. Distinguish among related adjectives (e.g., *thin, slender, skinny, scrawny; irritated, mad, angry, furious*) to gain a sense of their shadings of meaning.

Acquiring vocabulary

Core Standards — Students can and do:

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

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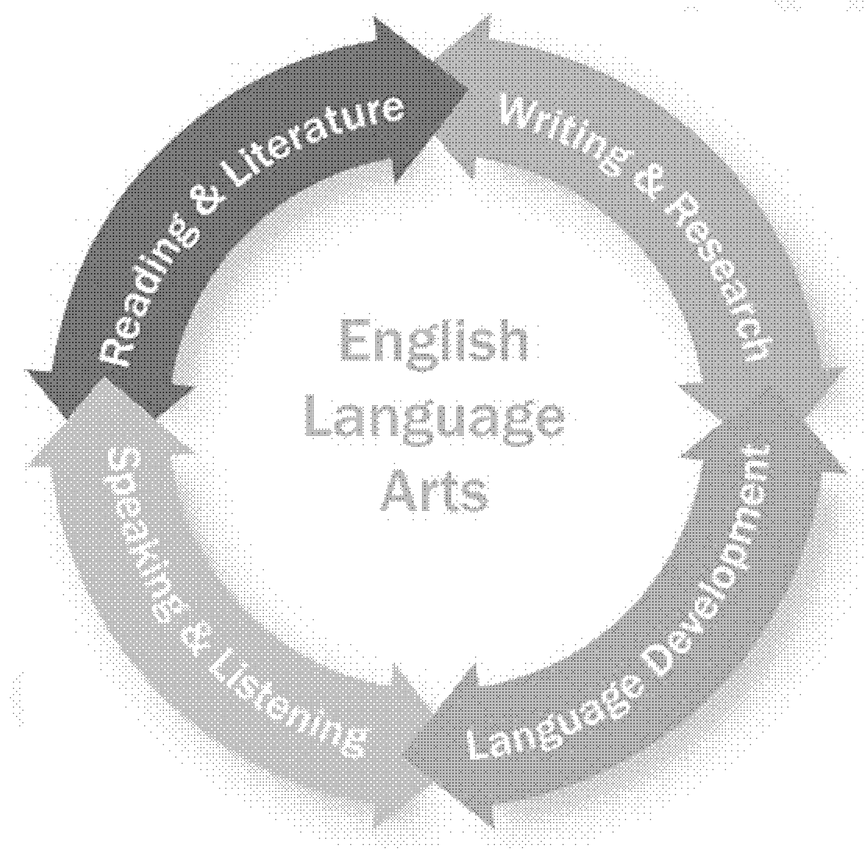
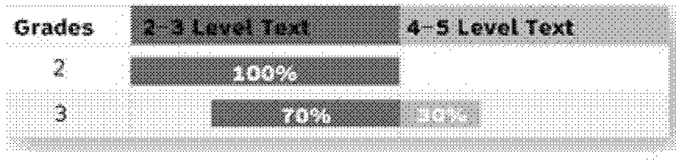
English Language Arts

Grade 3



Required Text Complexity by Grade

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



While advancing through the grades, students must engage with texts of steadily increasing complexity.

- **In grade 3**, students focus on reading texts in the 2–3 grade band level text (70 percent) independently and are introduced to texts in the 4–5 grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 2–3

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts[13]	Quantitative Measures of Texts
• *Structure:* Explicit, simple, conventional; simple graphic representations are supplementary to meaning; texts are relatively short • *Purpose:* Single; explicitly stated • *Style and Language:* Familiar, accessible, plain; few literary devices; mostly clear, everyday language; limited use of Tier 2 and 3 words and figurative language • *Richness:* A few ideas/concepts; concrete; low information density • *Relationships:* A few connections; explicit • *Knowledge Demands:* Ability to handle simple themes and fantastical elements as well as draw upon common, everyday experiences; general background knowledge and familiarity with genre conventions required; some everyday and general content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

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

Mix of Key Text Types for Grade 3

Narratives	Drama	Poetry	Informational Text
At this level, includes children's adventure stories, biographies, folktales, legends, fables, fantasy, realistic fiction, and myth.	*At this level, includes staged dialogue, scenes, and brief familiar scenes.*	*At this level, includes nursery rhymes, and the subgenres of narrative poems, limericks, and free verse.*	*At this level, includes books about science, history, and the arts and other nonfiction materials.*

Illustrative Texts for Narratives, Drama, and Poetry[14]

My Father's Dragon by Ruth Stiles Gannett, illustrated by Ruth Chrisman Gannett (1948)

Sarah, Plain and Tall by Patricia MacLachlan (1985)

The One-Eyed Giant (Book One of Tales from the Odyssey) by Mary Pope Osborne (2002)

"Knoxville, Tennessee" by Nikki Giovanni (1968)

"Eating While Reading" by Gary Soto (1995)

Read Alouds:

"How the Camel Got His Hump" in *Just So Stories* by Rudyard Kipling (1902)

Illustrative Informational Text

A Medieval Feast by Aliki (1983)

So You Want to Be President? by Judith St.George, illustrated by David Small (2000)

Bat Loves the Night by Nicola Davies, illustrated by Sarah Fox-Davies (2008)

Moonshot: The Flight of Apollo 11 by Brian Floca (2009)

[14] See Appendix B for other texts illustrative of Grades 2-3 text complexity.

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Retell what the text says explicitly and make inferences required to understand the text.
2. Identify lessons or topics of the text and the key details that support them.
3. Describe in detail a specific character, event, or topic in the text.

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

Narratives, Drama, and Poetry

a. ask and answer clarifying questions (e.g., how, why, where, when, who, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
b. identify or infer the moral or lesson in well-known stories, fables, folktales, or myths
c. describe how major events in a story often lead from problem to solution
d. examine a specific incident in a story, narrative, or drama in depth, and establish when, where, and why it occurs
e. describe characters based upon what they say and do

Informational Text

a. accurately restate key information provided by the text
b. ask and answer clarifying questions (e.g., how, why, and what) concerning specific details in the text and refer explicitly to parts of a text to answer these questions
c. identify the main idea and supporting details and facts in a text
d. explain the topic of each paragraph in a multi-paragraph text
e. identify specific events in historical or scientific texts and discuss what happened, as well as where, when, and why it happened, according to facts taken from the text

Reading Foundations

Phonics and Word Recognition

1. Students know and apply grade-level phonics and word analysis skills in decoding words.

a. identify and know the meaning of the most common prefixes and derivational suffixes (e.g., *un-*, *re-*, *mis-*, *-ful*, *-tion*, *-able*)
b. decode regularly spelled single-syllable and multi-syllable words (e.g., *vocabulary*, *refrigerator*, *terrible*, *frightening*)
c. read grade-appropriate irregularly spelled words by sight
d. use phonics and word analysis to identify visually new words when reading

Observing craft and structure

Core Standards — Students can and do:

4. Explain the meanings of words and phrases as they are used in the text.
5. Gain familiarity with different ways of presenting stories and information in text.
6. Compare and contrast different versions of the same story or informational texts on the same subject.

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

Narratives, Drama, and Poetry

a. recognize sensory details and how they are used to describe events, feelings, and objects
b. describe the different ways poets use rhyme, rhythm, and sensory images to convey a topic or message
c. identify repetitions in phrases, refrains, or sounds in poems and songs
d. describe story elements, including characters, setting, the problem, and how it is resolved
e. discuss stories written by the same author about similar characters or compare different versions of similar well-known tales and myths from various cultures

Informational Text

a. locate key words, facts, or other details using features of texts (e.g., captions, headings, glossaries, indexes, electronic menus, and icons)
b. distinguish between writing that is based on real events and writing that is based on fantasy or fictional events
c. combine information from two different parts of a text and identify how they are related (e.g., chronology, causation)
d. after reading two passages on the same subject, combine the information to more fully describe a topic

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Locate and use information from graphs, illustrations, and electronic sources.
8. Identify and understand words and phrases that indicate logical relationships.
9. Identify who is telling the story or providing information at any given point in the text.

Reading Foundations, continued

Developing Fluency

2. Students read with sufficient accuracy and fluency to support comprehension.

a. demonstrate increased accuracy, fluency, and expression on successive readings of a text
b. use context to confirm or self-correct word recognition and understanding, rereading as necessary
c. read at least 20 minutes each day, in school or out

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

Narratives, Drama, and Poetry

a. efficiently navigate stories in print and electronic text and explain how images and illustrations connect to and clarify the content
b. identify who is telling the story or who is speaking in a drama

Informational Text

a. use information from visual elements of print and electronic texts (e.g., graphs, maps, charts, illustrations, photographs, diagrams) and explain how they help a reader understand the text
b. identify words (e.g., *such as*, *because*, *therefore*, *in order to*, *since*) that logically connect ideas in sentences and paragraphs

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding text.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write narratives, informative and explanatory texts, and opinions that communicate to a familiar, known audience.

Conducting research

Core Standards — Students can and do:

2. Gather information from experiences or provided text sources.

Revising writing

Core Standards — Students can and do:

3. With specific guidance, strengthen writing through revision.

Using tools and technology

Core Standards — Students can and do:

4. Gain familiarity with technology and other tools to produce, revise, and edit writing.

Standards — Students can and do (by key text type):[15]

Narratives

a. set the time, indicate a location, introduce characters, or enter immediately into the story line to engage the reader
b. recount a single, well-elaborated event or a sequence of events that unfold naturally using temporal words, phrases, and clauses
c. tell what the narrator thought or felt
d. develop a focus, provide pacing, and include only relevant information
e. develop a character through the description of external behavior
f. provide descriptive details
g. employ dialogue and other narrative strategies
h. provide a satisfying conclusion that is reflective and/or that effectively ties up loose ends

Informative and Explanatory Texts

a. produce an introduction that names the topic and provides at least one general detail about it
b. create an organizational structure that presents similar information together, frequently patterned after chapter book headings or picture books
c. use adequate, relevant, and specific facts and definitions to develop points
d. logically categorize details and facts drawn from personal experience and other sources
e. use linking words, such as *also*, *another*, *and*, and *more*, to connect ideas within categories of information, and use headers to signal groupings
f. include only appropriate information
g. include a concluding sentence or section

Arguments (opinions)

a. introduce the topic or book(s) directly, and attempt to capture the reader's interest
b. state an opinion relative to the topic (e.g., *This is a good book* or *John is a good friend*)
c. provide facts and details to support the opinion
d. create a list-like organizing structure that provides reasons for the opinion
e. use appropriate words to link and organize opinions and reason(s) (e.g., *because*, *another*, *and*, *also*)
f. refer to the text(s) when writing about literature
g. provide a concluding statement, reflection, and/or recommendation

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

Speaking and Listening Standards

Listening critically and participating productively

Core Standards — Students can and do:

1. Participate productively in small groups and as a class, engaging in a series of oral exchanges about texts and topics.
2. Sustain concentration on information presented orally, visually, or multi-modally and confirm understanding by paraphrasing the information.

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

Classroom discussions and participating productively

a. engage in conversations on familiar topics
b. paraphrase the key information or ideas of others presented orally or through other media
c. inquire about oral or visual presentations to deepen understanding or clarify comprehension
d. link additions to conversation to the previous remarks of others
e. participate productively by listening politely to the ideas of others, taking turns speaking, and extending their ideas in light of discussions

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Share experiences and ideas, thinking about the needs of their listeners.
4. Speak audibly and clearly at an understandable pace.

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

Presentation of ideas and information

a. recount stories or experiences with descriptive details by answering who, what, where, when, how, and why questions about them
b. report on a topic, including appropriate facts and details
c. use appropriate tone to express ideas, feelings, and needs clearly
d. recite or read aloud poems, rhymes, songs, and stories, speaking clearly at an understandable pace

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*).

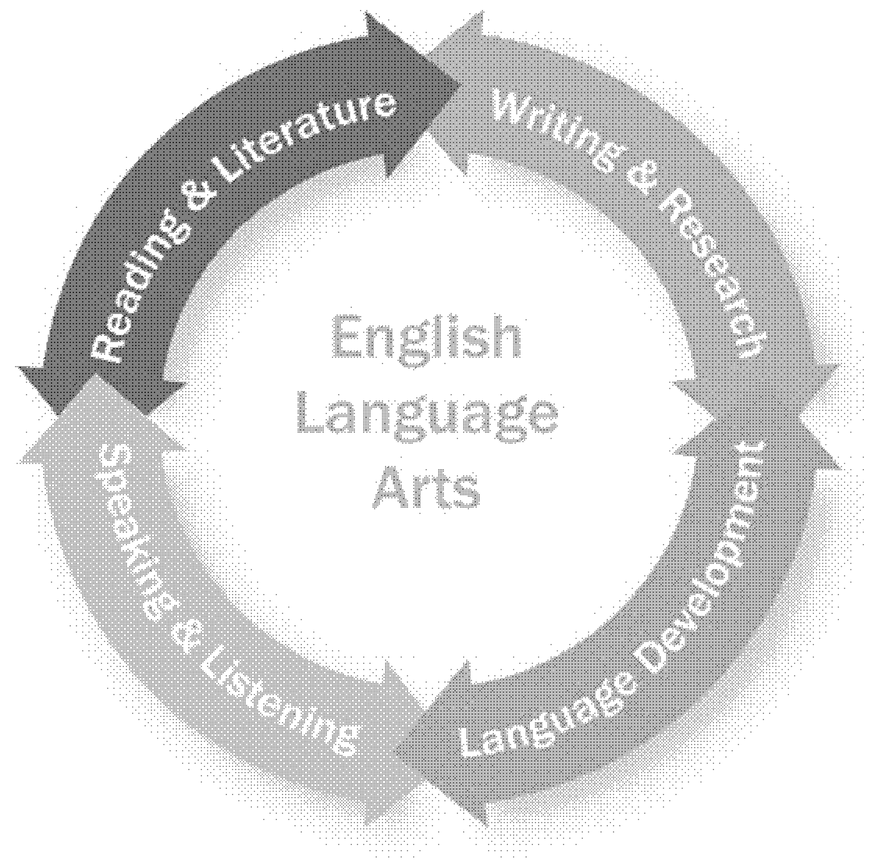
Acquiring vocabulary

Core Standards — Students can and do:

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

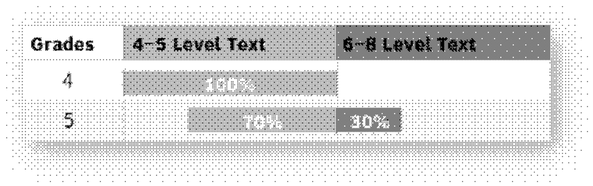
English Language Arts

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.

COPY

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*).

[21] Beck I. L., McKeown, M.G. & Kucan, L. (2002). *Bringing 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.

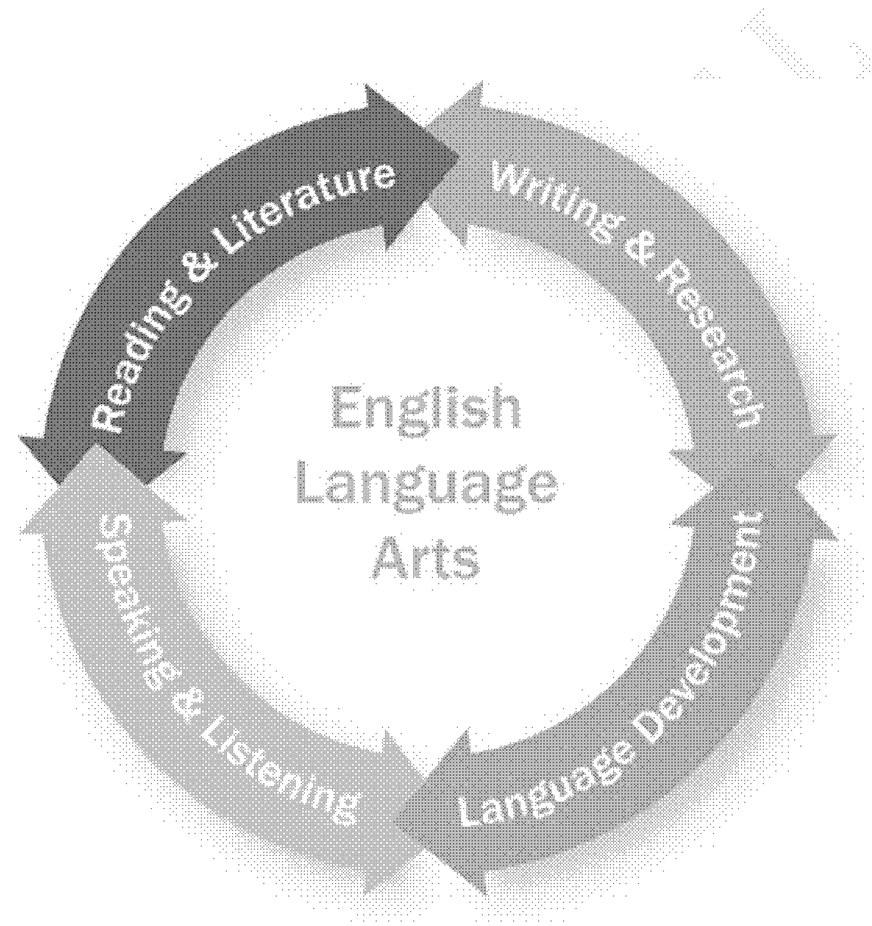
Language Development

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)

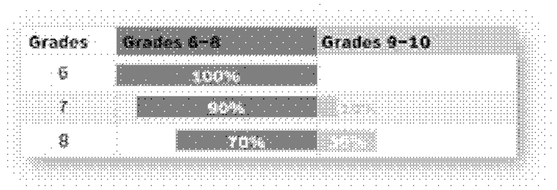
English Language Arts

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

90% 10%

Writing and Research

In grade 7, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 6-8th grade band level of complexity and content.

Speaking and Listening

In grade 7, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts; classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 7, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

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

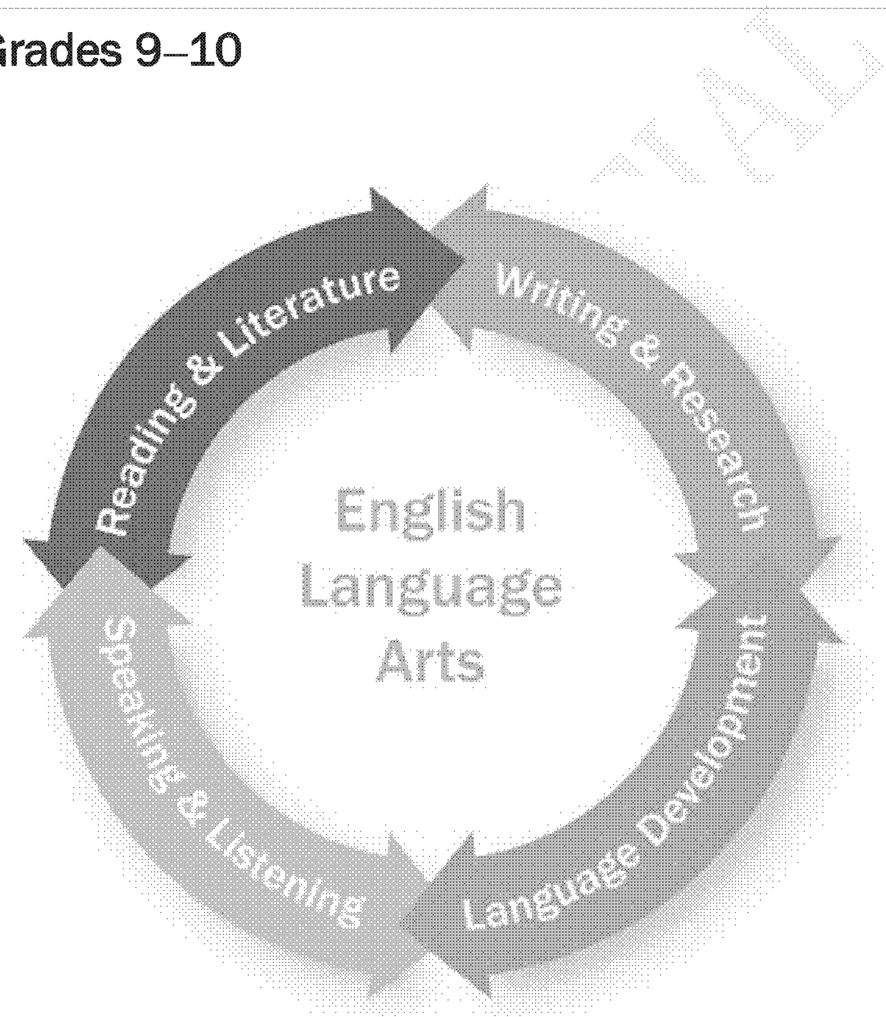
Grade 8 English Language Arts: Focus for Instruction

Reading and Literature
In grade 8, students apply the reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on reading text at the 6-8 grade band level independently as well as on sustained practice with 9-10 grade band level "stretch" texts, which may require scaffolding. • Reading standards applied to different text types • Mix of text types: Narratives, Drama, Poetry, Informational Text • **Text Complexity focus:** 70% at the 6-8 grade band level, 30% at the 9-10 grade band level
Writing and Research
In grade 8, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources. • Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument • Research, including short focused research tasks • **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 6-8th grade band level of complexity and content.
Speaking and Listening
In grade 8, students apply the core speaking and listening standards in different contexts. • Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.
Language Development

In grade 8, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.
• Vocabulary standards applied to reading, writing, speaking and listening
• **Grade-specific conventions focus:** Verb voice and mood
  • Form and use verbs in the active and passive voice (Conventions Standard #6)
  • Form and use verbs in the indicative… (Conventions Standard #7)
  • Avoid inappropriate shifts… (Conventions Standard #8)
  • Use verbs in the …voice …mood… (Conventions standard #11)

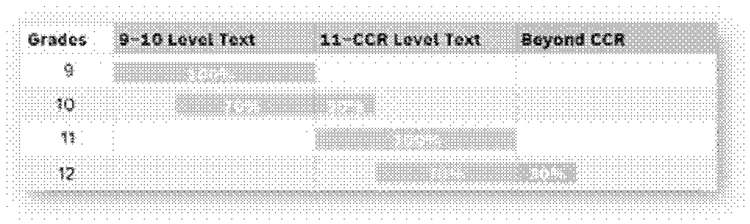
English Language Arts

Grades 9–10



Required Text Complexity by Grade

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



While advancing through grades 9–10, students must engage with texts of steadily increasing complexity.

- **In grade 9**, students focus on reading texts in the 9–10 grade band level with scaffolding likely required for texts at the high end of the range.
- **In grade 10**, students focus on reading texts in the 9–10 grade band level (70 percent) independently and are introduced to texts in the 11–CCR grade band level as "stretch" texts (30 percent), which will likely require scaffolding.

Determining Text Complexity for Grades 9–10[27]

Text complexity is determined by a mix of qualitative and quantitative measures of the text itself refined by teachers' professional judgment about the match of particular texts to particular students. The qualitative dimensions of text complexity are best understood as continua of increasing complexity rather than as representing discrete and easily defined stages. Most authentic texts will exhibit some but not all of the traits linked to a particular grade band; qualitatively assigning a text to a grade band is therefore a matter of "best fit," or determining which grade band's set of descriptors most accurately describes the text.

Qualitative Measures of Texts	Quantitative Measures of Texts
• *Structure:* Implicit, subtle; graphic representations are essential to meaning; texts of increasing length • *Purpose:* Multiple; often implicit • *Style and Language:* Demanding; many literary devices; extensive use of Tier 2 and 3 words and figurative language • *Richness:* Several ideas/concepts; abstract • *Relationships:* Several connections; implicit • *Knowledge Demands:* Ability to handle challenging themes, consider multiple perspectives, and understand experiences distinctly different from one's own; cultural and historical knowledge useful for understanding characters, settings, and allusions; extensive discipline-specific content knowledge	A study is underway with Coh-Metrix, a nonprofit research organization, to identify roughly five to seven computer-measurable dimensions of text cohesion. These dimensions, paired with a Lexile score, will yield a robust quantitative assessment of text complexity that, along with both the qualitative dimensions and professional judgment, will round out the Core Standards model of complexity.
Professional Judgment that weighs students' prior knowledge and life experiences as well as their interests, motivations, and maturity level.	

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

Mix of Key Text Types for 9–10

Narratives	Drama	Poetry	Informational Text
At this level, includes the subgenres of adventure stories, biographies, memoirs, historical fiction, mysteries, science fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels.	*At this level, includes one-act and multi-act plays both in written form and on film.*	*At this level, includes the subgenres of narrative poems, lyrical poems, free verse, odes, ballads, and epics.*	*At this level, Includes such subgenres as exposition and argument in the form of essays, speeches, opinion pieces as well as other documents and digital media sources on a range of topics.*

Illustrative Texts for Narratives, Drama, and Poetry[28]

The Odyssey by Homer (8th century B.C.E.) translated by Robert Fagles

The Grapes of Wrath by John Steinbeck (1939)

The Killer Angels by Michael Shaara (1975)

In the Time of the Butterflies by Julia Alvarez (1994)

The Glass Menagerie by Tennessee Williams (1944)

"Song" by John Donne (1635)

"The Raven" by Edgar Allen Poe (1845)

"Loveliest of Trees" by A.E. Houseman (1896)

"I Am Offering This Poem to You" by Jimmy Santiago Baca (1977)

Seminal historical texts that all students are expected to read

Illustrative Informational Texts

"Second Inaugural Address" by Abraham Lincoln (1865)**

"State of the Union Address" by Franklin Delano Roosevelt (1941)

"Remarks to the Senate in Support of a Declaration of Conscience" by Margaret Chase Smith (1950)

"Address at the March on Washington" by Martin Luther King, Jr. (1963)**

"A Quilt of a Country" by Anna Quindlen (2001)

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

Reading and Literature Standards

Grasping specific details and key ideas

Core Standards — Students can and do:

1. Read the text closely to determine what the text says explicitly and to make logical inferences from it; cite text evidence to support analyses in discussion and in writing.
2. Articulate the theses and themes and summarize how they develop over the course of the text and how they are expressed by the key details.
3. Analyze in detail how complex and multifaceted events, ideas, and characters unfold and interact over the course of the text.

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

Narratives, Drama, and Poetry

a. draw on specific details to describe how the events, characters, or setting develops over the course of the drama, narrative poem, or story
b. summarize the development of a theme and describe how that theme resonates throughout the text
c. weave together the details of texts to form a comprehensive understanding of its characters, including their overlapping or competing motivations
d. describe how the accumulation of specific phrases and images within poems contributes to a theme as a whole

Informational Text

a. demonstrate a command of the precise details of the exposition or argument, drawing on specific points to support an understanding of a part or the text as a whole
b. analyze the development of theses or explanations in texts and summarize succinctly the key relationships among ideas and supporting details

Observing craft and structure

Core Standards — Students can and do:

4. Interpret the meanings of words and phrases, including connotative and figurative meanings, and explain how specific word choices shape the meaning and tone of the text.
5. Analyze the structure of complex text and its parts, including how specific sentences, paragraphs, and larger portions build on each other and contribute to the whole of the text.
6. Compare and contrast the content and style of two or more texts written on similar topics or themes.

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

Narratives, Drama, and Poetry

a. analyze how the precise choice of words and phrases creates vivid images and sets the tone, mood, and theme of the text; compare the impact of words selected by the author to similar words with different connotations

b. explain how authors manipulate time (e.g., flashbacks, foreshadowing, pacing) to create suspense, mystery, or humor
c. evaluate how playwrights use soliloquies to portray the internal thinking and feeling of characters
d. compare and contrast similarities and differences in styles and forms of poems on a similar theme or topic

Informational Text

a. analyze how the author uses specific words and metaphors to establish tone or to make illuminating comparisons in an argument, explanation, or description
b. explain how the author structures information or an argument to emphasize key points and advance a point of view
c. analyze how different authors organize and categorize similar information and describe the impact of those different approaches

Integrating information and evaluating evidence

Core Standards — Students can and do:

7. Synthesize information presented graphically or visually in print, videos, or electronic texts with the information provided by the text.
8. Follow and evaluate the logic and reasoning of the text, including assessing whether the evidence provided is sufficient to support the claims.
9. Analyze the point of view or purpose represented in the text, assessing how it shapes the content, style, and tone.

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

Narratives, Drama, and Poetry

a. explain how a story unfolds when it is told by alternating or multiple narrators with different points of view
b. analyze literature in terms of its connection to related historical and cultural events and contexts

Informational Text

a. interpret complex, multifaceted, quantitative, or technical information presented in maps, charts, illustrations, graphs, and time lines
b. provide an account of an author's precise claims, including how specific assertions are defined and distinguished from opposing statements
c. analyze the explicit and implicit premises of an argument and determine if the conclusions reached are logically justified by the evidence presented in the text
d. compare how different authors construct and develop different points of views or perspectives on similar events or issues by assessing their assumptions, evidence, and reasoning

Developing habits for reading complex text

Core Standards — Students can and do:

10. Develop the habit of reading independently and productively, sustaining concentration and stamina to read increasingly demanding texts.

Writing and Research Standards

Writing to reflect audience, purpose, and task

Core Standards — Students can and do:

1. Write informative and explanatory texts and arguments that match purpose to task and address familiar as well as more distant, unknown and general audiences (e.g., peers, elected officials and policy makers, community members).

Conducting research

Core Standards — Students can and do:

2. Demonstrate proficiency at performing short, focused research projects as well as more sustained inquiries that demonstrate an increasing command of the subject under investigation.
3. Assemble evidence independently from authoritative and credible print and digital sources.
4. Assess the credibility, reliability, consistency, and accuracy of the information and sources gathered and determine the strengths and limitations of each source and avoiding over-reliance on any one source.
5. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.
6. Cite print or electronic sources correctly and document quotations, paraphrases, graphics, and other information using a standard format.

Revising writing

Core Standards — Students can and do:

7. Strengthen writing through revision, editing, or beginning again to ensure to ensure logical organization, precision of word choice, and coherence.

Using tools and technology

Core Standards — Students can and do:

8. Use technology and other tools to produce, revise, and distribute writing, as well as to interact online with others about writing, including responding to and providing feedback.

Developing proficiency in a range of writing

9. Create writing over extended timeframes (time for reflection and revision) and shorter timeframes (a single sitting or a day or two), responding to specific sources.

   Focus by grade level:

   Grade 9: Analyzing the content of literary or informational sources at the 9-10 grade band level of text complexity and content
   Grade 10: Comparing or evaluating the contents of literary or informational sources at the 9-10 grade band level of complexity and content

Standards — Students can and do (by key text type):[29]

Narratives

By high school, students are most often using narrative writing as a technique embedded within other genres. They use narrative writing to inform and persuade. They may, for example, provide a brief anecdote to support a point made in an argument or a scenario to illustrate an explanation. In such cases, narrative writing is a technique rather than a form in itself.

Informative and Explanatory Texts

a. provide a clear and coherent introduction that establishes the subject and conveys a knowledgeable stance
b. develop a complex subject through relevant and specific facts, concrete details, quotations, or other information and examples
c. organize complex information into categories that make clear distinctions and provide headings, figures, tables, and diagrams when useful
d. employ discipline-specific and technical vocabulary and maintain a formal, objective style
e. adapt strategies to present information and explanations (e.g., if/then, extended definitions, classification, comparison/contrast, and cause/effect) and employ them to manage the complexity of a topic
f. link ideas with transitions and by varying sentence structures to express relationships between ideas and create cohesion
g. emphasize the most significant information and confirm the accuracy of key points
h. provide a conclusion that articulates the implications and significance of the information or explanation

Arguments

a. establish a substantive claim and distinguish it from alternate or opposing claims
b. support claims with logical reasons
c. provide relevant and sufficient evidence from credible sources in support of the reasons
d. explain how the evidence links to the claim
e. develop the argument in part based on knowledge of the audience (e.g., building bridges by opening with areas of agreement)
f. convey relationships between reasons, as well as between reasons and evidence, and signal alternative claims using words, phrases, and clauses (e.g., *on the other hand, however, but, nevertheless, because, therefore, in addition*).
g. maintain a formal style when appropriate to the discipline or context
h. enhance the reliability of the argument by employing strategies such as paraphrasing or quoting explicitly from a credible, authoritative source
i. provide a concluding statement or section that enhances the argument, using strategies such as articulating the implications, summing up the key factors, or weighing the evidence to support the claim

Speaking and Listening Standards

Listening closely and participating productively

Core Standards — Students can and do:

1. Participate productively in a range of structured interactions—both interpersonally and in groups—exchanging information constructively and with confidence.

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

2. Sustain concentration on complex information presented orally, visually, or multi-modally and confirm understanding by summarizing, analyzing, and elaborating on key ideas.

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

Classroom discussions and collaboration

a. come to discussions having researched, studied, and taken notes on topics or issues under study and draw upon that preparation in discussions
b. determine the key ideas as well as the tone and mood of communications presented orally or through other media
c. ask questions to test the evidence that supports a speaker's claims and conclusions presented orally or through other media
d. build on essential information from others' input and respond constructively by making cogent and verifiable comments that aid in the furthering and deepening of discussions
e. integrate multiple streams of data presented through a variety of multi-modal media into a cohesive, meaningful understanding of the information
f. support productive teamwork by identifying the comments and claims made on all sides of an issue; evaluating the degree to which each claim is supported by evidence; sifting, summarizing, and putting to use the most important ideas developed by the group; and determining what additional information, research, and tasks are required in order to move the group towards its goals

Exchanging information and speaking effectively

Core Standards — Students can and do:

3. Present information and points of view, structuring and organizing comments to support their purposes and guide the listener.
4. Vary intonation and phrasing for emphasis and effect, demonstrating command of formal English when indicated or appropriate (e.g., presenting ideas versus class discussion).

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

Presentation of ideas and information

a. organize and present complex information about situations, topics, or texts so that listeners can follow the line of thought by grouping related ideas, using transitional markers, and clarifying one's claims with evidence that is verifiable and accessible
b. align verbal (tone, phrasing, pacing) and nonverbal strategies (gestures and facial expressions) for emphasis and effect
c. make strategic use of multimedia elements and visual displays of data to enhance understanding
d. perform dramatic readings of various prose and poetry, speaking with clarity, fidelity, and responsiveness to the text, reflecting on syntax and diction for cues regarding emphasis and rhythm

Language Development Standards

Conventions

In high school, students gain a broad range of sophisticated language skills to enhance meaning, achieve stylistic effect, and create subtle links between and among ideas. They maintain parallel structure. They acquire a more conceptual understanding of usage and the limits of "rules." They use a full range of punctuation, including ellipses, semicolons,

colons, and hyphens, and have a fuller understanding of how to employ commas and dashes. They make use of a wide range of phrases and clauses for effect. They maintain a consistent style and tone, using a style manual appropriate to the discipline in which they are working to help conventionalize their writing.

Key Terms: colon, ellipses, hyphen, semicolon, parallel structure, verbal

Grammar and usage

Core Standards — Students can and do:

1. Use parallel structure in writing.
2. Consult references (e.g., *Merriam-Webster's Dictionary of English Usage*) as needed to resolve particular usage issues, particularly when the usage is contested.

Mechanics

Core Standards — Students can and do:

3. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore a light*[,] *blue suit*).
4. Use a comma, ellipses, or dash to indicate a pause or break.
5. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.
6. Use a colon to introduce a list or a quotation.
7. Observe the conventions concerning using hyphens to join words.

Word choice and style

Core Standards — Students can and do:

8. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to add variety and interest to writing.
9. Maintain consistency in style and tone.
10. Write and edit work so that it conforms to the guidelines in a style manual.

Focus by Grade-Level
Grade 9: Style (Conventions Standards #9, #10)
Grade 10: Advanced punctuation use (Conventions Standards #s 3-7)

Vocabulary

Key to students' vocabulary development is building rich and flexible word knowledge marked by multiple connections that link a word to similar words and to contexts and experiences that are related to that word—as compared to simply a definition. In high school, students continue to make use of a range of strategies to determine and clarify the meaning of unknown and multiple-meaning words. This repertoire now includes considering multiple levels of context (sentence, paragraph, and text levels) and the word's history. They habitually verify their inferences of word meanings. They interpret a wide range of figurative language found in what they read and consider its contribution to the text. Possessing a highly developed sense of the shadings among words with similar denotations,

they evaluate an author's or speaker's choice of words as well as alternatives to the words chosen. They acquire new words through interactive language use, including informal talk, discussion, reading and responding to text as well as by being taught the words directly. This includes a continuing focus on "Tier 2" words and phrases (those that commonly appear in writing but not in spoken language), "Tier 3" words and phrases (those that are specific and important to particular disciplines).

Determining the meaning of words

Core Standards — Students can and do:

1. Determine or clarify the meaning of an unknown word by using one or more of the following strategies:
   - using knowledge of roots, prefixes, and suffixes
   - using context, including syntactic and semantic clues, at the sentence, paragraph, and text levels
   - consulting reference materials, including general and specialized dictionaries and thesauruses, both print and digital
2. Determine the relevant meaning of multiple-meaning words by using context.
3. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or by looking up the word in a dictionary).
4. Interpret figurative language and analyze its role within the text.

Understanding the nuances of words (denotations and connotations)

Core Standards — Students can and do:

5. Assess and explain the merits of the choice of one word over another in reading, writing, speaking, and listening.
6. Gain a clearer sense of a word's meaning and use by comparing it to other words with similar but not identical meanings (synonyms).

Acquiring vocabulary

Core Standards — Students can and do:

7. Acquire and use a grade-appropriate vocabulary of Tier 2 words taught directly and gained through reading.
8. Acquire and use a grade-appropriate vocabulary of Tier 3 words taught directly and gained through reading.

Grade 9 English Language Arts: Focus for Instruction

Reading and Literature

In grade 9, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 9-10 grade band text independently, with scaffolding likely required for texts at the high end of the range.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 100% 9-10 Band Text

100%

Writing and Research

In grade 9, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus: Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 9-10th grade band level of complexity and content.

Speaking and Listening

In grade 9, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

Language Development

In grade 9, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

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

Grade 10 English Language Arts: Focus for Instruction

Reading and Literature

In grade 10, students apply the core reading standards to the following types of text: narratives, drama, poetry, and informational text. Students focus on learning to read 9-10 grade band text independently as well as on sustained practice with 11-CCR band "stretch" texts, which will likely require scaffolding.

- Reading standards applied to different text types
- Mix of text types: Narratives, Drama, Poetry, Informational Text
- **Text Complexity focus:** 70% 9-10 Band Text; 30% 11-CCR text

Writing and Research

In grade 10, students apply the standards in writing to the following types of text: Narrative, Informative/Explanatory, and Argument. Students perform research, including short focused research tasks. They also write over various time frames in response to specific sources.

- Writing standards applied to different text types: Narrative, Informative/Explanatory, Argument
- Research, including short focused research tasks
- **Grade-specific focus:** Students create writing over extended and shorter timeframes, responding to specific sources by analyzing the contents of literary or informational sources at the 9-10th grade band level of complexity and content.

Speaking and Listening

In grade 10, students apply the core speaking and listening standards in different contexts.

- Speaking and listening standards applied in different contexts: classroom discussion and collaboration as well as in presentations of ideas and information.

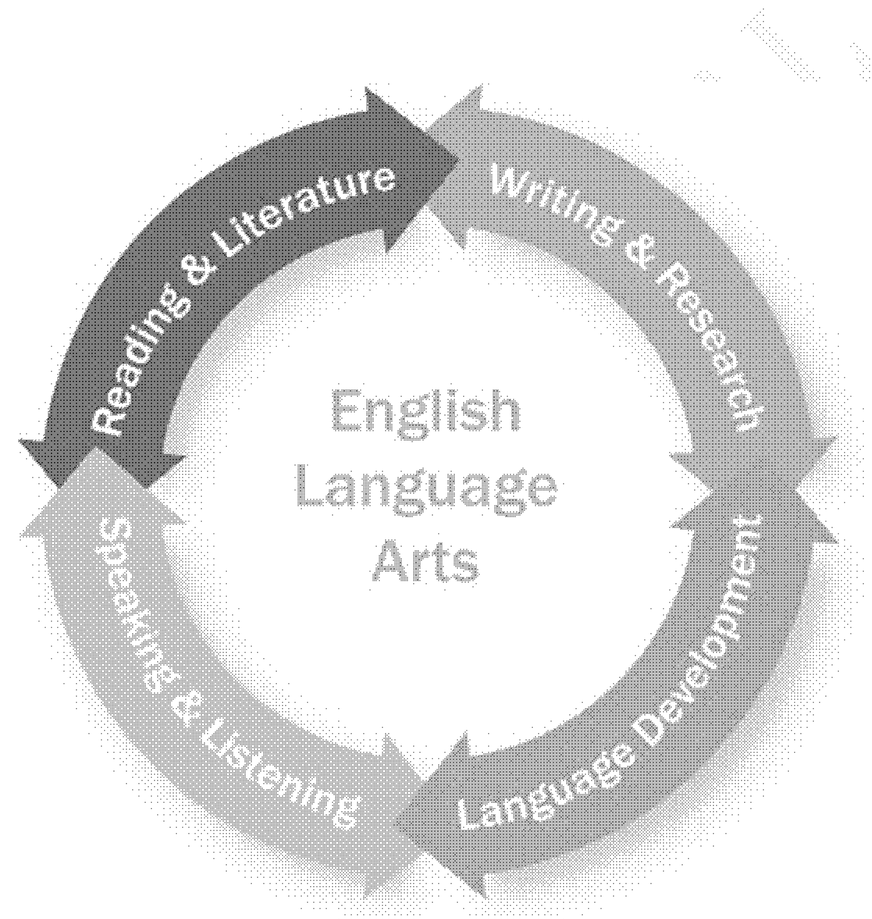
Language Development

In grade 10, students apply the language development standards by applying the core vocabulary standards to determine word meaning, understand word nuances, and acquire vocabulary and to produce writing and speaking that observes appropriate conventions.

- Vocabulary standards applied to reading, writing, speaking and listening
- **Grade-specific conventions focus:** Advanced Punctuation Use
  - Coordinate adjectives … (Conventions Standard #3)
  - Comma/dash/ellipsis… (Conventions Standard #4)
  - Semicolon … (Conventions Standard #5)
  - Colon … (Conventions Standard #6)
  - Hyphen … (Conventions Standard #7)

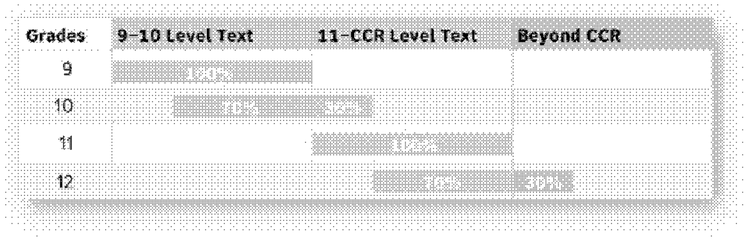
English Language Arts

Grades 11–CCR



Required Text Complexity by Grade

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



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)

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
Language Standard	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 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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[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.

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

[41] Beck, I. L., McKeown, M. & Kucan, L. (2008). *Creating robust vocabulary: Frequently asked questions and extended examples.*

APPENDIX B

Exemplars of Reading Text Complexity and Quality, ELA K–12

Selecting Text Samples

The following text samples primarily serve to exemplify the level of complexity and quality that the *Standards* require all students in a given grade band to engage with while additionally suggesting the breadth of text types that students should encounter. The choices should serve as useful guideposts in helping educators select texts of similar **complexity**, **quality**, and **breadth** for their own classrooms. The process of text selection was guided by these criteria in the following fashion:

- *Complexity*. Appendix A describes in detail a three-part model of measuring text complexity based on qualitative and quantitative indices of inherent text difficulty balanced with educators' professional judgment. In selecting texts to serve as exemplars, the work group began by soliciting contributions from teachers, educational leaders, and researchers who have experience working with students in the grades for which the texts have been selected. These contributors were asked to propose texts that they or their colleagues have used successfully with students in a given grade band. The work group made final selections based in part on whether qualitative and quantitative measures identified by the *Standards* indicated that the proposed texts were of sufficient complexity for the grade band. For those types of texts—particularly poetry and multimedia sources—for which these measures are not as well suited, professional judgment necessarily played a greater role in selection.

- *Quality*. While it is possible to have high-complexity texts of low inherent quality, the work group solicited only texts of recognized value. From the pool of submissions gathered from outside contributors, the work group selected classic or historically significant texts as well as contemporary works of comparable literary merit, cultural significance, and/or content richness.

- *Breadth*. After identifying texts of appropriate complexity and quality, the work group applied a range of secondary criteria to ensure that the samples presented in each band represented as broad a range of sufficiently complex, high-quality texts as possible. Among the factors considered were initial publication date, authorship, and subject matter.

Copyright and Permissions

For those exemplar texts not in the public domain, the work group is seeking permission from the rights holders for limited use by the Common Core State Standards Initiative of the National Governors Association.

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Please note that these texts are included solely as exemplars in support of the *Standards*. Any additional use of those texts that are not in the public domain, such as for classroom use or curriculum development, requires independent permission from the rights holders. The texts may not be copied or distributed in any way other than as part of the overall Common Core Standards Initiative document.

Organization and Excerpting

Texts are organized first by category, with narrative texts followed by drama and poetry and then the informational texts. Within each category, the texts are organized by date, usually of first publication, beginning with the oldest and ending with the most recent. In some cases, the date of any given work may be open to debate.

The excerpts given here are meant to stand in for the full work in most instances. Works that are not in the public domain may be represented by short excerpts or snippets while the work group awaits permission from the rights holders for full use.

Media Texts

Selected excerpts are accompanied by annotated links to related media texts available online at the time of the publication of this document.

Kindergarten to Grade 1 Exemplar Texts

Narratives

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

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

The Fire Cat by Esther Averill (1960)

Green Eggs and Ham by Dr. Seuss (1960)

Put Me in the Zoo by Robert Lopshire (1960)

Frog and Toad Together by Arnold Lobel (1971)

Owl at Home by Arnold Lobel (1975)

Henry and Mudge: The First Book of Their Adventures by Cynthia Rylant, illustrated by Suçie Stevenson (1987)

Poppleton in Winter by Cynthia Rylant, illustrated by Mark Teague (2001)

Cowgirl Kate and Cocoa by Erica Silverman, illustrated by Betsy Lewin (2005)

Poetry

"Mix a Pancake" by Christina G. Rossetti (1893)

"Singing-Time" by Rose Fyleman (1919)

"Halfway Down" by A. A. Milne (1924)

"As I Was Going to St. Ives" by Unknown, collected by Peter and Iona Opie (1951)

"Drinking Fountain" by Marchette Chute (1957)

"Poem" by Langston Hughes (1958)

"Wouldn't You?" by John Ciardi (1961)

"In the Falling Snow" by Richard Wright (1973)

"Covers" by Nikki Giovanni (1980)

"It Fell in the City" by Eve Merriam (1985)

"Celebration" by Alonzo Lopez (1993)

"Two Tree Toads" by Jon Agee (2009)

Informational Texts

A Tree Is a Plant by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)

My Five Senses by Aliki (1962)

Starfish by Edith Thacher Hurd, illustrated by Robin Brickman (1962)

What Do You Do With a Tail Like This? by Steve Jenkins & Robin Page (2003)

From Seed to Pumpkin by Wendy Pfeffer, illustrated by James Graham Hale (2004)

Mouse in a Meadow by John Himmelman (2005)

Petting Zoo by Dorling Kindersley (2005)

Meet the Meerkat by Darrin Lunde, illustrated by Patricia J. Wynne (2007)

"The Forest in Spring" in National Geographic Young Explorer! April 2009 (2009)

"Our Good Earth" in National Geographic Young Explorer, April 2009 (2009)

Read-Aloud Narratives

The Wonderful Wizard of Oz by L. Frank Baum (1900)

Little House in the Big Woods by Laura Ingalls Wilder, illustrated by Garth Williams (1932)

Mr. Popper's Penguins by Richard Atwater (1938)

Finn Family Moomintroll by Tove Jansson, translated by Elizabeth Portch (1948)

A Story A Story by Gail E. Haley (1970)

The Paper Crane by Molly Bang (1985)

Read-Aloud Poetry

"The Owl and the Pussycat" by Edward Lear (1871)

"April Rain Song" by Langston Hughes (1932)

"The Fox's Foray" – Traditional rhyme in Opie / *The Oxford Nursery Rhyme Book* (1955)

Over in the Meadow by John Langstaff, illustrated by Feodor Rojankovsky (1957)

Zin! Zin! Zin! a Violin by Lloyd Moss, illustrated by Marjorie Priceman (1995)

Read-Aloud Informational Texts

The Year at Maple Hill Farm by Alice and Martin Provensen (1978)

Fire! Fire! by Gail Gibbons (1984)

Follow the Water from Brook to Ocean by Arthur Dorros (1991)

Amazing Whales! by Sarah L. Thomson (2005)

Living Sunlight: How Plants Bring the Earth to Life by Molly Bang & Penny Chisholm, illustrated by Molly Bang (2009)

Grades 2–3 Exemplar Texts

Narratives

My Father's Dragon by Ruth Stiles Gannett, illustrated by Ruth Chrisman Gannett (1948)

Crow Boy by Taro Yashima (1955)

Amos & Boris by William Steig (1971)

The Treasure by Uri Shulevitz (1978)

The Stories Julian Tells by Ann Cameron (1981)

Sarah, Plain and Tall by Patricia MacLachlan (1985)

Tops and Bottoms by Janet Stevens (1995)

The Raft by Jim LaMarche (2000)

The Lighthouse Family: The Storm by Cynthia Rylant, illustrated by Preston McDaniels (2002)

The One-Eyed Giant (Book One of Tales from the Odyssey) by Mary Pope Osborne (2002)

Poetry

"Autumn" by Emily Dickinson (1893)

"Who Has Seen the Wind" by Christina G. Rossetti (1893)

"Afternoon on a Hill" by Edna St. Vincent Millay (1917)

"Stopping by Woods on a Snowy Evening" by Robert Frost (1923)

"Something Told the Wild Geese" by Rachel Field (1934)

"Grandpa's Stories" by Langston Hughes (1958)

"A Bat Is Born" by Randall Jarrell (1964)

"Knoxville, Tennessee" by Nikki Giovanni (1968)

"Weather" by Eve Merriam (1969)

"Eating While Reading" by Gary Soto (1995)

Informational Texts

A Medieval Feast by Aliki (1983)

Maps & Globes by Jack Knowlton, pictures by Harriet Barton (1985)

Sunshine Makes the Seasons by Franklyn M. Branley (1985)

From Seed to Plant by Gail Gibbons (1991)

Throw Your Teeth on the Roof: Tooth Traditions Around the World by Selby B. Beeler, illustrated by G. Brian Karas (1998)

So You Want to Be President? By Judith St.George, illustrated by David Small (2000)

Boy, Were We Wrong About Dinosaurs by Kathleen V. Kudlinski, illustrated by S.D. Schindler (2005)

Bat Loves the Night by Nicola Davies, illustrated by Sarah Fox-Davies (2008)

Moonshot: The Flight of Apollo 11 by Brian Floca (2009)

Where Do Polar Bears Live? by Sarah L. Thomson, illustrated by Jason Chin (2010)

Read-Aloud Narratives

"How the Camel Got His Hump" in *Just So Stories* by Rudyard Kipling (1902)

The Thirteen Clocks by James Thurber (1950)

The Cricket in Times Square by George Selden, illustrated by Garth Williams (1960)

The Search for Delicious by Natalie Babbitt (1969)

Bud, Not Buddy by Christopher Paul Curtis (1999)

Read-Aloud Poetry

"The Jumblies" by Edward Lear (1871)

"The Pied Piper of Hamelin" by Robert Browning (1888)

"Your World" by Georgia Douglas Johnson (1918)

"The Song of the Jellicles" by T.S. Eliot (1939)

"Fireflies" by Paul Fleischman, illustrated by Eric Beddows (1988)

Read-Aloud Informational Texts

Lincoln: A Photobiography by Russell Freedman (1987)

A Drop of Water: A Book of Science and Wonder by Walter Wick (1997)

The Museum Book: A Guide to Strange and Wonderful Collections by Jan Mark, illustrated by Richard Holland (2007)

What the World Eats by Faith D'Aluisio, photographed by Peter Menzel (2008)

Wild Tracks! A Guide to Nature's Footprints by Jim Arnosky (2008)

Grades 4–5 Exemplar Texts

Narratives

Alice in Wonderland by Lewis Carroll (1865)

The Secret Garden by Frances Hodgson Burnett (1911)

The Black Stallion by Walter Farley (1941)

The Little Prince by Antoine de Saint-Exupery (1943)

Tuck Everlasting by Natalie Babbitt (1975)

"Zlateh the Goat" by Isaac Bashevis Singer (1984)

M. C. Higgins, the Great by Virginia Hamilton (1993)

The Birchbark House by Louise Erdrich (1999)

Bud, Not Buddy by Christopher Paul Curtis (1999)

[Also a read-aloud narrative at Grades 2–3]

Where the Mountain Meets the Moon by Grace Lin (2009)

Poetry

"The Echoing Green" from *Songs of Innocence* by William Blake (1789)

"The New Colossus" by Emma Lazarus (1883)

"Casey at the Bat" by Ernest Lawrence Thayer (1888)

"A Bird Came Down the Walk" by Emily Dickinson (1893)

"Fog" by Carl Sandburg (1916)

"Dust of Snow" by Robert Frost (1923)

"Little Red Riding Hood and the Wolf" by Roald Dahl (1982)

"They Were My People" by Grace Nichols (1988)

"Words Free As Confetti" by Pat Mora (1996)

Informational Texts

Discovering Mars by Melvin Berger (1992)

Let's Investigate Marvelously Meaningful Maps by Madelyn Wood Carlisle (1992)

Hurricanes: Earth's Mightiest Storms by Patricia Lauber (1996)

The Kid's Guide to Money by Steve Otfinoski (1996)

Toys: Amazing Stories behind Some Great Inventions by Don Wulffson (2000)

"Good Pet, Bad Pet" by Elizabeth Schleichert from *Ranger Rick* (2002)

"Ancient Mound Builders" by E. Barrie Kavash from *Cobblestone* (2003)

About Time: A First Look at Time and Clocks by Bruce Koscielniak (2004)

England the Land by Erinn Banting (2004)

A History of US by Joy Hakim (2005)

My Librarian Is a Camel by Margriet Ruurs (2005)

Horses by Seymour Simon (2006)

Quest for the Tree Kangaroo by Sy Montgomery (2006)

Volcanoes by Seymour Simon (2006)

We Are the Ship: The Story of Negro League Baseball by Kadir Nelson (2008)

"Kenya's Long Dry Season" by Nellie Gonzalez Cutler from *Time for Kids* (2009)

"Seeing Eye to Eye" by Leslie Hall from *National Geographic Explorer* (2009)

"Computer" from *Britannica Junior Encyclopedia* (2010)

"Telescopes" by Ronan, Colin A. from *The New Book of Knowledge* (2010)

"Underground Railroad" by Henrietta Buckmaster from *The New Book of Knowledge* (2010)

Grades 6–8 Exemplar Texts

Narratives

Little Women by Louisa May Alcott (1869)

The Adventures of Tom Sawyer by Mark Twain (1876)

A Wrinkle in Time by Madeline L'Engle (1962)

The Dark is Rising by Susan Cooper (1973)

Dragonwings by Laurence Yep (1975)

Roll of Thunder, Hear My Cry by Mildred Taylor (1976)

"The People Could Fly" from *The People Could Fly: American Black Folktales* by Virginia Hamilton (1985)

The Tale of the Mandarin Ducks by Katherine Paterson (1990)

"Eleven" from *Woman Hollering Creek: And Other Stories* by Sandra Cisneros (1992)

Black Ships Before Troy: The Story of the Iliad by Rosemary Sutcliff (1993)

Drama

A Midsummer Night's Dream by William Shakespeare (1596)

The Diary of Anne Frank by Frances Goodrich and Albert Hackett (1958)

Poetry

"Paul Revere's Ride" by Henry Wadsworth Longfellow (1861)

"O Captain, My Captain" by Walt Whitman (1865)

"Jabberwocky" by Lewis Carroll (1872)

"Twelfth Song of Thunder" from *The Mountain Chant: A Navajo Ceremony* Navajo tradition (1887)

"The Railway Train" by Emily Dickinson (1893)

"The Song of Wandering Aengus" by W. B. Yeats (1899)

"Chicago" from *Chicago Poems* (1914) by Carl Sandburg

"Stopping by a Wood on a Snowy Evening" by Robert Frost (1923)

"I, Too" by Langston Hughes (1925)

"The Book of Questions" by Pablo Neruda (1973) translated by William O'Daly

"Oranges" from *Black Hair* (1985) by Gary Soto

"A Poem for My Librarian, Mrs. Long" from *Acolytes* (2007) by Nikki Giovanni

Informational Texts (English Language Arts)

"Allegory of the Cave" from *The Republic* by Plato (380 BCE) translated by G.M.A. Grube

"Letter on Thomas Jefferson" by John Adams (1822)

Narrative of the Life of Frederick Douglass an American Slave by Frederick Douglass (1845)

"Gettysburg Address" by Abraham Lincoln (1863)

"Lee Surrenders to Grant" by Horace Porter (1865)

"Blood, Toil, Tears and Sweat" by Winston Churchill (1940)

Travels with Charley: In Search of America by John Steinbeck (1962)

"Address to the Nation on Civil Rights" by John F. Kennedy (1963)

I Know Why the Caged Bird Sings by Maya Angelou (1969)

"Address to Students at Moscow State University" by Ronald Reagan (1988)

Grades 9-10 Exemplar Texts

Narratives

The Odyssey by Homer (8th century B.C.E.) translated by Robert Fagles

"The Nose" by Nikolai Gogol (1836) translated by Ronald Wilks

"The Gift of the Magi" by O. Henry (1906)

The Grapes of Wrath by John Steinbeck (1939)

Fahrenheit 451 by Ray Bradbury (1953)

"I Stand Here Ironing" by Tillie Olsen (1956)

The Killer Angels by Michael Shaara (1975)

The Joy Luck Club by Amy Tan (1989)

In the Time of the Butterflies by Julia Alvarez (1994)

The Book Thief by Marcus Zusak (2005)

Drama

The Tragedy of Romeo and Juliet by William Shakespeare (1592)

The Glass Menagerie by Tennessee Williams (1944)

Rhinoceros by Eugene Ionesco (1959) translated by Derek Prouse

Master Harold...and the Boys by Athol Fugard (1982)

Poetry

"Song" by John Donne (1635)

"Ozymandias" by Percy Bysshe Shelley (1810)

"The Raven" by Edgar Allen Poe (1845)

"We Grow Accustomed to the Dark" by Emily Dickinson (1893)

"Loveliest of Trees" by A. E. Houseman (1896)

"Lift Ev'ry Voice and Sing" by James Weldon Johnson (1900)

"Domination of Black" by Wallace Stevens (1916)

"Yet Do I Marvel" by Countee Cullen (1925)

"Women" by Alice Walker (1970)

"I Am Offering This Poem to You" by Jimmy Santiago Baca (1977)

Informational Texts (English Language Arts)

"Preface to Lyrical Ballads" by William Wordsworth (1800)

"Speech to the Second Virginia Convention" by Patrick Henry (1775)

"Second Inaugural Address" by Abraham Lincoln (1865)

"State of the Union Address" by Franklin Delano Roosevelt (1941)

"I Am an American Day Address" by Learned Hand (1944)

"Remarks to the Senate in Support of a Declaration of Conscience" by Margaret Chase Smith (1950)

"Address at the March on Washington" by Martin Luther King, Jr. (1963)

"Nobel Prize Acceptance Speech" by Elie Wiesel (1986)

"A Quilt of a Country" by Anna Quindlen (2001)

Grades 11-12 Exemplar Texts

Narratives

Pride and Prejudice by Jane Austen (1813)

Jane Eyre by Charlotte Brontë (1848)

"At Home" by Anton Chekov (1887) translated by Constance Garnett

The Great Gatsby by F. Scott Fitzgerald (1925)

As I Lay Dying by William Faulkner (1930)

Their Eyes Were Watching God by Zora Neale Hurston (1937)

Black Boy by Richard Wright (1945)

The Adventures of Augie March by Saul Bellow (1949)

The Bluest Eye by Toni Morrison (1970)

Dreaming in Cuban by Cristina García (1992)

The Namesake by Jhumpa Lahiri (2003)

Drama

Macbeth by William Shakespeare (c1611)

The Importance of Being Earnest by Oscar Wilde (1895)

Death of a Salesman by Arthur Miller (1949)

A Raisin in the Sun by Lorraine Hansberry (1959)

Poetry

"A Valediction Forbidding Mourning" by John Donne (1633)

"Ode on a Grecian Urn" by John Keats (1820)

"Song of Myself" from *Leaves of Grass* by Walt Whitman (c1860)

"Because I Could Not Stop for Death" by Emily Dickinson (1890)

"Mending Wall" by Robert Frost (1914)

"Ode to My Suit" by Pablo Neruda (1954) translated by Margaret Sayers Peden

"Sestina" by Elizabeth Bishop (1983)

"The Latin Deli: An Ars Poetica" by Judith Ortiz Cofer (1988)

"Demeter's Prayer to Hades" by Rita Dove (1995)

"Man Listening to Disc" by Billy Collins (2001)

Informational Texts (English Language Arts)

The Declaration of Independence by Thomas Jefferson (1776)

The Crisis by Thomas Paine (1776)

Walden by Henry David Thoreau (1854)

"Society and Solitude" by Ralph Waldo Emerson (1857)

"The Fallacy of Success" by G.K. Chesterton (1909)

The American Language by H.L. Mencken (1938)

"Politics and the English Language" by George Orwell (1946)

"Abraham Lincoln and the Self-Made Myth" by Richard Hofstadter (1948)

"Letter from Birmingham City Jail" by Martin Luther King, Jr. (1963)

"Mother Tongue" by Amy Tan (1990)

"Take the Tortillas Out of Your Poetry" by Rudolfo Anaya (1995)

The Common Core K–12 Mathematics Standards

This document provides grade level standards for mathematics in grades K–8, and high school standards organized under the headings of the *College and Career Readiness Standards in Mathematics*. Students reaching the readiness level described in that document (adjusted in response to feedback) will be prepared for non-remedial college mathematics courses and for training programs for career-level jobs. Recognizing that most students and parents have higher aspirations, and that ready for college is not the same as ready for mathematics-intensive majors and careers, we have included in this document standards going beyond the readiness level. Most students will cover these additional standards. Students who want the option of entering STEM fields will reach the readiness level by grade 10 or 11 and take precalculus or calculus before graduating from high school. Other students will go beyond readiness through statistics to college. Other pathways can be designed and available as long as they include the readiness level. The final draft of the K–12 standards will indicate which concepts and skills are needed to reach the readiness level and which go beyond. We welcome feedback from states on where that line should be drawn.

English Language Learners in Mathematics Classrooms

English language learners (ELLs) must be held to the same high standards expected of students who are already proficient in English. However, because these students are acquiring English language proficiency and content area knowledge concurrently, some students will require additional time and all will require appropriate instructional support and aligned assessments.

ELLs are a heterogeneous group with differences in ethnic background, first language, socio-economic status, quality of prior schooling, and levels of English language proficiency. Effectively educating these students requires adjusting instruction and assessment in ways that consider these factors. For example ELLs who are literate in a first language that shares cognates with English can apply first-language vocabulary knowledge when reading in English; likewise ELLs with high levels of schooling can bring to bear conceptual knowledge developed in their first language when reading in a second language. On the other hand, ELLs with limited or interrupted schooling will need to acquire background knowledge prerequisite to educational tasks at hand. As they become acculturated to US schools, ELLs who are newcomers will need sufficiently scaffolded instruction and assessments to make sense of content delivered in a second language and display this content knowledge.

While some ELLs are economically and educationally advantaged, this is not the case for many of these students. Moreover, once in the U.S., the majority of ELLs attend high poverty schools with high percentages of other ELLs. These schools often lack the resources and capacity needed to help ELLs reach high academic standards. However, schools and districts can be assisted in providing a positive learning environment that capitalizes on the linguistic and cultural diversity of the student body.

Language proficiency is a complex construct that can reflect proficiency in multiple contexts, modes, and academic disciplines. Current measures of language proficiency may not give an accurate picture of an individual's language competence. In particular, we do not have measures or assessments for language proficiency related to competence in mathematics for different ages or mathematical topics. These two facts can confuse discussions of mathematics instruction for ELLs. In particular, because of the complexity of language proficiency and the limitations of the label "English Language Learner" as currently implemented, instructional decisions should not be made solely based on that label. However, research on language and mathematics education for this student population does provide a few clear results to guide practices for teaching ELLs mathematics:

- English learners can participate in mathematical discussions as they learn English (Moschkovich, 1999a, 2002, 2007a, 2007b, 2007d).

- Mathematics instruction for students who are learning English should draw on multiple resources and modes available in classrooms—such as objects, drawings, inscriptions, and gestures—as well as home languages and mathematical experiences outside of school.

- While mathematics instruction for ELLs should address mathematical discourse and academic language, this involves much more than vocabulary instruction.

Basic principles for improving the mathematics achievement of ELLs

Language is a resource for learning mathematics, it is not only a tool for communicating, but also a tool for thinking and reasoning mathematically. All languages (English, Spanish, Tagalog,etc.) and language varieties (different dialects, home or everyday ways of talking, vernacular, slang, etc.) provide resources for mathematical thinking, reasoning, and communicating.

Regular and active participation in the classroom—not only reading and listening but also discussing, explaining, writing, representing, and presenting—is crucial to ELLs' success in mathematics, and that ELLS can produce explanations, presentations, etc. and participate in classroom discussions *as they are learning English* (Moschkovich, 1999 and 2007).

- ELLs, like English-speaking students, require regular access to teaching practices that are most effective for improving student achievement. These practices include: a) Keeping mathematical tasks at high-cognitive demand (Henningsen & Stein, 1997; Silver & Stein, 1996); b) teachers and students attend explicitly to concepts (Hiebert & Grouws, 2007), and c) students wrestle with important mathematics (Hiebert & Grouws, 2007).
- See the evidence of ELLs' mathematical thinking, hear how ELLs use language to communicate about mathematics, understand the competence that ELLS bring to the classroom, build on this competence, and provide access to opportunities for advancing their mathematics learning.

Overall, research suggests that:

- Classroom instruction should allow bilingual students to choose the language they prefer for arithmetic computation. Language switching can be swift, highly automatic, and facilitate rather than inhibit solving word problems in the second language, as long as the student's language proficiency is sufficient for understanding the text of the word problem.
- Instruction should ensure that students understand the text of word problems before they attempt to solve them.
- Instruction should include a focus on "mathematical discourse" and "academic language" because these are important for English learners. Although it is crucial that students who are learning English have opportunities to communicate mathematically, this is not primarily a matter of learning vocabulary. Students learn to participate in mathematical reasoning, not by learning vocabulary, but by making conjectures, presenting explanations, and/or constructing arguments.
- While vocabulary instruction is important, it is not sufficient for supporting mathematical communication. Furthermore, vocabulary drill and practice are not the most effective instructional practices for learning vocabulary. Instead, research has demonstrated that vocabulary learning occurs most successfully through instructional environments that are language-rich, actively involve students in using language, require that students both understand spoken or written words and also express that understanding orally and in writing, and require students to use words in multiple ways over extended periods of time (Blachowicz, Camille, and Peter Fisher, 2000). To develop written and oral communication skills, students need to participate in negotiating meaning for mathematical situations and in mathematical practices that require output from students (Moschkovich, 2009).

References

Blachowicz, Camille, and Peter Fisher. "Vocabulary Instruction." In *Handbook of Reading Research*, Volume III, edited by Michael Kamil, Peter Mosenthal, P. David Pearson, and Rebecca Barr, pp. 503-523. Mahwah, NJ: Lawrence Erlbaum Associates, 2000.

Gándara, Patricia, and Frances Contreras. *The Latino Education Crisis: The Consequences of Failed Social Policies.* Cambridge, Ma: Harvard University Press, 2009.

Moschkovich, Judit N. "Supporting the Participation of English Language Learners in Mathematical Discussions." *For the Learning of Mathematics* 19 (March 1999): 11-19.

Moschkovich, J. N. (in press). Language, culture, and equity in secondary mathematics classrooms. To appear in F. Lester & J. Lobato (Ed.), Teaching and Learning Mathematics: Translating Research to the Secondary Classroom, Reston, VA: NCTM.

Moschkovich, Judit N. "Examining Mathematical Discourse Practices," *For the Learning of Mathematics* 27 (March 2007): 24-30.

Moschkovich, Judit N. "Using Two Languages when Learning Mathematics: How Can Research Help Us Understand Mathematics Learners Who Use Two Languages?" *Research Brief and Clip*, National Council of Teachers of Mathematics, 2009 http://www.nctm.org/uploadedFiles/Research_News_and_Advocacy/Research/Clips_and_Briefs/Research_brief_12_Using_2.pdf. (accessed November 25, 2009).

Moschkovich, J.N. (2007) Bilingual Mathematics Learners: How views of language, bilingual learners, and mathematical communication impact instruction. In N. Nasir and P. Cobb (Eds.), *Diversity, Equity, and Access to Mathematical Ideas*. New York: Teachers College Press, 89-104.

Schleppegrell, M.J. (2007). The linguistic challenges of mathematics teaching and learning: A research review. *Reading & Writing Quarterly*, 23:139-159.

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 $5 - 3(x - y)^2$ 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]

[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.

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.

[9] Glossary: Transitive property of measurement order: If one object is bigger than a second, and the second object is bigger than a third object, then the first object is bigger than the third object.
[10] The symbol ♦ indicates material in data analysis and statistics that appears under another progression heading in order to make an important connection.
[11] For example, a square rotated to form a "diamond" is still a square, even though it is rotated. Students at this grade might need to physically rotate a shape until it is "level" before they can correctly name it.

b. Move shapes using translations, reflections and rotations.[12]

[12] This is not meant to be assessed by showing students a picture of a shape and asking them to draw or select a translated, reflected or rotated version of it.

Mathematics: First Grade[13]

Developing Coherent Understanding

[Temporarily removed for editing.]

Early Relations and Operations

Core Standards · Students understand that:

1. Counting on is an efficient method of counting all, in which the initial count of the first addend is omitted.
2. Addition and subtraction apply to situations of joining, separating, part-part-whole, and comparing quantities to one another.[14] These situations can be represented by addition and subtraction equations such as $7 + 5 = 12$, $10 = 5 + 5$, and so on.
3. Addition and subtraction are inverse operations; that is $10 - 8$ can be found by thinking $8 + 2 = 10$.
4. When any two of the numbers in an addition or subtraction equation are known, the unknown number can be found.
5. One-to-one dealing of objects in a collection (e.g., "One for you, one for me, one for him, …") creates fair shares.

Core Standards · Students can and do:

a. Use counting on strategies or decomposing strategies for additions and subtractions within 20.
b. Solve addition problems containing three addends.
c. Use objects, pictures and story contexts to explain what happens when the order of addends in a sum is changed, when 0 is added to a number, and when one addend in a sum is increased by 1 and another decreased by 1.
d. Experience enough problem situations so that many or all sums and differences within 20 become well known.
e. Use drawings and equations to represent and solve word problems involving addition and subtraction.[15]
f. ♦ Organize, represent and interpret data with several categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another
g. Create *n* fair shares from a collection of objects. Identify the size of one share, and recognize the original collection as *n* copies of a single share.

Quantity and Measurement

Core Standards · Students understand that:

1. Lengths can be added by placing long objects, rods, or unit cubes end to end in a straight line. The total length is the same in whatever order the rods are placed.

[13] Some material is used verbatim from National Research Council. (2009, op. cit.)
[14] In join and separate problems, there is change over time. In part-part-whole problems, two quantities make up a whole in a static situation. Compare problems involve two quantities and the difference between them. Compare problems add specificity to the notions of greater than and less than.
[15] Include join, separate, part-part-whole, and compare problems, with unknowns in all positions. Represent these situations with equations that use a small square or a ? for the unknown.

2. Lengths can be compared by placing rods side by side, with one end lined up. The difference in length is how far the longer extends beyond the end of the shorter.
3. Lengths are measured (assigned numerical values) by comparing them to other lengths—that is, by using another object as a length unit. The length of an object can be expressed numerically by counting the number of length units that span it with no gaps or overlaps.
4. When an object or figure is decomposed into several pieces, the length of the whole can be found by placing the pieces end to end in any order.
5. A sum of two whole numbers represents a total length; a difference of two whole numbers represents a difference in length.
6. Durations of time are measured by comparing them to other durations of time, such as the earth's rotation period, or the time a minute hand takes to complete a circle around a clock face.

Core Standards · Students can and do:

a. Using an object as a length unit, measure, compare and estimate length.[16]
b. Using an object as a length unit, determine total length by adding lengths of two parts.[17] Compare lengths using addition and subtraction.
c. Decompose circles and rectangles into 2 and 4 equal parts. Describe the parts using the words "halves" and "quarters," and using the phrases "half of" and "quarter of." Describe the wholes as twice or four times as large as the parts.
d. Tell time in hours from clocks; subtract to find whole-hour durations on a clock (within AM or within PM).

Base Ten Computation

Core Standards · Students understand that:

1. In comparing two-digit numbers, the number with more tens units is larger; if the number of tens units is the same in each, the number of ones units decides.
2. In adding or subtracting 2-digit numbers, one adds or subtract like units (tens units and tens units, or ones units and ones units).

Core Standards · Students can and do:

a. Count to 100 or beyond, switching appropriately to the new decade after a 9 has been said in the ones place.
b. Compare and order numbers to 100 based on meanings of the tens and ones places.
c. Easily write numerals to 20; write numerals to 100.
d. Use break-apart and make-a-ten strategies to add and subtract with teen totals as in $7 + 6 = 10 + 3$ and $17 - 9 = 17 - 7 - 2$.
e. Find 10 more or 10 less than a number without having to count.
f. Add one-digit numbers to two-digit numbers, and add multiples of 10 to one-digit and two-digit numbers.
g. Represent addition of two-digit numbers using 10-rods and unit cubes,[18] including rearranging rods and cubes to show regrouping when needed.
h. Add two-digit numbers to two-digit numbers using strategies based on place value, Properties of Arithmetic, or the inverse relationship between addition and subtraction.

Shapes

[16] Select and iterate units, partition into equal parts, and compare lengths indirectly by using a reference length.
[17] Restrict to whole-unit lengths.
[18] Any concrete model that can show individual units and ten connected units will do.

Core Standards · Students understand that:

1. Several shapes can be joined together to form a larger shape. A single shape can also be visualized as a collection of smaller shapes joined together.
2. Decomposing larger shapes into equal-sized parts creates fair shares.
3. When an identical figure is decomposed into more fair shares, the shares are smaller than in the first instance.

Core Standards · Students can and do:

a. Form different 2D figures with cutouts of rectangles, squares, triangles, semicircles, and quarter-circles.[19]
b. Form different 3D figures with concrete models of cubes, rectangular prisms, cones, and cylinders.[20]
c. Decompose 2D shapes into rectangles, squares, triangles, semicircles, and quarter-circles, including decomposing into fair shares.

[19] From Singapore Primary 2
[20] From Singapore Primary 2

Mathematics: Second Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Operations and the Problems They Solve

Core Standards · Students understand that:

1. Addition and subtraction apply to situations of joining, separating, part-part-whole, and comparing quantities to one another.[21] These situations can be represented by addition and subtraction equations such as 17 + 5 = 22, 36 = 56 – 26, and so on.
2. Addition and subtraction are inverse operations; that is 100 – 98 can be found by thinking 98 + 2 = 100.
3. Numbers can be added and subtracted only when they refer to the same underlying unit.

Core Standards · Students can and do:

a. Use representations (objects, pictures, story contexts) to describe and justify properties of addition and subtraction.[22]
b. Produce full sets of related equations for addition and subtraction, as in the set 5 + 3 = 8, 3 + 5 = 8, 8 = 5 + 3, 8 = 3 + 5, 8 – 5 = 3, 8 – 3 = 5, 3 = 8 – 5, 5 = 8 – 3.
c. Solve up to two-step addition/subtraction word problems with whole numbers and whole number quantities within 100.[23]

Base Ten Computation

Core Standards · Students understand that:

1. A three-digit number is made up of hundreds, tens and ones units. Digits in each place are worth ten times as much as digits in the place to the right.
2. Comparison of numbers is decided by the leftmost digit, with subsequent digits breaking ties.
3. Three-digit numbers can be expanded into sums of hundreds, tens and ones units. In adding or subtracting, one adds or subtracts the units of each size; regrouping might be needed to write a total in standard form if there are too many of a unit, or to get enough of a unit to subtract from it.
4. The scheme for regrouping is the same at each place, because each unit is composed of ten of the smaller unit.

Core Standards · Students can and do:

a. Compare and order numbers to 1,000.

[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]

[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. $3/10 = 30/100$, $9/12 = 3/4$).

[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 $28 \div 7$ (i.e., when a is a multiple of b), but also gives meaning to quotients such as $3 \div 4$ or $7 \div 2$.
[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:

[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

[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:

[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 $T + 1000°C = 0$.
[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]

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

[59] Glossary: Congruent. Two plane or solid figures are *congruent* if one can be obtained from the other by a sequence of rigid motions (rotations, reflections, and translations).
[60] Glossary: Similarity transformation. A rigid motion followed by a dilation. Glossary: Dilation. A transformation that moves each point along the ray through the point emanating from a fixed center, and multiplies distances from the center by a common scale factor.

3. Congruent figures have the same area or volume. A similarity transformation with a scale factor of k leaves angle measures unchanged, changes lengths by a factor of k, changes areas by a factor of k^2, and changes volumes by a factor of k^3.
4. Given a line in the coordinate plane not parallel to either axis, any two right triangles with legs parallel to the axes and hypotenuse on the given line are similar, and so the slope of the line (rise over run) is the same regardless of which two distinct points are used to compute it.

Core Standards· Students can & do:

a. Solve problems involving similar triangles and scale drawings (including computing actual lengths, areas and volumes from a scale drawing and reproducing a scale drawing at a different scale).
b. Explore using hands-on activities the area of non-rectangular figures and the perimeter of curvilinear figures, and the fact that a dilation of the plane changes areas by the square of the scale factor.[61]
c. Use scale factors to find lengths and areas of similar figures, including an informal derivation of the formulas relating the area, radius and circumference of a circle.
d. Give an explanation of why the volume of a cylinder is the area of the base times the height, using informal arguments involving slices.
e. Use coordinate grids to transform figures and to predict the effect of dilations, translations, rotations and reflections.
f. Use two-dimensional representations of three-dimensional objects (schematics, assembly instructions, perspective drawings and multiple views) to solve problems.
g. Explore three-dimensional figures formed by translations and rotations of plane figures through space.
h. Sketch and describe cross-sections of cones, cylinders, pyramids and prisms.

[61] Include using grids of squares with fractional side lengths to estimate area, and measuring the length of strings wrapped around the perimter.

Mathematics: Eighth Grade

Developing Coherent Understanding

[Temporarily removed for editing.]

Functions and the Situations They Model

Core Standards · Students understand that:

1. A function is a rule, often defined by an expression, that states a relationship between the values of two variable quantities.
2. A linear function models a situation where the change in one quantity is proportional to the corresponding change in the other quantity. The constant of proportionality, m, is the rate of change of the function. If x is the input and y is the output then the function is defined by $y = mx + b$ for some constant b, which is called the initial value of the function (the value of the function when x is 0).
3. The graph of a linear function $y = mx + b$ is a straight line, and the slope of the line is the function's rate of change.
4. The problem of finding where two linear functions have the same output value for a common input value leads to an equation in one variable; the solution or solutions (if any) can be visualized as the input value(s) where the graphs of the functions intersect.
5. A linear equation in one variable can be solved by successively transforming it into simpler equations with the same solutions using the Properties of Arithmetic and the Properties of Equality, until an equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).

Core Standards · Students can and do:

a. Compare features of two or more functions that may be presented in different representations (as formulas, graphs, tables of values, or verbally).
b. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship; from two (x, y) values (including reading these from a table); or from a graph.
c. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
d. Solve linear equations with rational number coefficients, including equations that require expanding expressions using the distributive law and collecting like terms.

The Number System

Core Standards · Students understand that:

1. The number line has numbers that are not rational, such as 2π or $2 + \sqrt{3}$, called irrational numbers.
2. An irrational number can be approximated to arbitrary precision by rational numbers.
3. If $n > 0$ is an integer and $\sqrt{n}$ is not an integer, then $\sqrt{n}$ is irrational. If q is rational and r is irrational, then $q + r$ is irrational, and so is qr provided $q \neq 0$.

Core Standards · Students can and do:

a. Use rational approximations to compare the size of irrational numbers, locate them approximately on a number line and estimate the value of expressions (e.g. π^2).

Geometry

Core Standards · Students understand that:

1. Angle measures formed by a configuration of lines in a plane can often be deduced from other angle measures (e.g., vertically opposite angles, angles produced when a transversal line cuts two parallel lines).
2. The side lengths of a right triangle are related by the Pythagorean theorem.

Core Standards · Students can and do:

a. Explore and explain by hands-on activities facts about the angle sum of triangles, exterior angles, and alternate interior angles of parallel lines. Use these facts to determine the angle sum of interior angles of convex polygons, and the angle sum of exterior angles of convex polygons.[62]
b. Explore and explain using hands-on activities: parallel lines in space, line perpendicular to a line through a given point, lines perpendicular to a plane, lines parallel to a plane, the plane passing through three given points, and the plane perpendicular to a given line at a given point.
c. Use facts about angles to write and solve simple equations for an unknown angle in a figure.
d. Explain a proof of the Pythagorean theorem.[63]
e. Use the Pythagorean theorem to determine missing side lengths in right triangles and to solve problems in two and three dimensions.
f. Use the Pythagorean theorem to find the distance between two points in a coordinate system.
g. Draw (freehand, with ruler and protractor, and with technology) geometric shapes from given conditions. (Focus on constructing triangles from three measures of angles or sides, noticing when the triangle is uniquely defined, ambiguous, or impossible.)
h. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc): copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
i. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Statistics

Core Standards · Students understand that:

1. Scatterplots for bivariate continuous data may reveal patterns of association between two quantities. This kind of relationship between quantities is not a functional relationship—and yet, a function might be a valuable way to describe a statistical relationship.

Core Standards · Students can and do:

a. Construct and interpret scatterplots for bivariate measurement data.
b. Describe patterns that appear in scatterplots, such as clustering, outliers, positive/negative association, linear association, nonlinear association.
c. For scatterplots that suggest a linear association, model the relationship with a linear function using an informal fitting procedure. Use the model function to solve problems in the context of the data,

[62] Use physical models, transparencies, or dynamic geometry software to make rigid motions and give informal arguments, for example, arrange three copies of the same triangle so that the three angles form a line, and give an argument in terms of transversals why this is so.
[63] For example, by the method of right triangles in a square.

interpreting the slope/rate of change and intercept/initial value. Informally assess the goodness of the model by judging the closeness of the data points to the graph of the function.

Probability

Core Standards · Students understand that:

1. The framework for theoretical probability models is the same for compound events as for simple events: the theoretical probability is the fraction of the sample space in which the compound event occurs.

Core Standards · Students can and do:

a. Compute experimental probabilities from data sets, including data sets generated by simulations or repeated sampling experiments.
b. Compute experimental probabilities to estimate theoretical probabilities of compound events when no theoretical probability model is apparent.
c. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams; identify members of the sample space in which specified events occur.
d. Compute theoretical probabilities for compound events by counting members of the sample space.
e. Compare experimental probabilities to theoretical probabilities for multi-stage random experiments, examining the assumptions of the theoretical model when the two conflict.

Mathematics: High School—Expressions

A Coherent Understanding of Expressions

[Final draft of CCR narrative goes here.]

Seeing structure in expressions

Core Standards · Students understand that:

1. Different forms of expression for functions reveal different properties of the function; a purpose in transforming expressions is to find those properties.

   For example, factoring a quadratic expression reveals the zeros of the function it defines, and putting the expression in vertex form reveals the maximum or minimum of the function; the expression 1.15^t can be rewritten in the form $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate monthly interest rate if the annual rate is 15%.

2. The laws of exponents for whole number exponents follow from an understanding of exponents as indicating repeated multiplication, and from the associative property of multiplication.

3. The interpretation of zero, fractional and negative exponents follows from extending the laws of exponents to those values.

   For example, since $(x^{1/3})^3 = x^{(1/3)\cdot 3} = x^1 = x$, $x^{1/3}$ is the cube root of x.

4. Complex expressions can be interpreted by "chunking": temporarily viewing a part of the expression as a single entity.

Core Standards · Students can and do:

a. Factor, expand, and complete the square in quadratic expressions.
b. Use chunking to see expressions in different ways that suggest ways of rewriting them.

   For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

c. Rewrite expressions using the laws of exponents.

   For example $(x^{1/2})^3 = x^{3/2}$ and $1/x = x^{-1}$.

d. Use the laws of exponents to interpret expressions for exponential functions, recognizing fractional exponents as indicating roots of the base and negative exponents as indicating the reciprocal of a power.

   For example, identify the relative rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.2)^{10t}$, $y = (1.01)^{t/12}$, and recognize that any non-zero number raised to the 0 power is 1 (for example, $12(1.05)^0 = 12$). Avoid common errors such as confusing as $6(1.05)^t$ with $(6\cdot 1.05)^t$ and $5(0.03)^t$ with $5(1.03)^t$.

e. Given an expression for an exponential function, identify whether it represents exponential growth or decay.
f. Using a method such as the factorization $(x^n - 1) = (x-1)(x^{n-1} + \ldots + 1)$ where n is a whole number, prove the formula for the sum of a geometric series, and use the formula to solve problems.

   Include problems involving compound interest and mortgage payments.

The arithmetic of polynomials and rational functions

Core Standards · Students understand that:

1. Polynomials form a system analogous to the integers, closed under the operations of addition, subtraction, and multiplication.

2. A polynomial of degree n has n complex roots, where roots are counted according to multiplicity.
3. For a polynomial $p(x)$, $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
4. The Binomial Theorem gives the expansion of $(x + a)^n$ in powers of x for a whole number n and a real number a, with coefficients determined for example by Pascal's triangle. The Binomial Theorem can be proved by mathematical induction.
5. Rational functions are fractions whose numerator and denominator are polynomials, and the rational functions are closed under the operation of division by a nonzero rational function.

Core Standards · Students can and do:

a. Add, subtract and multiply polynomials.
b. Identify zeros of polynomials when suitable factorizations are available, and graph polynomials.
c. Transform simple rational functions using the Properties of Arithmetic and the rules for operations on fractions.
d. Identify zeros and asymptotes of rational functions, when suitable factorizations are available, and graph rational functions.
e. Divide polynomials by monomials

Mathematics: High School—Equations

A Coherent Understanding of Equations

[Final draft of CCR narrative goes here.]

Building equations to model relations between quantities

Core Standards · Students understand that:

1. Choosing a unit for a general quantity (e.g. length) establishes a correspondence between specific instances of the quantity (e.g. lengths of specific objects) and numbers called coordinates.
2. A relation between two quantities can be represented by an equation in variables representing coordinates for the quantities; by a graph on a pair of axes marked with units for the quantities; and by a table of coordinate pairs from the relation. The graph and the table show pairs that are solutions to the equation.

Core Standards · Students can and do:

a. Build equations to express relations between quantities and solve problems.

   Include equations arising from situations involving linear, quadratic, simple rational, and exponential functions.

b. Rearrange formulas to isolate a quantity of interest.
c. Build systems of equations and solve problems involving systems of equations.

Reasoning with equations and inequalities

Core Standards · Students understand that:

1. To solve an equation algebraically, one assumes it is true and deduces the solutions, often in steps that replace it with a simpler equation whose solutions include the solutions of the original one.
2. Adding a number to both sides of an equation, or multiplying both sides by a nonzero number, leads to an equation that has exactly the same solutions as the original.
3. If the product of two numbers is zero, then at least one equals zero, and conversely. This principle is the basis for solving equations by factoring.
4. Multiplying both sides of an equation by an expression that can be zero for certain values of the variables in it, or squaring both sides of an equation, can lead to an equation that has more solutions than the original. Evaluating these in the original equation eliminates extraneous solutions.
5. The method of completing the square can transform any quadratic equation in x into an equivalent equation of the form $(x - p)^2 = q$. This leads to the quadratic formula.
6. Equations not solvable in one number system may have solutions in a larger number system.
7. Equations of the form $f(x) = g(x)$ can be solved graphically by finding the intersections (if any) of the graphs of $f(x)$ and $g(x)$.
8. The relationship between a function f and its inverse (if it has one) can be used to solve equations of the form $f(x) = c$. For example, a logarithmic function can help solve exponential equations, and an inverse trigonometric function can help solve trigonometric equations.
9. Given a system of linear equations, adding a multiple of one equation to another produces a system with the same solutions. This principle, combined with principles already encountered with equations in one variable, allows for the simplification of systems.

10. The solutions to an equation in two variables form a graph—a set of points, often a curve or a line, in the coordinate plane.
11. The solutions to two equations in two variables (if any) can be visualized as the points of intersection of their graphs, because those points satisfy both equations simultaneously.
12. The solution to a system of inequalities in two variables can be visualized as the intersection of the regions in the plane defined by the inequalities.

Core Standards · Students can and do:

a. Solve simple rational and radical equations, noting and explaining extraneous solutions.
b. Solve quadratic equations over the real numbers by completing the square, using the quadratic formula and factoring.
c. Solve linear inequalities in one variable and graph the solution set on a number line.

Emphasize: solving the associated equality and determining on which side of the solution of the associated equation the solutions to the inequality lie.

d. Solve linear systems of equations algebraically, focusing on pairs of linear equations in two variables.
e. Graph a system of two linear or quadratic equations in two unknowns and estimate the solution from a graph.
f. Graph the solution set of a linear inequality in two variables.
g. Use the properties of logarithms to solve equations involving exponential functions.
h. Use inverse trigonometric functions to solve equations of the form $A\sin(Bx + C) = D$.
i. Find complex roots of quadratic equations.
j. Solve a system of two quadratic equations in two unknowns.

Mathematics: High School—Functions

A Coherent Understanding of Functions

[Final draft of CCR narrative goes here.]

Interpreting functions

Core Standards · Students understand that:

1. The domain of a function is the set of its inputs, and the range is the set of its outputs.
2. Function notation uses a letter to stand for a function. If f is a function and x is a number in its domain, then $f(x)$ indicates the output of f corresponding to the input x.
3. Functions can be described by key characteristics, including: zeros; vertical intercept; extreme points; average rates of change (over intervals); intervals of increasing, decreasing and/or constant behavior; and end behavior.
4. Linear, quadratic and exponential functions are defined by expressions that have forms specific to each type, in which the parameters can often be interpreted in terms of characteristics of the graph.
5. An equation in two variables implicitly expresses one variable as a function of the other if there are no points on the graph having the same value of the first variable but different values of the second.
6. When x is a power of ten, the common logarithm $\log(x)$ tells the exponent. When x lies between 10^n and 10^{n+1}, $\log(x)$ lies between n and $n+1$.

Core Standards · Students can and do:

a. Describe qualitatively the functional relationship between two quantities by reading a graph; e.g., where the function is increasing or decreasing, what its long run behavior appears to be, and whether it appears to be periodic.
b. Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
c. Compare values and properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions).
d. Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes.
e. Describe the qualitative behavior of common types of functions using graphs and tables.

Identify: intercepts; intervals where the function is increasing, decreasing, positive or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. Use technology to explore the effects of parameter changes on the graphs of linear, power, quadratic, square root and cube root, polynomial, simple rational, exponential, logarithmic, sine and cosine, absolute value and step functions.

f. Interpret the parameters in the general expressions for linear, quadratic, and exponential functions, and draw conclusions about the parameters by inspection of the graph.
g. Given a function f, and given a constant c, evaluate $f(c)$ if possible and find solutions to $f(x) = c$ (if they exist). Where appropriate, relate the possibility of evaluation to the domain and the existence or nonexistence of solutions to the range.

Building functions

Core Standards · Students understand that:

1. Varying a parameter in the general expression for a linear, quadratic or exponential function can (often) be interpreted as performing a geometric transformation on the graph. This can be used to adjust a function to model a particular situation.

2. Composing a function f with a function g creates a new function called the composite function—for an input number x, the output of the composite function is $f(g(x))$.
3. The inverse of a function "undoes" what the function does; that is, composing the function with its inverse in either order returns the original input.
4. Sequences are functions whose domain is the whole numbers, and they can be defined recursively as well as explicitly. Arithmetic sequences are linear functions and geometric sequences are exponential functions.

Core Standards · Students can and do:

a. Make graphs of linear, quadratic, cubic, absolute value and exponential functions, and, given the graph of one of these types, identify the type.
b. Sketch graphs of quadratic functions presented in the form $y = ax^2+bx+c$, $y = a(x-h)^2+k$ and $y = a(x-p)(x-q)$ (without plotting points).
c. Solve problems involving quadratic functions, such as analyzing projectile motion and maximizing profit.
d. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$. Include both positive and negative k; find the value of k given the graphs.
e. Write an expression of the form $a(1+r)^t$ or ab^t for an exponential function to express a constant percent growth rate or a constant growth factor.
f. Evaluate composite functions and compose functions symbolically in simple cases (e.g. one or both functions linear).
g. Read values of an inverse function from a graph or a table, given that the function has an inverse.
h. For linear or simple exponential functions, find a formula for an inverse function by solving an equation.
i. For linear functions or simple exponential functions, verify symbolically by composition that one function is the inverse of another.
j. Write arithmetic and geometric sequences both recursively and in closed form, and translate between the two forms.

Linear vs. exponential behavior

Core Standards · Students understand that:

1. Linear functions grow by equal differences in equal time periods; exponential functions grow by equal factors in equal time periods.
2. The rate of change of a linear function is constant; the rate of change of an exponential function is proportional to the value of the function.
3. Exponential growth eventually outstrips polynomial growth (including, in particular, linear growth).

Students can and do:

a. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.
b. Interpret absolute and relative rates of change and use them to make predictions.
c. Identify the initial value and growth or decay rate from a table or graph of an exponential function.
d. Calculate and interpret the growth factor for an exponential function (presented symbolically or as a table) given a fixed time interval. Estimate the growth factor from a graph.
e. Recognize a quantitative relationship as linear or exponential from description of a situation.

Trigonometric functions

Core Standards · Students understand that:

1. The unit circle in the coordinate plane enables one to extend the domains of the sine, cosine and tangent functions of right-triangle trigonometry to the real numbers.
2. Trigonometric functions are periodic by definition, and sums and products of these functions are periodic.
3. Restricting trigonometric functions to a domain on which they are always increasing or always decreasing allows for the construction of an inverse function.

Core Standards · Students can and do:

a. Use radian measure and revisit graphs of trigonometric functions in terms of radians.
b. Use the unit circle to determine geometrically the values of sine, cosine, tangent for multiples of $\pi/4$ and $\pi/3$; commit sines and cosines of principal angles to memory.
c. Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
d. Solve simple trigonometric equations formally using inverse trigonometric functions;[64] evaluate solutions using technology.
e. Explain relationships between the identity $\sin^2 x + \cos^2 x = 1$, the equation of a circle, and the Pythagorean theorem.
f. Explain proofs of the sine and cosine addition and subtraction formulas.
g. Use trigonometric identities to simplify expressions.
h. Use trigonometric functions to solve problems in science, economics or other fields where periodic phenomena occur.

[64] Solving trigonometric equations by means of the quadratic formula is optional.

Mathematics: High School—Coordinates

A Coherent Understanding of Coordinates.

[Final draft of CCR narrative goes here.]

Expressing geometric properties with equations

Core Standards · Students understand that:

1. The graph of a linear equation is the straight line through any two of its solutions. Conversely, any line is the set of solutions to some linear equation.
2. Two lines with well-defined slopes are parallel if their slopes are equal and perpendicular if their slopes multiply to –1.
3. The equation of a circle can be found using its definition and the Pythagorean theorem.
4. Transforming the graph of an equation by reflecting in the axes, translating parallel to the axes, or applying a dilation to one of the axes correspond to substitutions in the equation.

   For example, reflection in the y axis corresponds to $(x,y) \rightarrow (-x,y)$, translation vertically down by three units corresponds to $(x,y) \rightarrow (x,y+3)$, and dilating by a factor of 2 parallel to the x-axis corresponds to $(x, y) \rightarrow (x/2, y)$.
5. An ellipse is obtained by stretching a circle, leading to an equation of the form $x^2/a^2 + y^2/b^2 = 1$.
6. The formula $A = \pi ab$ for the area of an ellipse can be derived from the formula for the area of a circle.

Core Standards · Students can and do:

a. Write the equation of a line in point-slope form, slope-intercept form, or standard form.
b. Identify parallel and perpendicular lines in a coordinate plane, and use the relationship between slopes of parallel and perpendicular lines to solve problems. Know the equations of vertical and horizontal lines.
c. Find the point on the segment between two given points that divides the segment in a given ratio.
d. Complete the square to find the center and radius of a circle given by an equation.
e. Find an equation for an ellipse given the lengths of its major and minor axes; calculate the area of an ellipse.
f. Use coordinates to solve geometric problems.

   Include proving simple geometric theorems algebraically, using coordinates to compute perimeters and areas for triangles and rectangles, finding midpoints of line segments, finding distances between pairs of points and determining when two lines are parallel or perpendicular.

Vectors and matrices[65]

Core Standards · Students understand that:

1. Vectors are quantities having both magnitude and direction. They are typically represented by directed line segments.
2. On a coordinate plane, vectors are determined by the coordinates of their initial and terminal points or by their x- and y-components.

[65] Limit to vectors in the plane and 2x2 matrices.

3. Vectors can be added end-to-end, component-wise, or by the parallelogram rule. The length of the sum of two vectors is typically not the sum of the lengths.
4. Translations of the plane can be represented by vectors.
5. Vectors are often used to describe "directed quantities" in physics, such as position, velocity, acceleration and force. Vector addition is used to find resultant forces or compute displacements.
6. Multiplying a 2x2 matrix into a vector produces another vector. This can be viewed as a transformation of the plane.
7. A system of two linear equations in two variables can be represented as a single matrix equation in a vector variable.
8. Matrices can be added, subtracted and multiplied.
9. The zero and identify matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a 2x2 matrix determines whether it has a multiplicative inverse.

Core Standards · Students can and do:

a. Represent vectors graphically.
b. Perform basic vector operations (addition, subtraction, scalar multiplication) both graphically and algebraically.
c. Use vectors to model and solve problems.
d. Use trigonometry to decompose a vector into perpendicular components.
e. Add, subtract and multiply matrices.
f. Represent systems of equations as matrix equations.
g. Find the inverse of a matrix if it exists and use it to solve equations.

Complex Numbers

Core Standards · Students understand that:

1. To solve quadratic equations that have no solutions in the real numbers, the number system can be extended to include the square roots of –1, creating a closed number system called the complex numbers.
2. The Properties of Arithmetic and the relation $i^2 = -1$ can be used to perform operations on complex numbers.
3. All polynomials can be factored over the complex numbers, e.g. as in $x^2 + 4 = (x + 2i)(x - 2i)$.
4. Complex numbers can be visualized on the complex plane. Real numbers fall on the horizontal (real) axis, and imaginary numbers fall on the vertical axis.
5. On the complex plane, arithmetic of complex numbers can be interpreted geometrically: addition is analogous to vector addition, and multiplication can be understood as rotation and dilation about the origin. Complex conjugation is reflection across the real axis.
6. The absolute value (or modulus) of a complex number is defined as its distance from the origin in the complex plane. On the complex plane, as on the real line, the distance between numbers is the absolute value of the difference, and the midpoint of a segment is the average of the numbers at its endpoints.
7. Euler's formula $e^{i\theta} = \cos\theta + i\sin\theta$ links complex numbers to trigonometry.

Core Standards · Students can and do:

a. Add, subtract and multiply complex numbers.
b. Find the conjugate of complex a number and use it to find absolute values and divide complex numbers.
c. Graph complex numbers in both rectangular and polar form and interpret arithmetic of complex numbers geometrically.

d. Solve quadratic equations over the complex numbers.
e. Convert complex numbers between rectangular and polar form.
f. Re-derive trigonometric identities using complex methods.

Mathematics: High School—Modeling

A Coherent Understanding of Modeling.

Modeling uses mathematics to help us make sense of the real world—to understand quantitative relationships, make predictions, and propose solutions.

A model can be very simple, such as a geometric shape to describe a physical object like a coin. Even so simple a model involves making choices. It is up to us whether to model the solid nature of the coin with a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. For some purposes, we might even choose to adjust the right circular cylinder to model more closely the way the coin deviates from the cylinder.

In any given situation, the model we devise depends on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models we can create and analyze is constrained as well by the limitations of our mathematical and technical skills. For example, modeling a physical object, a delivery route, a production schedule, or a comparison of loan amortizations each requires different sets of tools. Networks, spreadsheets and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations. One of the insights provided by mathematical modeling is that essentially the same mathematical structure might model seemingly different situations.

The basic modeling cycle is one of (1) identifying the key features of a situation, (2) creating geometric, algebraic or statistical objects that describe key features of the situation, (3) analyzing and performing operations on these objects to draw conclusions and (4) interpreting the results of the mathematics in terms of the original situation. Choices and assumptions are present throughout this cycle.

The modeling cycle and general tools

Core Standards · Students understand that:

1. The behavior of quantities in physical, economic, public policy, social and everyday situations can be modeled using mathematics. Mathematics is used to model relationships among quantities, constraints and objectives.
2. Models are formulated to answer questions about the world based on an analysis of the situation and a conceptual model that involves assumptions and choices.
3. Quantities in the situation are represented by variables in the model, usually through measurement. Modeling includes decisions about what to measure and how, and how well the measurements work for the purpose.
4. Mathematical knowledge and skill are required in order to get results from a mathematical model—even to devise a model in the first place. Areas of mathematics commonly used in modeling include linear, quadratic, exponential or other functions; probability and statistics; and geometry (solid, plane and coordinate). In active modeling, fluency with math content is required in order to focus on the larger problem.
5. Technology is often required in order to obtain results from a model.
6. The results of a mathematical model must be evaluated against evidence and the phenomena at hand. If the mathematics is correct, then unreasonable results point to unreasonable assumptions and the need to revise the model.
7. Real-world problems do not announce that they are amenable to mathematical analysis and solution; bringing mathematics to bear on such a problem is a highly creative act.

Core Standards · Students can and do:

a. Creatively apply the mathematics they know to situations in which it only imperfectly applies—and achieve useful results by doing so.

For example, independently choose to describe HIV transmission as a random event with a fixed probability per sexual encounter.

b. Decide what measures are relevant to a problem.

For example, given the purpose at hand, is traffic safety best measured in terms of fatalities per year or fatalities per vehicle-mile? (or fatalities per 100 million vehicle-miles?)

c. Use network diagrams or other techniques to visualize complex situations with many factors, causes or agents.

For example, what agents and factors are responsible for setting the price of gasoline? How do they interact?

d. In situations with many factors, causes or agents, organize the factors/causes/agents into a hierarchy of importance.

For example, what are the primary, secondary, and relatively rare causes of lung cancer?

e. Use order of magnitude estimates, unprompted, to identify important effects, disregard unimportant effects and predict results of a more detailed model.
f. Use 2-by-2 tables, flowcharts, and other strategies to organize information and manage scenarios.

Modeling with geometry, equations, functions, probability, and statistics

Core Standards · Students can and do:

a. Model physical objects with geometric shapes.

Include common objects that can reasonably be idealized as two- and three-dimensional geometric shapes. Identify the ways in which the actual shape varies from the idealized geometric model.

b. Model situations with equations and inequalities.

Include situations well described by a linear inequality in two variables or a system of linear inequalities defining a region in the plane.

c. Model situations with common functions.

Include situations well described by linear, quadratic or exponential functions; and situations that can be well described by inverse variation ($f(x) = k/x$). Include identifying a family of functions that models features of a problem, and identifying a particular function of that family and adjusting it to fit by changing parameters. Understand the recursive nature of situations modeled by linear and exponential functions.

d. Model situations using probability and statistics.

Include using simulations to model probabilistic situations; describing the shape of a distribution of values and summarizing a distribution with measures of center and variability; modeling a bivariate relationship using a trend line or a regression line.

Mathematics: High School—Statistics

A Coherent Understanding of Statistics.

[Final draft of CCR narrative goes here.]

Summarizing and interpreting categorical, count and measurement data

Core Standards · Students understand that:

1. Statistical methods take variability into account to support making informed decisions based on quantitative studies designed to answer specific questions.
2. Visual displays and summary statistics condense the information in data sets into usable knowledge.

Core Standards · Students can and do:

a. Summarize comparative or bivariate categorical data in two-way frequency tables; interpret joint, marginal and conditional relative frequencies in the context of the data.
b. Compare data on two or more count or measurement variables by using plots on the real number line (dot plots, histograms and box plots); use appropriate statistics to summarize center (median, mean) and spread (interquartile range, standard deviation) of the data sets; interpret changes in shape, center and spread in the context of the data sets, accounting for possible effects of extreme data points.
c. Summarize bivariate quantitative data by giving a regression line and a measure of goodness of fit.

Making inferences and justifying conclusions drawn from data

Core Standards · Students understand that:

1. Statistics is a process for making inferences about population parameters based on a sample from that population; randomness is the foundation for statistical inference.
2. The design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions.

Core Standards · Students can and do:

a. Use probabilistic reasoning to decide if a specified model is consistent with a given data-generating process.
b. Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.
c. Use data from a sample survey to estimate a population parameter.
d. Use data from a randomized experiment to compare two treatments.
e. Evaluate reports based on data.

Mathematics: High School—Probability

A Coherent Understanding of Probability.

[Final draft of CCR narrative goes here.]

Modeling random events with finite sample spaces

Core Standards · Students understand that:

1. Random phenomena can be modeled mathematically using a sample space in which sample points represent distinct outcomes, and in which each sample point is assumed to have the same probability.
2. Events are subsets of a sample space that can be defined using characteristics (or categories) of the sample points, as well as unions, intersections, or complements thereof ('and', 'or', 'not'). A sample point may belong to several events (categories).
3. If A and B are two events (categories), then the conditional probability of A given B, denoted by $p(A \mid B)$, is the fraction of sample points in B that also lie in A.
4. The laws of probability can be used to generate new probabilities from known probabilities.

Core Standards · Students can and do:

a. Compute theoretical probabilities of compound events by constructing and analyzing representations, including tree diagrams, systematic lists, and Venn diagrams
b. Use the addition and multiplication laws of probability to compute probabilities of complementary, disjunctive, and compound events.
c. Apply concepts such as intersections, unions and complements of events, and conditional probability and independence, to define or analyze compound events, calculate probabilities, and solve problems.
d. Construct and interpret two way tables to show probabilities when two characteristics (or categories) are associated with each sample point. Use a two way table to determine conditional probabilities.
e. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
f. Use permutations and combinations to compute probabilities of compound events and solve problems.

Experimenting and simulating to model probabilities

Core Standards · Students understand that:

1. Sets of data obtained from surveys, simulations, or other means, can be used as probability models, by treating the data set itself as a sample space, in which the sample points are the individual pieces of data. The probability of an event within the data set is its relative frequency.
2. The law of large numbers provides the basis for estimating certain probabilities by use of empirical relative frequencies.
3. The probability of an outcome can be interpreted as an assertion about the long-run proportion of the time the outcome will occur if the random experiment is repeated a large number of times. The observed proportion of occurrence for the outcome of interest can be used as an estimate of the relevant probability.

Core Standards · Students can and do:

a. Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.

b. Compare the results of simulations (e.g., random number tables, random functions, and area models) with predicted probabilities. When there are substantial discrepancies between predicted and observed probabilities, explain them in terms of the assumptions of the probability model.
c. Use the relationship between conditional probabilities and relative frequencies in contingency tables to analyze decision problems.
d. Use the mean and standard deviation of a data set to fit it to a normal distribution (bell-shaped curve) and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.
e. Apply the binomial theorem to solve probability problems.

Using probability to make decisions

Core Standards · Students understand that:

1. A probability distribution is a collection of probabilities $\{p_1, \ldots, p_n\}$ for a set of mutually exclusive and jointly exhaustive events $\{E_1, \ldots, E_n\}$. The probabilities in a probability distribution sum to unity.
2. A random variable attaches a value to each event in a probability distribution. The expected value of the random variable is the weighted average of its possible values, with weights given by their respective probabilities.
3. When the possible outcomes of a decision can be assigned probabilities and payoff values, the decision can be analyzed as a random variable with an expected value, e.g. of a wager. If possible, this is the first thing to compute in a decision context.

Core Standards · Students can and do:

a. Calculate expected value to analyze mathematical fairness, payoff.
b. Evaluate and compare options in situations where all of the available options share the same expected value but carry different levels of risk.
c. Analyze each of two options and make a quantitatively informed decision in situations where one option has both a higher expected return and a higher level of risk. Include both low-stakes and high-stakes decisions.
d. Analyze decision problems using probability concepts.

Mathematics: High School—Geometry

A Coherent Understanding of Geometry.

[Final draft of CCR narrative goes here.]

Triangle Congruence

Core Standards · Students understand that:

1. Rigid motions move lines to lines and segments to segments; preserve the distance between points; and preserve measures of angles.
2. Two geometric figures are congruent if there is a sequence of rigid motions that carries one onto the other. This is the principle of superposition.
3. Criteria for triangle congruence can be thought of as answers to the following question: What information about the measures in a triangle ensures that all triangles drawn with those measures are congruent?
4. Criteria for triangle congruence can be established using rigid motions.

Core Standards · Students can and do:

a. Use (in reasoning and problem solving) precise definitions of angles, polygons, parallel and perpendicular lines, rigid motions (rotations, reflections, translations), parallelograms and rectangles; commit these definitions to memory.

b. Prove theorems about lines and angles; test conjectures and identify logical errors in fallacious proofs.

Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; measures of supplementary angles sum to 180°; two lines parallel to a third are parallel to each other; points on a perpendicular bisector of a segment are exactly those equidistant from the segment's endpoints.

c. Prove theorems about triangles; test conjectures and identify logical errors in fallacious proofs.

Theorems include: measures of interior angles of a triangle sum to 180°, base angles of isosceles triangles are equal, the triangle inequality, the longest side of a triangle faces the largest side and vice-versa, the exterior-angle inequality, and the segment joining midpoints of two sides of a triangle parallel to the third side and half the length.

d. Use and prove properties of and relationships among special quadrilaterals: parallelogram, rectangle, rhombus, square, trapezoid and kite.

e. Characterize parallelograms in terms of equality of opposite sides, in terms of equality of opposite angles, and in terms of bisection of diagonals; characterize rectangles as parallelograms with equal diagonals.

Similarity, Right Triangles and Trigonometry

Core Standards · Students understand that:

1. The dilation of a given line is parallel to the given line. (In particular, lines passing through the center remain unchanged.)
2. The dilation of a given segment is parallel to the given segment and longer or shorter in the ratio given by the scale factor. A dilation leaves a segment unchanged if and only if the scale factor is 1.
3. The assumed properties of dilations can be used to establish the AA, SAS and SSS criteria for similarity of triangles.
4. Similarity allows one to view side ratios in right triangles as properties of the angles themselves, leading to elementary definitions of sine, cosine and tangent.

Core Standards · Students can and do:

a. Use triangle similarity criteria to solve problems and to prove relationships in geometric figures.

b. Prove that two lines with well-defined slopes are parallel if and only if they have the same slope, and perpendicular if and only if the product of their slopes is equal to –1.

c. Give an informal explanation using successive approximation that a dilation of scale factor r changes the length of a curve by a factor of r and the area of a region by a factor of r^2.

d. Use and explain the relationship between the trigonometric ratios of complementary angles.

e. Use trigonometric ratios and the Pythagorean theorem to solve right triangles[66] in applied problems.

Circles

Core Standards · Students understand that:

1. All circles are similar.
2. There is a unique circle through three non-collinear points, or tangent to three non-concurrent lines.

Core Standards · Students can and do:

a. Identify and describe relationships among angles, radii, and chords.

Include the relationship between central, inscribed and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

b. Identify and define radius, diameter, chord, tangent, secant and circumference.

c. Determine the arc lengths and the areas of sectors of circles, using proportions.

d. Construct a tangent line from a point outside a given circle to the circle.

e. Prove and use basic theorems about circles, and use these theorems to solve problems. Include:

- Symmetries of a circle
- Similarity of a circle to any other
- Tangent line, perpendicularity to a radius
- Inscribed angles in a circle, relationship to central angles, and equality of inscribed angles
- Properties of chords, tangents and secants as an application of triangle similarity.

Axiomatic Systems

Core Standards · Students understand that:

1. Mathematical statements are proven or disproven by deductive reasoning. Conjectures can arise from inductive reasoning, but they cannot be proven that way.
2. Precise definitions make possible rigorous logical reasoning, and definitions shared in common make possible the objective evaluation of one's own reasoning by others.
3. Logical reasoning requires avoiding common fallacies, such as using an example to prove the rule or confusing a statement with its converse.
4. Axiomatic systems require precise definitions, but some terms must be left "undefined." The axioms specify how the undefined terms behave.
5. The first three postulates of the *Elements* are models of straightedge and compass construction.
6. Hilbert and other mathematicians improved on the *Elements* by identifying its hidden assumptions and making them explicit with additional axioms.

[66] A right triangle has five parameters, its three lengths and two acute angles. Given a length and any other parameter, "solving a right triangle" means finding the remaining three parameters. (It is worth reflecting on why this problem is well-posed.)

7. Three classical construction problems (trisecting an angle, duplicating a cube and squaring a circle) inspired the development of much important mathematics.

8. The Parallel Postulate (axiom) distinguishes Euclidean geometry from other geometries. Other geometries, such as spherical and hyperbolic geometry, use alternatives to the Parallel Postulate. Many theorems of Euclidean geometry are not theorems in other geometries.

Core Standards · Students can and do:

a. Use the terms point, line and plane to define other geometric terms as line segments, angles and rays.
b. With ruler and compass:
   - Divide a segment into any number of equal parts.
   - Given two segments of lengths r and s, construct a segment of length rs and one of length r/s.
   - Given a segment of length r, construct a segment of length $\sqrt{r}$.

Trigonometry of General Triangles

Core Standards · Students understand that:

1. The Law of Sines generalizes the side-angle inequality.

2. The Law of Cosines generalizes the Pythagorean theorem.

3. The Laws of Sines and Cosines embody the triangle congruence criteria, in that three pieces of information are usually sufficient to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that "Side-Side-Angle" is not a congruence criterion.

Core Standards · Students can and do:

a. Explain proofs of the Law of Sines and the Law of Cosines.
b. Use the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Geometric Measurement and Dimension

Core Standards · Students understand that:

1. Congruence plays a fundamental role defining the concepts of length, area and volume.

2. Areas of polygons can be computed by dissecting them into triangles and using the fundamental property of area, that the area of a dissected figure is the sum of the areas of its components.

3. Lengths of curves and areas of curved regions can be defined informally using the concept of "limit."

4. Cavalieri's principle allows one to understand volume formulas informally by visualizing volumes as stacks of thin slices.

Core Standards · Students can and do:

a. Give definitions of rectangular prism, (right) pyramid, (right circular) cone, (right circular) cylinder and sphere.

b. For a pyramid or a cone, give an heuristic argument to show why its volume is (1/3) its height times the area of its base.

c. Use the behavior of length and area under dilations to prove the formulas for the circumference and area of a circle.

d. Apply formulas and solve problems involving volume and surface area of right prisms, right circular cylinders and right pyramids, cones, spheres and composite figures.

e. Identify and apply the 3:2:1 relationship among volumes of circular cylinders, hemispheres and cones with same height and circular base and 3:1 relationship between volume of a prism and pyramid with same base area and height.

f. Identify cross-sectional shapes of slices of three-dimensional objects, and identify three-dimensional objects traced out by rotations of two-dimensional objects.

Mathematics: High School—Calculus

Calculus is an important part of the high school curriculum for a large and growing number of students. To see well-established standards for this course, please see course descriptions such as those of the College Board, International Baccalaureate Organization, or any of the following states: California, Florida, Hawaii, Indiana, Mississippi, Pennsylvania, South Carolina, Tennessee, Utah, and Virginia. We invite feedback from states as to whether they would like to see Calculus in future drafts of the Common Core Standards.

Progressions in Grades K–8

Note, a progression may appear in more than one band.

Grades K-5

Number

Counting and Cardinality
Base Ten Computation
Early Relations and Operations
Quantity and Measurement
Operations and the Problems They Solve
Fractions

Geometry

Shapes
Coordinates
Geometry

Data

Statistics

Grades 6-8

Number

The Number System

Algebra

Ratios and Proportional Relationships
Expressions and Equations
Functions and the Situations They Model

Geometry

Geometry

Data

Statistics
Probability

List of Progressions and Grade Ranges

Strand	Progression	Start	End
Number	Counting and Cardinality	K	K
	Early Relations and Operations	K	1
	Base Ten Computation	K	5
	Quantity and Measurement	K	5
	Operations and the Problems They Solve	2	4
	Fractions	3	5
	Ratios and Proportional Relationships	6	7
	The Number System	6	8
Geometry	Shapes	K	4
	Coordinate Geometry	5	5
	Geometry	6	8
Algebra*	Expressions and Equations	6	7
	Functions & The Situations They Model	8	8
Data*	Statistics	5	8
	Probability	7	8

* The Algebra and Data strands have concepts and skills in earlier grades that progressions in the Number strand.

GLOSSARY

Additive inverses. Two numbers whose sum is 0 are additive inverses of one another. Example: $3/4$ and $-3/4$ are additive inverses of one another because $3/4 + (-3/4) = (-3/4) + 3/4 = 0$.

Algorithm. A step by step routine that always gives some answer, rather than ever giving no answer; that always gives the right answer, and never gives a wrong answer; that can always be completed in a finite number of steps, rather than in an infinite number of steps; and that applies to all problems of a given type (e.g., adding any two multidigit whole numbers, or bisecting any angle). Cf. Wikipedia's "effective procedure," from which this definition is adapted.

Common logarithm. The common logarithm of x is the power to which you raise 10 in order to get x.

Congruent. Two plane or solid figures are congruent if one can be obtained from the other by a sequence of rigid motions (rotations, reflections, and translations).

Dilation. A transformation that moves each point along the ray through the point emanating from a fixed center, and multiplies distances from the center by a common scale factor.

Integer. A positive whole number, a negative whole number, or 0.

Mean. The sum of the values in a list divided by the number of values in the list. (To be more precise, this defines the *arithmetic mean*.)

Median. In a list of values, the value appearing at the center of a sorted version of the list — or the mean of the two central values, if the list contains an even number of values.

Multiplicative inverses. Two numbers whose product is 1 are multiplicative inverses of one another. Example: $3/4$ and $4/3$ are multiplicative inverses of one another because $3/4 \times 4/3 = 4/3 \times 3/4 = 1$.

Range. The difference between the greatest and smallest values in a list of numbers.

Rational number. A number expressible in the form a/b for integers a and $b \neq 0$. The rational numbers include positive and negative integers, positive and negative fractions, and 0.

Related fractions. Two fractions are *related* if one denominator is a factor of the other. (See Ginsburg, Leinwand and Decker (2009), *Informing Grades 1-6 Mathematics Standards Development: What Can Be Learned from High-Performing Hong Kong, Korea, and Singapore?*, Table A1, p. A-5, grades 3 and 4.)

Similarity transformation. A rigid motion followed by a dilation.

Single-place number. The numbers that result when a whole number between 1 and 9 (inclusive) is multiplied by the numbers 10, 100, 1000, etc.

Teen number. A whole number that is greater than or equal to 11 and less than or equal to 19.

Transitive property of measurement order. If one object is bigger than a second, and the second object is bigger than a third object, then the first object is bigger than the third object.

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

What follows is a sample of sources consulted in the drafting of the Core Standards for Reading, Writing, and Speaking and Listening. Citations are organized by the standard to which they pertain. For example, all sources with specific relevance to reading standard #1 are listed below that standard. Each citation contains a link to the section of the source document that is relevant to the core reading, writing, or speaking and listening standard to which it corresponds. For more information on sources and how they were used in the drafting of the core standards, please refer to the "College and Career Readiness Standards for Reading, Writing, and Speaking and Listening."

Reading Evidence

Reading 1. Determine both what the text says explicitly and what can be inferred logically from the text.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #4, pgs. 98-99)
- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #2 "Making inferences and drawing conclusions")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #4 and #15).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- *AP European and World History Course Descriptions* (2009), New York, NY: College Board (see pgs. 21-24 in AP European History for document-based question expectations). AP World and U.S. History also have these expectations.

Career Readiness

- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Main Ideas and Supporting Details")
- *Hawai'i Career Ready Study.* (2007). Commissioned by the Hawai'i P-20 Initiative. (see sample task "Review Commercial Real Estate Loan Application," Banking/Loan Officer; see sample task "Review claim letter," Insurance/Claims Agent)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.1.2.a)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package,* Prescribed Learning Outcomes, 2007 (Grade 12) (see B6, B7)
  3. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 5.4.a. Higher; 5.5.a. Ordinary)
  4. **Ontario, Canada:** *The Ontario Curriculum, English,* 2007 (see 1.4. Grade 12 Reading & Literature Studies)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **Singapore:** *English Language Syllabus 2001,* Learning Outcomes for O-Levels (≈ Grades 10-11) (see 8.1.d, 8.2.d, 8.3.c)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 293, Reading Proficiency Levels 2 and 4) (PISA 2006, Vol. 1, full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pgs. 112-115, esp. pg.114 "Retrieving Information")

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Reading Competencies, Comprehension and Retention, bullet 14)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see 1.A.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools.* (see 2.5. Grades 11-12, 2.0 Reading Comprehension Grades 11-12, 2.2.a-e Writing Applications Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework,* June 2001. (see General Standard 8: Understanding a Text, General Standard 12: Fiction, General Standard 13: Nonfiction)

U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Locate and Recall," see "Integrate and Interpret," see Basic and Advanced – Literary; Proficient – Informational)

Reading 2. Support or challenge assertions about the text by citing evidence in the text explicitly and accurately.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #6, pgs. 102-103)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #7 "Justifying a personal interpretation of a text through specific references")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #4 and #15).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- *AP European and World History Course Descriptions* (2009), New York, NY: College board (see pgs. 21-24 in AP European History for document-based question expectations). AP 5 high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30 2.3.2.b and 30.3.2.3.c)
    2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B8)
    3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (see 1.4 &1.7, Grade 12 Reading & Literature Studies)
    4. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 1, Key Skill 4; Unit 3, Outcome 1, Key Skill 3)

- A counterpart of this standard also appears in the English language arts standards of the following :

    1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.d)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 289, example PISA item "Graffiti") (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (see pg. 115, "Reflecting on and Evaluating the Content of a Text")

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2009). *Reading Framework for the 2009 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Proficient-Informational bullet 1)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.A.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

1. **California:** *English-Language Arts Content Standards for California Public Schools.* (see 2.4, Reading Comprehension Grades 11-12; 2.2.b, Grades 9-10, 3.2 Literary Response and Analysis Grades 11-12, 2.2.c Writing Applications Grades 11-12)
2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 8.30, General Standard 11: Theme, 11.5, 11.7; General Standard 13: Nonfiction;General Standard 15: Style and Language)

Reading 3. Discern the most important ideas, events, or information, and summarize them accurately and concisely.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #4, pgs. 98-99)
- *Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices. New York, NY: College Entrance Examination Board* (see pg. 7- skills rated by importance to post-secondary instructors- skill #1 "Identifying and/or summarizing the theme or central argument of a text," skill #4 "Understanding and paraphrasing points made in a text")
- ACT (2006), *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #3, #6).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Informational Text 2. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 9. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (Workplace Task #5, pg. 82-83)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 3 on pg. 13; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Main Ideas and Supporting Details")

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 20.2.1.2.b)
2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B6, B7)
3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Reading bullet 2)
4. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 4.1.1.a; 4.1.1.c)
5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.3, Grade 12 Reading & Literature Studies)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 8.1.b, 8.2.b, 8.3.a)

- Organization for Economic Cooperation and Development. (2006). PISA 2006: *Science Competencies for Tomorrow's World, Vol. 1* (see pg. 291, example PISA item "Runners") (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (see pg. 114, "Forming a Broad General Understanding")

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities. (see Making the Reading/Writing Connection bullet 2; Reading Competencies, Comprehension and Retention bullets 1, 2 and 5)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 8: Understanding a Text)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Locate and Recall", see Basic-Informational bullet 1)

Reading 4. Delineate the main ideas or themes in the text and the details that elaborate them.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #4, pgs. 98-99)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- ACT (2006), *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #3, #6).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Informational Text 2. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 9. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (Workplace Task #5, pg. 82-83)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 2, page 12; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Main Ideas and Supporting Details")

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 20.2.1.2.b; 10/20/30.2.3.2.f)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see B6, B7)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Reading bullet 2)
  4. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 4.1.1.a)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.3 and 1.6, Grade 12 Reading & Literature Studies)
  6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 1, Key Knowledge 1; Unit 2, Outcome 1, Key Skill 2; Unit 3, Outcome 2, Key Knowledge 2)
- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 1.4.a-b)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11)
     (Did not participate in PISA) (see 8.1.b-c, 8.2.b; 9.1.c)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- Organization for Economic Cooperation and Development. (2006). PISA 2006: *Science Competencies for Tomorrow's World, Vol. 1* (see pg. 291, example PISA item "Runners") (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (see pg. 114, "Forming a Broad General Understanding")

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, F2 - in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities. (see Reading Competencies, Comprehension and Retention bullets 5 and 6, Listening)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **Massachusetts:** English Language Arts Curriculum Framework, June 2001. (see General Standard 8: Understanding a Text, 8.30; General Standard 11: Theme, 11.5, 11.6, 11.7)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Locate and Recall", see 12th Grade)

Reading 5. Determine when, where, and why events unfold in the text, and explain how they relate to one another.

College Readiness

- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #11, #14, #21, #24).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Informational Text 6. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10.)
- *Florida American Diploma Project Survey Results.* (see row 20. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Sequential, Comparative, and Cause-Effect Relationships")

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see points 1 and 2, page 12; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.1.2.h)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.0.1)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Reading bullets 3 and 10; Language Development bullet 2, dash 2)
  4. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 4.2.1.b, Higher Level)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.6, Grade 12 Reading & Literature Studies)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.a; 2.2.k)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 293, Reading Proficiency Level 3)(PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pg. 115, "Developing an Interpretation")

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2009). *Reading Framework for the 2009 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Proficient – Literary bullet 2)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.A.4)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools.* (see 3.6, Reading Comprehension Grades 9-10)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 13: Nonfiction, 13.25, 13.27)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Reading 6. Analyze the traits, motivations, and thoughts of individuals in fiction and nonfiction based on how they are described, what they say and do, and how they interact.

College Readiness

- ACT (2008) *College Readiness Standards*. Iowa City IA (see p. 21: Sequential, Comparative, and Cause-Effect Relationships)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.1.2.d; 30.2.3.1.c; 20/30.2.3.2.d; 10/20/30.5.1.1.c)
  2. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 1, Key Knowledge 1)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.2.d; 8.2.d)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, H8– in 9 of 12 states analyzed)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.A.4)
- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see Proficient bullets 1 and 3 and Advanced bullet 3- Literary, see "Integrate and Interpret")
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools* (see Reading 3.3, 3.4, grades 9-10)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Reading 7. Determine what is meant by words and phrases in context, including connotative meanings and figurative language.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #6, pgs. 102-103)
- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #8 "Determining the meaning of unfamiliar words from context," skill #18 "Understanding figurative language...")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted to clarify which skills are most important to post-secondary instructors, see skill #7, skill #19).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (See Language 4. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

- ACT (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Meaning of Words")
- ACT (2009) See ACT WorkKeys "Reading for Information" Level 5 requirements (Level 5 is workplace training and college ready).
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see pg. 11, point d; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 20.2.1.2.f)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B6; B13)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.CC.1)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (Listening, bullet 8; Reading, bullets 1 and 12)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12, see 3.1-3.3, Reading and Literature Studies)

6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 2, Outcome 1, Key Knowledge 4)

- A counterpart of this standard also appears in the English language arts standards of the following :

1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 7.d)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Reading Competencies, Comprehension and Retention bullet 15; Listening bullet 3)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.B.3)
- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Vocabulary Assessment on the 2009 Reading Assessment," see pg. 47 "Preliminary Achievment Levels: Vocabulary")
- A counterpart of this standard appears in the English language arts standards from the following states:

1. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (General Standard 4: Vocabulary and Concept Development, 4.23)

Reading 8. Analyze how specific word choices shape the meaning and tone of the text.

College Readiness

- *Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices. New York, NY: College Entrance Examination Board* (see pg. 7- skills rated by importance to post-secondary instructors- skill #14: "Understanding words that have multiple definitions," skill #17: "Distinguishing between connotative and denotative meanings of words," skill #20: "Identifying the tone of the the text.")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #7, #10, and #19).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

Illustrative International Benchmarks

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.1.2.f; 20.2.1.2.e; 30.2.2.2.b and c)
2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B13)
3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.CC.1; AI 5.CC.3)
4. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 4.3.1.a; 4.1.1.h)
5. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) Outcome 4: C-4, 4.1, 4.2, 4.3, HSC; C-4, 4.1, 4.2, Preliminary and C-7.1, Preliminary)
6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.3, Grade 12 Reading and Literature)
7. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 2, Key Knowledge 1)

- A counterpart of this standard also appears in the English language arts standards of the following :

1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.j; 2.2.m)
2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 6.b)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 289, example PISA item "Graffiti") (PISA 2006, Vol. 1 full PDF).

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, A6- in 11 of 12 states analyzed)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.C.3)
- A counterpart of this standard appears in the English language arts standards from the following states:

1. **California:** *English-Language Arts Content Standards for California Public Schools* (see 2.2 Reading Comprehension Grades 11-12; 3.3 Literary Response and Analysis Grades 11-12, 2.2.d Writing Applications Grades 11-12)
2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 14.6; and General Standard 15: Style and Language, 15.7, 15.10)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see Proficient - Literary bullet 4, see "Critique and Evaluate")

Reading 9. Analyze how the text's organizational structure presents the argument, explanation, or narrative.

College Readiness

- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #3 "Understanding organizational strategies such as introduction, supporting examples, summary")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #6, #10, #12).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada**: English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.2.1.a; 30.2.2.1.c)
  2. **British Columbia, Canada**: *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B12)
  3. **Finland**: *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.CC.1)
  4. **Hong Kong**: *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Reading, bullet 10)
  5. **Ireland**: *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 4.2.1.b; 4.4.1.c; 4.1.1.h; 5.5.b, Ordinary Level; 5.4.c, Higher Level)
  6. **New South Wales, Australia**: *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see Outcome 4; C-4, 4.1, 4.2, Preliminary)
  7. **Ontario, Canada**: *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.6, Grade 12 Reading and Literature)
  8. **Victoria, Australia**: *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 4, Outcome 2, Key Knowledge 1 and Skill 1; Unit 1, Outcome 1, Key Skills 1 and 4; Unit 1, Outcome 2, Key Knowledge 1 and 2; Unit 2, Outcome 1, Key Knowledge 2 and 4 and Skill 1; Unit 3, Outcome 1, Key Knowledge 2 and Skill 1; Unit 2, Outcome 3, Key Knowledge 2)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England**: *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.1 and 2.2.k)
  2. **Singapore**: *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 6.b, 7.c)

- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pg. 116, "Reflecting on and Evaluating the Form of a Text")
- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (See pg. 289, example PISA item "Graffiti") (PISA 2006, Vol. 1 full PDF)

Illustrative Alignment with State and Other Standards

- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.C.3)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California**: *English-Language Arts Content Standards for California Public Schools* (see Reading 2.2, grades 11-12)
  2. **Massachusetts**: *English Language Arts Curriculum Framework*, June 2001. (see General Standard 13: Nonfiction 13.25, 13.27)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Critique and Evaluate")

Reading 10. Analyze how specific details and larger portions of the text contribute to the meaning of the text.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #4, pgs. 98-99)
- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #6 "Identifying the purpose of a portion of the text")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #10, #12, #16).

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Informational Text 2. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 9. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).

Career Readiness

- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2 "Main Ideas and Supporting Details")

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.2.1.2.b; 10/20/30.2.3.2.f)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.0.1)
  3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.6, Grade 12 Reading & Literature Studies)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 1.4.a)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 8.1.c)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 293, Reading Proficiency Level 3) (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills. Paris, France: Organization for Economic Cooperation and Development.* (see pgs. 112-115, esp. pg.114 "Retrieving Information," and "Forming a Broad General Understanding")

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, F2- in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Reading Competencies, Comprehension and Retention bullet 6; Reading Competencies, Depth of Understanding bullet 4)
- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Locate and Recall", see "Integrate and Interpret")
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools.* (see 2.2.a-e, Writing Applications Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 8: Understanding a Text, 8.33, 8.34, General Standard 15: Style and Language, 15.8)

Reading 11. Synthesize data, diagrams, maps, and other visual elements with words in the text to further comprehension.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #2, pgs. 92-93; sample post-secondary assignment #3, pgs. 94-97)
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Informational Text 5. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see Row 28. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (Workplace Tasks #1-4, pgs. 74-81.)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 2, page 12; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 3 "Data Representation and Statistical Thinking"- WorkKeys Column, Skill 3)
- *Hawai'i Career Ready Study.* (2007). Commissioned by the Hawai'i P-20 Initiative. (see sample task "Build wall frame and building ramp," Construction/Carpenter; sample task "Draft memo to all employees," Hotel/Guest Services Manager; see also F5 for the occupational tasks for which this skill is important.)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B12)
    2. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Numeracy Skills, Senior Secondary, bullet 2 and 1 and 2)
    3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.1, Grade 12 Reading and Literature)

- A counterpart of this standard also appears in the English language arts standards of the following :

    1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 7.a)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (see pg. 290, example PISA item "Lake Chad," and pg. 288 example PISA item "Labour") (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pgs. 110-111, "Non-Continuous Texts")

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, F5- in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Reading Competencies bullet 1)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.F.1 and I.F.2)
- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Procedural Texts and Documents", see "Integrate and Interpret")
- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California:** *English-Language Arts Content Standards for California Public Schools* (see 2.1, Reading Comprehension Grades 9-10)

Reading 12. Extract key information efficiently in print and online using text features and search techniques.

College Readiness

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Research 2. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see Row 10. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 10/20/30.3.2.1.b, 10/20/30.2.1.4.a)
    2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see B6)
    3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.0.4)
- A counterpart of this standard also appears in the English language arts standards of the following :

    1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.a, 8.1.b)

Illustrative Alignment with State and Other Standards

- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California:** *English-Language Arts Content Standards for California Public Schools* (see 2.1, Reading Comprehension Grades 9-10)

Reading 13. Ascertain the origin, credibility, and accuracy of print and online sources.

College Readiness

- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #5).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Research 3. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 18. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Career Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample Workplace Task #5, see sample Workplace Task #6, pg. 82-85)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point 4 on pg. 13; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30.3.2.2.a, 10/20/30.3.2.2.c, 10/20/30.3.2.2.d)
    2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.0.4)
    3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.5, Grade 12 Writing)

- A counterpart of this standard also appears in the English language arts standards of the following :

    1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.f)
    2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.f)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, E4- in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies – Style/Expression bullet 4 and Technological Competencies bullet 7)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see III.B.5 and III.B.7*)
- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California:** *English-Language Arts Content Standards for California Public Schools* (see 2.3, Reading Comprehension, Grades 11-12, 2.4, Writing Applications Grades 11-12)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see "Multiple Texts")

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Reading 14. Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing whether the evidence provided is relevant and sufficient.

College Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample post-secondary assignment #5, pgs. 100-101)
- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #5 "Distinguish fact from opinion," skill #10 "Identifying logical flaws or discrepancies in an author's argument)
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #5, #8, #9, #12, #17, #18, #20).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Logic 4. Survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- *AP European and World History Course Descriptions* (2009), New York, NY: College Board (see pgs. 21-24 in AP European History for document-based question expectations). AP World and U.S. History also have these expectations.

Career Readiness

- Achieve, Inc. (2004). *The American Diploma Project, Ready or Not: Creating a High School Diploma that Counts.* Washington, DC: Achieve, Inc. (see sample workplace task #6, pg. 84-85)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point 4 on pg. 13 and point 2 on pg. 18; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada**: English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.3.2.2.d, 10/20/30/3.2.2.c)
    2. **British Columbia, Canada**: *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B9)

3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 4.CC.1 and 3)
4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Reading bullets 4, 6, 7 and 13; Critical Thinking bullets 1 and 5)
5. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 4.2.1.a-c)
6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 2, Outcome 3, Key Knowledge 1 and Skills 1 and 2; Unit 3, Outcome 2, Key Knowledge 2)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 1.4.c and 2.2.f)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.e, 7.c)

- Organization for Economic Cooperation and Development. (2006). *PISA 2006: Science Competencies for Tomorrow's World, Vol. 1* (See pg. 289, example PISA item "Graffiti") (PISA 2006, Vol. 1 full PDF)
- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pg. 115, "Reflecting on and Evaluating the Content of a Text")

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see pg. 17, E4 – in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Fostering Habits of Mind Essential for Success bullet 5)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see III.B.7*)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools* (see Reading 2.8, grades 9-10; Reading 2.0 and 2.6, grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 8.31 and 8.34, and 13.24, 13.26; and General Standard 13: Nonfiction)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see Proficient bullet 5 and Advanced bullets 1, 3 and 5 – Informational, see "Critique and Evaluate")

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Reading 15. Analyze how two or more texts with different styles, points of view, or arguments address similar topics or themes.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Entrance Examination Board (see pg. 7- skills rated by importance to post-secondary instructors- skill #19 "Comparing and contrasting two texts")
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #25).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- *AP European and World History Course Descriptions* (2009), New York, NY: College board (see pgs. 21-24 in AP European History for document-based question expectations). AP World and U.S. History also have these expectations.
- *Florida American Diploma Project Survey Results.* (see row 23. Survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 5.5.d. Ordinary; 4.4.1.f and 5.4.d. Higher)
  2. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see Outcome 2; C-2, 2.1, 2.2, 2.3, Preliminary; C-1.1, C-2, 2.1, 2.2, 2.3, HSC)
  3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.6, Grade 12 Oral Communication)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.m and 2.2.n, 1.4.b)

- Organization for Economic Cooperation and Development. (2003). *The PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills.* Paris, France: Organization for Economic Cooperation and Development. (pg. 115, "Developing an Interpretation")

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Making the Reading/Writing Connection bullet 4)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see I.C.5)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools* (see 3.5, Reading Comprehension grades 9-10, 2.4.b Writing Applications Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 10.5, 11.7, 15.10)

- U.S. Dept. of Education. (2009). *Reading Framework for the National Assessment of Educational Progress 2009.* Washington, DC: National Assessment Governing Board. (see Advanced - Literary bullet 4, see "Multiple Texts", see"Integrate and Interpret")

Reading 16. Draw upon relevant prior knowledge to enhance comprehension, and note when the text expands on or challenges that knowledge.

College Readiness

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 10/20/30.2.1.3.a , 20.2.1.3.a, 30.2.1.3.b, 30.3.2.3.a, 10/20/30.2.1.1.d)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see B5)
  3. **Ontario, Canada:** *The Ontario Curriculum*, English, 2007 (see 1.2 and 1.5 Grade 12 Reading & Literature Studies)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 7.e, 8.1.d and 8.2.e)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Making the Reading/Writing Connection bullet 3)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Reading 17. Apply knowledge and concepts gained through reading to build a more coherent understanding of a subject, inform reading of additional texts, and to solve problems.

College Readiness

- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pgs. 51-54, and sample exam expectations for literature beginning on 56).
- *AP European and World History Course Descriptions* (2009), New York, NY: College board (see pgs. 21-24 in AP European History for document-based question expectations). AP World and U.S. History also have these expectations.
- ACT. (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 44-45, these data have been re-sorted to clarify which skills are most important to post-secondary instructors, see skill #9, #22, #23, #25).

Career Readiness

- ACT. (2006). *Ready for College and Ready for Work: Same or Different?* Iowa City, IA: ACT. (pgs. 3-5, see Table 2, "Sequential, Comparative, and Cause-Effect Relationships," WorkKeys Column, Points 1 and 2)
- ACT (2009) See ACT WorkKeys "Reading for Information" Level 5 requirements (Level 5 is workplace training and college ready).
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 1, page 12; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.6, Grade 12 Oral Communication)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.e)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.2.f)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. (see pg. 17, E8– in 10 of 12 states analyzed)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools* (2.3, Reading Comprehension Grades 11-12)

Reading 18. Demonstrate facility with the specific reading demands of texts drawn from different disciplines, including history, literature, science, and mathematics.

Disciplinary Literacy Research

The following are a few seminal works of research on disciplinary literacy, which is at the heart of this standard. The sources below cannot be categorized as college or career readiness materials or evidence from a set of standards. Rather, it is general research that provides insight into the field of disciplinary literacy.

- Carnegie Council on Advancing Adolescent Literacy. (2010). *Time to act: An agenda for advancing adolescent literacy for college and career success*. New York, NY: Carnegie Corporation of New York.
- Fang, Z., & Schleppegrell, M. J. (2008). *Reading in secondary content areas.* Ann Arbor: University of Michigan Press.
- Lee, C.D., Spratley, A. (2010). *Reading in the disciplines: The challenges of adolescent literacy*. New York, NY: Carnegie Corporation of New York.
- Moje, E. B., Young, J. P., Readence, J. E., & Moore, D. W. (2000). Reinventing adolescent literacy for new times: Perennial and millennial issues. *Journal of Adolescent and Adult Literacy, 43*, 400–410.
- Schleppegrell, M. J. (2004). *The language of schooling: A functional linguistics perspective.* Mahwah, NJ: Lawrence Erlbaum Associates.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review, 78*, 40–59.

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Writing Evidence

Writing 1. Establish and refine a topic or thesis that addresses the specific task and audience.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #12, #37).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- Conley, D. (2003) *Understanding University Success: English Work Samples.* Eugene, OR: Center for Educational Policy Research.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #15, #23).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Research 1 and Writing 3; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see rows 5 and 12; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point *b* on pg. 24; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.3.1.1.a and 10/20/30.3.1.1.c)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 5.0.3 and AI 8.CC.3)
  3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.1 and 1.2, Grade 12 Writing)

- A counterpart of this standard also appears in the English language arts standards of the following:

1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 4.b)

Illustrative Alignment with State and Other Standards

- *Intersegmental Committee of the Academic Senates (ICAS).* (2002) Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities. (see Writing Competencies, Invention, bullet 4)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.E.1 & III.A.1)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (1.0, Writing Strategies Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 19: Writing, 19.26, 19.27, 19.30)

Writing 2. Gather the information needed to build an argument, provide an explanation, or address a research question.

College Readiness

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (See Research 2; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 10; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see pgs. 22-25; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30.3.2.1.b)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C6)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.O.4 and AI 2.CC.3; AI 5.O.3)
  4. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see C-10.3, HSC)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.3, Grade 12 Writing)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.h)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Making the Reading/Writing Connection, bullet 6)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see III.B.1 and III.A.2, III.B)

Writing 3. Sustain focus on a specific topic or argument.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #3, #12).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #15).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30.4.1.3.c and 20.4.1.3.e; 20/30.4.2.1.a; 10/20.4.2.2.d)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 8.O.2)
  3. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 4, Outcome 1, Key Skill 1)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.d-e)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 4.b; 4.e; 5.b)

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2007). *Writing Framework for the 2011 National Assessment of Educational Progress*. Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guides Level 6 "To Persuade"; "To Explain"; "To Convey Experience")
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California**: *English-Language Arts Content Standards for California Public Schools*, 1997. (see 1.3, Writing Strategies Grades 11-12)
  2. **Massachusetts**, *English Language Arts Curriculum Framework*, June 2001. (see General Standard 19: Writing, 19.26, 19.27, 19.30)

Writing 4. Support and illustrate arguments and explanations with relevant details, examples, and evidence.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices*. New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #3, #4).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006*. Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #3).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.4.1.3.e and 20/30.4.1.3.g)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C7; C8)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.CC.3)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide, 2007*. (≈Grades 10-11) (see bullet 4, Writing)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.4 & 1.5, Grade 12 Writing)
  6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 2, Key Skill 3; Unit 4, Outcome 1, Key Skill 1)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.h)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 4.b-c and 5.c; 9.1.d)

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress*. Washington, DC: National Assessment Governing Board. (see Proficient Achievement Level, Grade 12, box 3, Holistic Scoring Guides Level 6 "to Persuade"; "To Explain"; "To Convey Experience")
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Writing Competencies, Arrangement, bullet 1: Fostering Habits of Mind Essential for Success, bullet 16)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success*. Eugene, OR: Center for Educational Policy Research. (see II.E.2 and IV.B.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California**: English-Language Arts Content Standards for California Public Schools, 1997. (see 1.3, Writing Strategies Grades 11-12)
  2. **Massachusetts**, English Language Arts Curriculum Framework, June 2001. (see General Standard 19: Writing, 19.26, 19.27, 19.30)

Writing 5. Create a logical progression of ideas or events, and convey the relationships among them.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices*. New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #3, #7, #9, #21, #26).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- Conley, D. (2003) *Understanding University Success: English Work Samples.* Eugene, OR: Center for Educational Policy Research.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #4, #9, #12, #17, #19, #22, #29, #30).

Career Readiness

- ACT (2009) See ACT WorkKeys Writing Level 3 requirements (Level 3 is workplace training and college ready).

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30.3.2.1.d; 20/30.4.2.2.b; 10/20.4.2.2.d-e)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C6; C13)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI.5.O.3; AI.8.O.2; AI.8.CC.3)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see bullets 1-3 and 8-9, Writing; bullet 2, Senior Secondary)
  5. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see 9.2 Preliminary)
  6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.4, 2.6, Grade 12 Writing)
  7. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 2, Outcome 2, Key Skill 5)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.c; 2.3.e-f)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (See 4.a-b; 4.e-f; 5.b; 5.g)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see C3 - in 12 of 12 states analyzed)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Advanced Achievement Level, Grade 12, box three, Holistic Scoring Guides Level 6 "to Persuade"; "To Explain"; "To Convey Experience")

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, Arrangement, bullets 3 and 4)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.D.2 and II.D.4, II.F.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (See 1.3, Writing Strategies Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 19: Writing, 19.26, 19.27, 19.30; General Standard 23: Organizing Ideas in Writing, 23.13, 23.14, 23.15)

Writing 6. Choose words and phrases to express ideas precisely and concisely.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #5, #27).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #28).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Language 6 and Writing 2; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 20/30.4.2.3.b)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grades 11-12) (see C12)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI.2.CC.1, AI.5.CC.3)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see bullet 9, Writing; point 5, Senior Secondary)

5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.3, Grade 12 Writing)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see C2- in 12 of 12 states analyzed)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Advanced Achievement Level, Grade 12, box 5; Holistic Scoring Guides Level 6 "to Persuade"; "To Explain"; "To Convey Experience")
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (Writing Competencies, Style/Expression, bullet 1)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.D.5 & II.E.5)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 1.5, Writing Strategies Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 21: Revising, 21.8, 21.9)

Writing 7. Use varied sentence structures to engage the reader and achieve cohesion between sentences.

College Readiness

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 20/30.4.2.3.c; 20/30.4.2.4.f)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C12)
  3. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 5.3)
  4. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.4, Grade 12 Writing)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.g, 2.3.m)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2007). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guides Level 6, bullet 4 "to Persuade"; "To Explain"; "To Convey Experience"; Advanced Achievement Level, Grade 12, box four)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, Style/Expression, bullet 1)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.D.3)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 1.1, Written and Oral Language Conventions Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 19.26, 19.27)

Writing 8. Develop and maintain a style and tone appropriate to the task, purpose, and audience.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #3, #12, #23, #37).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #15, #20).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Writing 2 and 5; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see rows 22 and 26; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *Hawai'i Career Ready Study.* (2007). Commissioned by the Hawai'i P-20 Initiative. (see pgs. 36-38 sample task "Draft memo to all employees," Hotel/Guest Services Manager)
- ACT (2009) See ACT WorkKeys Writing Level 3 requirements (Level 3 is workplace training and college ready).

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 20.4.1.1.c; 10/20/30.4.2.3.a and 20.4.2.3.d)
    2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grades 11-12) (see C12)
    3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.CC.1; AI 5.O.3; AI 8.CC.3)
    4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (See bullets 9 and 12, Writing)
    5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.2, Grade 12 Writing)
    6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 2, Key Knowledge 4; Unit 3, Outcome 2, Key Knowledge 1)

- A counterpart of this standard also appears in the English language arts standards of the following :

    1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.b)
    2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 5.e and 5.g)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see C2 - in 12 of 12 states analyzed)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Advanced Achievement Level, Grade 12, box 6; Holistic Scoring Guides Level 6, bullet 4 "to Persuade"; "To Explain"; "To Convey Experience")
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, Invention, bullet 2)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.E.4-6 and II.D.6*)
- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 1.2, 1.5, and 1.9, Writing Strategies Grades 11-12)
    2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 21: Revising, 21.8, 21.9)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Writing 9. Demonstrate command of the conventions of standard written English, including grammar, usage, and mechanics.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #6, #8, #11, #13, #16, #18, #19, #20, #25, #26, #28, #31, #32, #34, #39, #40, #41, #43, #44).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- Conley, D. (2003) *Understanding University Success: English Work Samples.* Eugene, OR: Center for Educational Policy Research.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #2, #5, #6, #7, #8, #10, #11, #14, #16, #18, #20, #21, #24, #25, #26, #28).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Language 1; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 3; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *Hawai'i Career Ready Study.* (2007). Commissioned by the Hawai'i P-20 Initiative. (see pgs. 22-24 sample task "Pass entrance exams for apprenticeship." Military/Navy Shipyard Apprenticeship)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see top half, pg. 10; pg. 17; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- ACT (2009) See ACT WorkKeys Writing Level 3 requirements (Level 3 is workplace training and college ready).

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 4.2.4.b-g)
    2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grades 11-12) (see C14)
    3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 8.C.4)
    4. **Ireland:** *Leaving Certificate/English Syllabus* for Higher Level and Ordinary Level (≈ Grades 10-11) (see 5.3)

5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 3.3 and 3.4, Grade 12 Writing)
6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 1, Key Skill 7)

- A counterpart of this standard also appears in the English language arts standards of the following:

1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 1.1.c; 2.3.n-o)
2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 5.d; 6.c)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see A1 - in 12 of 12 states analyzed)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Advanced Achievement Level, Grade 12, box 7; Holistic Scoring Guides Level 6, bullet 4 "to Persuade"; "To Explain"; "To Convey Experience")
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, Style/Expression, bullet 2)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.A & II.B)
- A counterpart of this standard appears in the English language arts standards from the following states:

1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 1.1 and 1.2, Written and Oral English Language Conventions Grades 11-12)
2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. see 5.28, 5.30; 21.8; General Standard 22: Standard English Conventions, 22.9, 22.10)

Writing 10. Represent and cite accurately the data, conclusions, and opinions of others, effectively incorporating them into one's own work while avoiding plagiarism.

College Readiness

- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #13).

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Writing 6; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (See row 21; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point 4 on pg. 25; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 3.2.1.c; 3.2.1.e)
2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C14)
3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (1.3, Grade 12 Writing)
4. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 3, Key Skill 5)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, "Students will be assigned writing tasks...," bullet 14; Technology Competencies, bullet 8)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.D.7; III.B.4; III.B.6)
- A counterpart of this standard appears in the English language arts standards from the following states:

1. **California**: *English-Language Arts Content Standards for California Public Schools*, 1997. (See 1.7, Writing Strategies Grades 9-10)
2. **Massachusetts**, *English Language Arts Curriculum Framework*, June 2001. (see 24.5)

Writing 11. Assess the quality of one's own writing, and, when necessary, strengthen it through revision.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #7, #12, #16, #24, #33, #37).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skill #15).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Writing 4 and 5; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see rows 16 and 22; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 20/30.4.2.1.a-d; 30.4.2.2.a, 20/30.4.2.2.b-c, 10/20.4.2.2.d-e)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C7)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (AI 2.O.2; AI 2.CC.3; AI 5.O.3; AI 8.CC.3)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see bullet 7, Writing; see Senior Secondary, bullet 2)
  5. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see C-12.1-12.4, Preliminary)
  6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.7, Grade 12 Writing)
  7. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 1, Key Skill 5; Unit 1, Outcomes 2, Key Knowledge 4; Unit 1, Outcome 3, Key Skill 3)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.l; 4.3.e)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 5.f)

Illustrative Alignment with State and Other Standards

- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.F)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Writing Competencies, Arrangement, bullet 6 and Style/Expression, bullet 2)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (See 1.9, Writing Strategies Grades 9-12)
  2. **Massachusetts**, *English Language Arts Curriculum Framework*, June 2001. (see General Standard 21: Revising, 21.8, 21.9)

Writing 12. Use technology as a tool to produce, edit, and distribute writing.

College Readiness

Career Readiness

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (See Writing 8; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Information Technology, Senior Secondary, bullet 4)
  2. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see C-9.1, HSC)
  3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 3.5-3.6, Grade 12 Writing)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Technology Competencies, bullets 1-2)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Writing 13. Synthesize information from multiple relevant sources, including graphics and quantitative information when appropriate, to provide an accurate picture of that information.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #2, #5, #15, #29).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- Conley, D. (2003) *Understanding University Success: English Work Samples.* Eugene, OR: Center for Educational Policy Research.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #3).
- *Florida American Diploma Project Survey Results.* (see row 24; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *Hawai'i Career Ready Study.* (2007). Commissioned by the Hawai'i P-20 Initiative. (See pgs. 18-19 sample task "Review claim letter," Insurance/Claims Agent)
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see pgs. 22-23; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 30.3.2.3.a)
  2. **British Columbia, Canada:** English Language Arts Integrated Resource Package, Prescribed Learning Outcomes, 2007 (Grade 12) (see C8 and C10)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see bullet 2, Writing; Information Technology Skills, Senior Secondary 1;Study Skills, Senior Secondary, bullet 1)
  4. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see 10.1, Preliminary; Outcome 7, HSC)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.3, Grade 12 Writing)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.2.e)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.b)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see F7 - in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Fostering Habits of Mind Essential for Success, bullet 4; Writing Competencies, "Students will be assigned writing tasks...," bullet 5)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.E.8*, and III.B.6)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California**: *English-Language Arts Content Standards for California Public Schools*, 1997. (see 2.3, Writing Applications Grades 9-10, 1.4, Writing Strategies Grades 11-12; 2.4.a-d, Writing Applications Grades 11-12)

Writing 14. Convey complex information clearly and coherently to the audience through purposeful selection and organization of content.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #5, #12, #15, #29, #37).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #3, #4, #12, #15).

Career Readiness

- ACT (2009) See ACT WorkKeys Writing Level 3 requirements (Level 3 is workplace training and college ready).
- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point 2 on pg. 19; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20/30.3.2.1.d)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C4)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see "Work with others", dash 1, Language Development)
  4. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 5.5.e, Ordinary Level; 5.4.e, Higher Level)
  5. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see Outcome 7, HSC; 10.3, Preliminary)
  6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.4 & 2.1, Grade 12 Writing)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 1.1.a; 2.3.c)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.b)

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress*. Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guide for "To Explain" Level 6)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Writing Competencies, Invention, bullet 2; Arrangement, bullets 3 & 4)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success*. Eugene, OR: Center for Educational Policy Research. (see II.E.8*, II.D.2, II.D.4)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 2.3 and 2.6.a, Writing Applications Grades 9-10)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 19: Writing, 19.26, 19.30)

Writing 15. Demonstrate understanding of content by reporting facts accurately and anticipating reader misconceptions.

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices*. New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #2, #5, #12, #15, #29, #37).
- ACT (2006). *ACT National Curriculum Survey 2005-2006*. Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #3, #15).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see C2; C4)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Writing Competencies, "Students will be assigned writing tasks…," bullets 6 & 7)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success*. Eugene, OR: Center for Educational Policy Research. (see II.E.8*)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 2.3 & 2.6.d, Writing Applications Grades 9-10)

Writing 16. Establish a substantive claim, distinguishing it from alternate or opposing claims.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices*. New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #4, #5, #10, #12, #14, #29).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #23).
- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (see Logic 9; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (see row 7; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see point f3 on pg. 21; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **British Columbia, Canada:** English Language Arts Integrated Resource Package, Prescribed Learning Outcomes, 2007 (Grade 12) (see A2, C2, C4)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 4.CC.3-5)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see bullets 3 and 11, Writing, see Communication Skills, Senior Secondary, bullet 2)
  4. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 4.2.2.a-b; 5.4.e. Higher Level)
  5. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see 6.2. HSC)
  6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 3, Key Knowledge 4 & Skill 3)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see E9 - in 11 of 12 states analyzed)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress.* Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guide for "To Persuade" Level 6)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success.* Eugene, OR: Center for Educational Policy Research. (see II.E.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  1. **California:** *English-Language Arts Content Standards for California Public Schools*, 1997. (see 2.4. Writing Applications Grades 9-10)
  2. **Massachusetts**, *English Language Arts Curriculum Framework*, June 2001. (see 19.30)

Writing 17. Link claims and evidence with clear reasons, and ensure that the evidence is relevant and sufficient to support the claims.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices.* New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #4, #5, #10, #14, #29, #30).
- *AP English Language and Composition and English Literature and Composition Course Description* (2008), New York, NY: College Board (see pg. 11 for course expectations).
- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- Conley, D. (2003) *Understanding University Success: English Work Samples.* Eugene, OR: Center for Educational Policy Research.
- ACT (2006). *ACT National Curriculum Survey 2005-2006.* Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #1, #3, #4, #12, #15).

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (see f3, pg. 21; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 20.4.1.3.f; 20/30.4.2.1.c)
  2. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see 6.2. HSC; 10.2 and 10.3. HSC)
  3. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.4 and 1.5, Grade 12 Writing)
  4. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 2, Key Skill 3; Unit 4, Outcome 2, Key Skills 2-3; Unit 3, Outcome 3, Key Knowledge 4 & Skill 3)

- A counterpart of this standard also appears in the English language arts standards of the following:

1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.3.h-i)
2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.1.d)

Illustrative Alignment with State and Other Standards

- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress*. Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guide for "To Persuade" Level 6)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Fostering Habits of Mind Essential for Success, bullet 16)
- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success*. Eugene, OR: Center for Educational Policy Research. (see II.E.2; II.E.3; IV.B.2)
- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California**: *English-Language Arts Content Standards for California Public Schools*, 1997. (see Writing Applications Grades 9-10; 2.2.c and 2.4.a-e, Writing Applications Grades 11-12; 1.3)
    2. **Massachusetts**: *English Language Arts Curriculum Framework*, June 2001. (see General Standard 19: Writing, 19.26, 19.30)

Writing 18. Acknowledge competing arguments or information, defending or qualifying the initial claim as appropriate.

College Readiness

- Milewski, G.B., Johnsen, D., Glazer, N., & Kubota, M. (2005). *A Survey to Evaluate the Alignment of the New SAT® Writing and Critical Reading Sections to Curricula and Instructional Practices*. New York, NY: College Board (see pgs. 10 and 12, these data have been sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #4, #5, #10, #12, #14, #29).
- *AP European History Course Description* (2009), New York, NY: College board (see pp. 21-24 for document-based question expectations). AP World and US History also have these expectations.
- ACT (2006). *ACT National Curriculum Survey 2005-2006*. Iowa City, IA: ACT. (pgs. 39-40, these data have been re-sorted by importance to clarify which skills are most important to post-secondary instructors, see skills #15).

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

    1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see B9)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

2. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see "Plan...", dash five, Language Development)
3. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 2, Key Skill 3)

Illustrative Alignment with State and Other Standards

- Conley, D.T. (2003) *Understanding University Success: A Report from Standards for Success*. Eugene, OR: Center for Educational Policy Research. (see II.E.4)
- U.S. Dept. of Education. (2011). *Writing Framework for the 2011 National Assessment of Educational Progress*. Washington, DC: National Assessment Governing Board. (see Holistic Scoring Guide for "To Persuade"Level 6)

- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **California**: *English-Language Arts Content Standards for California Public Schools*, 1997. (see 2.4, Writing Applications Grades 9-10)
    2. **Massachusetts**, *English Language Arts Curriculum Framework*, June 2001. (see 19.30)

2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 4.b and 4.e)

Illustrative Alignment with State and Other Standards

- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 2, 2.5)
  2. **Texas:** *Texas College Readiness Standards*, (2008). (see pg. 4-5, Speaking, B.3)

Speaking 3. Make strategic use of multimedia elements and visual displays of data to gain audience attention and enhance understanding.

College Readiness

Career Readiness

- *Missouri Career Prep Certificate Program Planning Guide*, Missouri Department of Elementary and Secondary Education. (see pg. A5, Communication: Written, Verbal, and Listening, Performance skill 4)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10.4.1.4.b, 20.4.1.4.b and 10/20/30.4.1.4.c)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see A6)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Information Technology, Senior Secondary, bullets 3-5)
  4. **New South Wales, Australia:** *English Stage 6 Syllabus*, 1999 (Grades 11-12) (see C-5, 5.3, Preliminary)
  5. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.7, Grade 12 Oral Communication; 3.4, Grade 12 Media Studies)
  6. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 1, Outcome 2, Key Skills 1 and 4; Unit 2, Outcome 3, Key Knowledge 5 and Key Skill 3)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 4.a, 4.c)

Illustrative Alignment with State and Other Standards

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up*. (2008). Washington, DC: Achieve. 2008. (see E4, in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Fostering Habits of Mind Essential for Success, bullet 5; Listening and Speaking Competencies in Academic Settings, bullet 2)
- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*. (see 2.6, Grades 11-12; 2.4, Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 27: Media Production, 27.6)

Speaking 4. Demonstrate command of formal Standard English when appropriate to task and audience.

College Readiness

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis*. (see Language 1; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results*. (see row 3; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study*. (2002). Washington, DC: National Alliance of Business. (see pgs. 16-17, 19); data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see A12)
  2. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Speaking, "Present Information…" bullet 4)
  3. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 1, Key Skill 6)

- A counterpart of this standard also appears in the English language arts standards of the following:

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.1.a)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 3.e)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

Speaking & Listening Evidence

Speaking 1. Select and use a format, organization, and style appropriate to the topic, purpose, and audience.

College Readiness

Career Readiness

- *The American Diploma Project Workplace Study*. (2002). Washington, DC: National Alliance of Business. (See pg. 19; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- Qualifications and Curriculum Authority. (2007). *Functional Skills and Standards*. (see pg. 12, Speaking and Listening Level 2, bullet 3)
- *Missouri Career Prep Certificate Program Planning Guide*, Missouri Department of Elementary and Secondary Education. (see pg. A5, Communication: Written, Verbal, and Listening, Knowledge skill 2)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 10.4.1.4.b, 10/20/30.4.1.4.c)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see A6, A12)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Speaking, bullets 1, 4, and 5)
  4. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.1 - 2.6, Grade 12 Oral Communication)
  5. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 3, Outcome 1, Key Skills 6-7)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.1.a-c)
  2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 3.a-f, 4.a-f)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Fostering Habits of Mind Essential for Success, bullet 7; Speaking, bullets 1-4)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- A counterpart of this standard appears in the English language arts standards from the following states:

  1. **California:** *English-Language Arts Content Standards for California Public Schools*. (see 1.3, Grades 9-10; 1.8-1.10, Grades 11-12)
  2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 3: Oral Presentation, 3.17)
  3. **Texas:** *Texas College Readiness Standards*, (2008). (see pg. 4-5, Speaking, A.1-2)

Speaking 2. Present information, findings, and supporting evidence clearly and concisely.

College Readiness

Career Readiness

- *The American Diploma Project Workplace Study*. (2002). Washington, DC: National Alliance of Business. (See pg. 19; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- Casner-Lotto, J., Rosenblum, E., and Wright, M., *The Ill-Prepared Workforce*. (2009). The Conference Board. (see pg. 22, Oral Communications)
- Qualifications and Curriculum Authority. (2007). *Functional Skills and Standards*. (see pg. 12, Speaking and Listening Level 2, bullet 2)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see A8, A9)
  2. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 4.0.2)
  3. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Speaking, bullets 1-2)
  4. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 2.3, Grade 12 Oral Communication)
  5. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 2, Outcome 3, Key Knowledge, bullet 5)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (2.1.b)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see A1, in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Fostering Habits of Mind Essential for Success, bullet 5; Listening and Speaking Competencies in Academic Settings, bullet 2)

Speaking 5. Listen to complex information, and discern the main ideas, the significant details, and the relationships among them.

College Readiness

- *Virginia Postsecondary Outreach Campaign and Data Collection, Essential English Skills Analysis.* (See Communication 2 and 3; survey of multi-disciplinary faculty teams at 30 higher education institutions; included if average rating is at least 7.5 on a scale of 10)
- *Florida American Diploma Project Survey Results.* (See rows 11 and 27; survey of faculty members at 18 public higher education institutions; included if average rating is at least 7.5 on a scale of 10)

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 1, pg. 18; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)
- *Missouri Career Prep Certificate Program Planning Guide,* Missouri Department of Elementary and Secondary Education. (see pg. A5, Communication: Written, Verbal, and Listening, Knowledge skill 3 and Performance skill 5)
- Qualifications and Curriculum Authority. (2007). *Functional Skills and Standards.* (see pg. 12, Speaking and Listening Level 2, bullet 1)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** English Language Arts Curriculum Outcomes, 2003 (Grades 10-12) (see 10/20.2.1.2.b)
  2. **British Columbia, Canada:** English Language Arts Integrated Resource Package, Prescribed Learning Outcomes, 2007 (Grade 12) (see A3, A7, A8)
  3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 1.CC.3 and 1.CC.5)
  4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Listening, bullets 1 and 2)
  5. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 4.1.1.a, 4.1.1.c)

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

  6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.4-1.6, Grade 12 Oral Communication)

- A counterpart of this standard also appears in the English language arts standards of the following :

  1. **England:** English Programme of Study for Key stage 4, 2005 (≈ Grades 10-11) (see 2.1.f)
  2. **Singapore:** English Language Syllabus 2001, Learning Outcomes for O-Levels (≈ Grades 10-11) (See 2.c, 2.e, 8.3.a-c)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see B4, in 11 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (Listening, bullet 2)
- A counterpart of this standard appears in the English language arts standards from the following states: S

  1. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see General Standard 2, 2.5)
  2. **Texas:** *Texas College Readiness Standards*, (2008). (see pg. 4-5, Listening, A.2-3, B.1-3)

Speaking 6. Follow the progression of the speaker's message, and evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.

College Readiness

Career Readiness

- *The American Diploma Project Workplace Study.* (2002). Washington, DC: National Alliance of Business. (See point 2, pg. 18; data gathered through employer feedback from 21 organizations in eight states representing over 10 industries)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

  1. **Alberta, Canada:** *English Language Arts Curriculum Outcomes*, 2003 (Grades 10-12) (see 30.2.2.2.f, 30.3.2.2.a-d)
  2. **British Columbia, Canada:** *English Language Arts Integrated Resource Package, Prescribed Learning Outcomes*, 2007 (Grade 12) (see A9)

3. **Finland:** *National Core Curriculum for Upper Secondary Schools* for Mother Tongue and Literature, Finnish as the mother tongue, 2003 (≈ Grades 10-12) (see AI 2.0.1, AI 7.0.3)
4. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Listening, bullets 6-7; Critical Thinking Skills, number 2 and bullets 1-4)
5. **Ireland:** *Leaving Certificate/English Syllabus for Higher Level and Ordinary Level* (≈ Grades 10-11) (see 4.1.1.d-f, 4.2.1.a-g, 4.3.1.a)
6. **Ontario, Canada:** *The Ontario Curriculum, English*, 2007 (Grades 11-12) (see 1.7 & 1.8, Grade 12 Oral Communication)
7. **Victoria, Australia:** *Victorian Certificate of Education Study Design: English/English as a Second Language*, 2007 (≈ Grades 11-12) (see Unit 2, Outcome 3, Key Skill bullets 1 and 2)

- A counterpart of this standard also appears in the English language arts standards of the following :

1. **England:** *English Programme of Study* for Key stage 4, 2005 (≈ Grades 10-11) (see 1.4.c-d, 2.1.g)
2. **Singapore:** *English Language Syllabus 2001*, Learning Outcomes for O-Levels (≈ Grades 10-11) (see 9.2.c, 9.3.b)

Illustrative Alignment with State and Other Standards

- *Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up.* (2008). Washington, DC: Achieve. 2008. (see E4, in 12 of 12 states analyzed)
- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Fostering Habits of Mind Essential for Success, bullet 5; Listening and Speaking, Listening, bullet 2)
- A counterpart of this standard appears in the English language arts standards from the following states:

1. **California:** *English-Language Arts Content Standards for California Public Schools.* (see 1.12, 1.13, Grades 9-10)
2. **Massachusetts:** *English Language Arts Curriculum Framework*, June 2001. (see 3.15)
3. **Texas:** *Texas College Readiness Standards*, (2008). (see pg. 4-5, Listening, A.1-3)

Speaking 7. Ask relevant questions to clarify points and challenge ideas.

College Readiness

Career Readiness

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

1. **British Columbia, Canada:** *English Language Arts Integrated Resource Package*, Prescribed Learning Outcomes, 2007 (Grade 12) (see A7)

- A counterpart of this standard also appears in the English language arts standards of the following :

1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.1.e)

Illustrative Alignment with State and Other Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities.* (see Fostering Habits of Mind Essential for Success, bullet 7; Listening and Speaking, Speaking, bullets 1 and 3)
- A counterpart of this standard appears in the English language arts standards from the following states:

Massachusetts: *English Language Arts Curriculum Framework*, June 2001. (see General Standard 2: Questioning, Listening, and Contributing)

Speaking 8. Respond constructively to advance a discussion and build on the input of others.

College Readiness

Career Readiness

- *Missouri Career Prep Certificate Program Planning Guide*, Missouri Department of Elementary and Secondary Education. (see pg. A5, Communication: Written, Verbal, and Listening-Performance skill 2)
- Qualifications and Curriculum Authority. (2007). *Functional Skills and Standards.* (see pg. 12, Speaking and Listening Level 2, bullets 1 and 4)

Illustrative International Benchmarks

- A counterpart of this standard appears in the English language arts standards and learning outcomes from the following high performing countries, as defined by their top 10 ranking on the 2006 Programme of International Student Assessment (PISA) Reading Scale:

1. **Hong Kong:** *English Language Curriculum and Assessment Guide*, 2007. (≈Grades 10-11) (see Speaking, "Participate Effectively...", bullets 3-4 and 6)

- A counterpart of this standard also appears in the English language arts standards of the following :

1. **England:** *English Programme of Study for Key stage 4*, 2005 (≈ Grades 10-11) (see 2.1.d-e)

Illustrative Alignment with State and Other Standards

Evidence for Individual Reading, Writing, and Speaking and Listening Standards

- Intersegmental Committee of the Academic Senates (ICAS). (2002) *Academic Literacy: A Statement of Competencies Expected of Students Entering California's Public Colleges and Universities*. (see Fostering Habits of Mind Essential for Success, bullet 7; Listening and Speaking, Speaking, bullets 1-4)
- A counterpart of this standard appears in the English language arts standards from the following states:

    1. **Massachusetts**: *English Language Arts Curriculum Framework*, June 2001. (see General Standard 1: Discussion; General Standard 2: Questioning, Listening, and Contributing)
    2. **Texas:** *Texas College Readiness Standards*, (2008). (see pg. 4-5, Listening, B.1)

Evidence for Individual Math Standards

What follows is a sample of sources consulted in the drafting of the core math standards. Citations are organized by the standard to which they pertain. For example, all sources with specific relevance to standard #2 (Number) are listed below that standard. Each citation contains a link to the section of the source document that is relevant to the core math standard to which it corresponds. For more information on sources and how they were used in the drafting of the math standards, please refer to the "College and Career Readiness Standards for Mathematics."

1. Mathematical Practice

2. Number

National Reports

- *NAEP Math Framework 2009* – Number Properties and Operations Strand (p. 7-8 description, standards follow)
- AMATYC, *Crossroads* - Standard C-1 Number Sense
- NCTM, *Focal Points* - Number and Operations Focal Points
- NCTM *Principles and Standards* - Number and Operations Standard

College Readiness

- ACT *College Readiness Standards* - Basic Operations and Applications; Numbers: Concepts & Properties
- *Advanced Placement Computer Science*, Statistics and Computer Science Course Descriptions - Computer Science Prerequisite (p.7)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Computation Strand (p.31-32), Mathematical Reasoning (p. 35-37)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Middle School Math Standards p.iii
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Number sense and Numerical Operations Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Number Strand p. 3
- **Belgium** - 2 Number theory and algebra strand
- **China** - Numbers and Algebra strand
- **Chinese Taipei** - 1. Numbers and Coordinate system, pgs. 31-32
- **England** - Number and Algebra
- **Hong Kong** - Number and Algebra Dimension
- **India** - Number Systems Unit, Grade 9
- **Ireland** – Leaving Certificate - Arithmetic
- **Japan** - Math I course
- **Korea** - Strand A Numbers and Operations
- **Singapore** - Topic 1 Numbers and Algebra
- Program for International Student Assessment (PISA), (2006) - Quantity Overarching Idea (p. 89-92)
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Number

Evidence for Individual Math Standards

- International Baccalaureate, Mathematics Standard Level, (2006) - Prior Knowledge (Number and Algebra)
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra I
- **Florida** - State Standards – Algebra
- **Georgia** - State Standards - Number and Operations (throughout)
- **Massachusetts** - State Standards - Number Sense and Operations
- **Minnesota** - State Standards - Algebra Strand

3. Quantity

National Reports

- *NAEP Math Framework 2009* – Measurement Strand (p. 13-14 description, standards follow. Strand called "Geometry and Measurement" in grade 12)
- AMATYC, *Crossroads* - Standard C-3: Geometry
- NCTM, *Focal Points* - Number and Operations and Measurement Focal Points
- NCTM *Principles and Standards* - Measurement Standard

College Readiness

- ACT *College Readiness Standards* - Numbers: Concepts & Properties; Measurement
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - General Foundation Skills (Natural Science Standards) (p.44)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Number sense and Numerical Operations

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Number Strand
- **China** - Numbers and Algebra ; Space and Figures Strands
- **England** - Geometry and Measures Strand
- **Hong Kong** - Measures, Shape and Space Dimension
- **Singapore** - Topic 1 Numbers and Algebra; Topic 2 Geometry and Measurement
- Program for International Student Assessment (PISA), (2006) - Quantity Overarching Idea
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Number
- International Baccalaureate, Mathematics Standard Level, (2006) - Prior Knowledge (Number and Algebra), pgs. 2-3
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Shape, space and measures

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Throughout Measurement and Geometry strand in K-7 (e.g. p. 32)
- **Florida** - State Standards – Algebra; Financial Literacy
- **Massachusetts** - State Standards - Measurement

Evidence for Individual Math Standards

- **Minnesota** - State Standards - Geometry and Measurement Strand

4. Expressions

National Reports

- *NAEP Math Framework 2009* – Number Properties and Operations Strand (p. 7-8 description, standards follow); Algebra Strand (p. 30-31 description, standards follow)
- AMATYC, *Crossroads* - Standard C-2: Symbolism and Algebra
- NCTM, *Focal Points* - Number and Operations and Algebra Focal Points
- NCTM *Principles and Standards* - Number and Operations Standard; Algebra Standard

College Readiness

- ACT *College Readiness Standards* - Expressions, Equations & Inequalities
- *Advanced Placement Calculus*, Statistics and Computer Science Course Descriptions - Calculus Prerequisite (p.6); Statistics Prerequisite (p.6); Computer Science Prerequisite (p.7)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Computation Strand (p.31-32); Algebra Strand (p32-34)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Algebra I Standards (p.v); Algebra II Standards (p.vii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Algebra Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Patterns and Relations Strand
- **Belgium** - 2 Number theory and algebra Strand
- **China** - Numbers and Algebra strand
- **Chinese Taipei** - 3. Polynomials, pgs. 32-33
- **England** - Number and Algebra
- **Finland** - MAB1 Expressions and equations
- **Hong Kong** - Number and Algebra Dimension
- **India** - Algebra Unit, Grade 10
- **Ireland** – Leaving Certificate - Algebra
- **Japan** - Math I course p. 59
- **Korea** - Strand B Variables and Expressions
- **Singapore** - Topic 1 Numbers and Algebra
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Algebra
- International Baccalaureate, Mathematics Standard Level, (2006) - Prior Knowledge (Number and Algebra)
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra I; Algebra II
- **Florida** - State Standards – Algebra
- **Georgia** - State Standards –Mathematics 3, Algebra
- **Massachusetts** - State Standards - Patterns, Relations and Algebra
- **Minnesota** - State Standards - Algebra Strand

Evidence for Individual Math Standards

5. Equations

National Reports

- *NAEP Math Framework 2009* – Number Properties and Operations Strand (p. 7-8 description, standards follow); Algebra Strand (p. 30-31 description, standards follow)
- AMATYC, *Crossroads* - Standard C-2: Symbolism and Algebra
- NCTM, *Focal Points* - Number and Operations and Algebra Focal Points
- NCTM *Principles and Standards* - Number and Operations Standard; Algebra Standard

College Readiness

- ACT *College Readiness Standards* - Expressions, Equations & Inequalities
- *Advanced Placement Calculus*, Statistics and Computer Science Course Descriptions - Calculus Prerequisite (p.6); Statistics Prerequisite (p.6); Computer Science Prerequisite (p.7)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Computation Strand (p.31-32); Algebra Strand (p32-34)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Algebra I Standards (p.v); Algebra II Standards (p.vii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Algebra Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes – Patterns and Relations Strand
- **Belgium** - 2 Number theory and algebra Strand
- **China** - Numbers and Algebra strand
- **Chinese Taipei** - 3. Polynomials, pgs. 32-33
- **England** - Number and Algebra
- **Finland** - MAB1 Expressions and equations
- **Hong Kong** - Number and Algebra Dimension
- **India** - Algebra Unit
- **Ireland** – Leaving Certificate - Algebra
- **Japan** – Math I course; Math II course
- **Korea** - Strand B Variables and Expressions
- **Singapore** - Topic 1 Numbers and Algebra
- Program for International Student Assessment (PISA), (2006) - Change and Relationships Overarching Idea (p. 86-89)
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Algebra
- International Baccalaureate, Mathematics Standard Level, (2006) - Functions and Equations, pgs. 4-5; Prior Knowledge (Number and Algebra), pgs. 2-3
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra I; Algebra II
- **Florida** - State Standards – Algebra
- **Georgia** - State Standards – Mathematics 3, Algebra
- **Massachusetts** - State Standards - Patterns, Relations and Algebra
- **Minnesota** - State Standards - Algebra Strand

Evidence for Individual Math Standards

6. Functions

National Reports

- NAEP *Math Framework 2009* – Number Properties and Operations Strand (p. 7-8 description, standards follow); Algebra Strand (p. 30-31 description, standards follow)
- AMATYC, *Crossroads* - Standard C-4: Function
- NCTM, *Focal Points* - Algebra Focal Points
- NCTM *Principles and Standards* - Algebra Standard

College Readiness

- ACT *College Readiness Standards* – Functions
- *Advanced Placement Calculus*, Statistics and Computer Science Course Descriptions - Calculus Prerequisite (p.6); Statistics Prerequisite (p.6); Computer Science Prerequisite (p.7)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Algebra Strand (p32-34)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Algebra II Standards (p.vii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Algebra Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Patterns and Relations Strand
- **Belgium** - 3 Real functions
- **China** - Numbers and Algebra strand
- **Chinese Taipei** - 4. Exponent and logarithm; 5. The basic concept of trigonometric functions, pgs. 33-34
- **England** - Number and Algebra
- **Finland** - MAB3 Mathematical Models 1; MAB4 Mathematical analysis; MAB6 Mathematical Models II
- **Hong Kong** - Number and Algebra Dimension
- **India** - Sets and Function, Grade 11
- **Ireland** – Leaving Certficate, Functions and Calculus
- **Japan** - Math I course; Math II course
- **Korea** - Strand D Functions
- **Singapore** - Topic 1 Numbers and Algebra
- Program for International Student Assessment (PISA), (2006) - Change and Relationships Overarching Idea
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Algebra
- International Baccalaureate, Mathematics Standard Level, (2006) - Functions and Equations, pgs. 4-5
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra II
- **Florida** - State Standards – Algebra
- **Georgia** - State Standards – Mathematics 3, Algebra
- **Massachusetts** - State Standards - Patterns, Relations and Algebra
- **Minnesota** - State Standards - Algebra Strand

Evidence for Individual Math Standards

7. Modeling

National Reports

- NAEP *Math Framework 2009* - Algebra Strand (p. 30-31 description, standards follow)
- AMATYC, *Crossroads* - Standard C-4: Function
- NCTM, *Focal Points* - Algebra Focal Points
- NCTM Principles and Standards - Algebra Standard

College Readiness

- ACT *College Readiness Standards* - Expressions, Equations & Inequalities
- *Advanced Placement Calculus*, Calculus Course Descriptions - Calculus Prerequisite (p.6)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Algebra Strand (p32-34)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Algebra II (p.vii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Algebra Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Patterns and Relations Strand
- **China** - Numbers and Algebra Strand
- **England** - Number and Algebra
- **Finland** - MAB3 Mathematical Models 1; MAB6 Mathematical Models II
- **India** - Mathematical Modeling
- **Singapore** - Topic 1 Numbers and Algebra
- Program for International Student Assessment (PISA), (2006) - Change and Relationships Overarching Idea (p. 86-89)
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Algebra
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra I
- **Florida** - State Standards - Algebra
- **Georgia** - State Standards - Mathematics 3, Algebra
- **Massachusetts** - State Standards - Patterns, Relations and Algebra
- **Minnesota** - State Standards - Algebra Strand

8. Shape

National Reports

- *NAEP Math Framework 2009* – Geometry Strand (p. 17-19 description, standards follow. Strand called "Geometry and Measurement" in grade 12)
- AMATYC, *Crossroads* - Standard C-3: Geometry
- NCTM, *Focal Points* - Geometry and Measurement Focal Points
- NCTM *Principles and Standards* - Geometry Standard

Evidence for Individual Math Standards

College Readiness

- ACT *College Readiness Standards* - Properties of Plane Figures: Measurement
- *Advanced Placement Calculus,* Calculus Course Descriptions - Calculus Prerequisite (p.6)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Geometry (p.34-35)
- *College Board Standards for College Success:* Mathematics and Statistics. College Board, (2006) - Geometry Standards (p. vi)
- *Ready or Not: Creating a High School Diploma That Counts.* American Diploma Project, (2004) - Geometry Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Shape and Space Strand
- **Belgium** - 4 Geometry
- **China** - Mathematics 2; Space and Figures Strand
- **Chinese Taipei** – 6. Characters and application of trigonometric (sic), pg. 34; 2. Straight line and plane of space; 4. Conic section, pgs. 35-36
- **England** - Geometry and Measures Strand
- **Finland** - MAB2 Geometry
- **Hong Kong** - Measures, Shape and Space Dimension
- **India** - Geometry Unit
- **Ireland** - Geometry
- **Japan** - Math II Course; Math A Course
- **Korea** - Strand C Geometry
- **Singapore** - Topic 2 Geometry and Measurement (starting on page 7)
- Program for International Student Assessment (PISA), (2006) - Space and Shape Overarching Idea (p.83-86)
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Geometry
- International Baccalaureate, Mathematics Standard Level, (2006) - Prior Knowledge (Geometry), pgs. 3
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Shape, space and measures

Illustrative Alignment with State and Other Standards

- **California** - State Standards – Geometry
- **Florida** - State Standards – Geometry
- **Georgia** - State Standards -Mathematics 2, Geometry
- **Massachusetts** - State Standards - Geometry
- **Minnesota** - State Standards - Geometry and Measurement Strand

9. Coordinates

National Reports

- *NAEP Math Framework 2009* – Geometry Strand (p. 17-19 description, standards follow, Strand called "Geometry and Measurement" in grade 12)
- AMATYC, *Crossroads* - Standard C-3: Geometry
- NCTM, *Focal Points* - Geometry and Measurement Focal Points
- NCTM *Principles and Standards* - Geometry Standard

Evidence for Individual Math Standards

College Readiness

- ACT *College Readiness Standards* - Graphical Representations
- *Advanced Placement Calculus,* Calculus Course Descriptions - Calculus Prerequisite (p.6)
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Geometry (p.34-35)
- College Board Standards for College Success: Mathematics and Statistics. College Board, (2006) - Algebra I Standards (p.v); Algebra II Standards (p.vii)
- Ready or Not: Creating a High School Diploma That Counts. American Diploma Project, (2004) - Geometry Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Shape and Space Strand
- **Belgium** - 4 Geometry
- **China** - Mathematics 2; Space and Figures Strand
- **Chinese Taipei** – First Year, 1. Numbers and Coordinate system, pgs. 31-32; Second Year, 1. Vector, pg. 35
- **England** - Geometry and Measures Strand ; Number and Algebra
- **Finland** - MAB2 Geometry
- **Hong Kong** - Measures, Shape and Space Dimension
- **India** - Geometry and Mensuration Units
- **Ireland** - Coordinate Geometry
- **Japan** – Math II Course; Math B Course
- **Korea** - Strand C Geometry
- **Singapore** - Topic 2 Geometry and Measurement
- Program for International Student Assessment (PISA), (2006) - Space and Shape Overarching Idea; Change and Relationships Overarching Idea
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Algebra; Geometry
- International Baccalaureate, Mathematics Standard Level, (2006) - Prior Knowledge (Number and Algebra, and Geometry), pgs. 2-3
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Number and Algebra; Geometry

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra I; Geometry
- **Florida** - State Standards – Algebra
- **Georgia** - State Standards - Geometry
- **Massachusetts** - State Standards - Geometry
- **Minnesota** - State Standards - Geometry and Measurement Strand

10. Probability

National Reports

- *NAEP Math Framework 2009* – Data Analysis, Statistics and Probability Strand (p. 24-25 description, standards follow)
- AMATYC, *Crossroads* - Standard C-5: Discrete Mathematics, Standard C-6: Probability and Statistics
- NCTM *Principles and Standards* - Data Analysis & Probability Standard

Evidence for Individual Math Standards

College Readiness

- ACT College Readiness Standards - Probability, Statistics & Data Analysis [link to ACT_CollegeReadinessStandards_p10-17.pdf]
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Research & Analysis (Social Science Standards), section B (p.64)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Geometry Standards (p. vi); Algebra II Standards (p. vii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Data Interpretation, Statistics and Probability Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Statistics and Probability Strand
- **Belgium** - 5 Statistics
- **China** - Mathematics 3; Statistics and Probability Strand
- **Chinese Taipei** – Second Year, 5 Permutation and Combination, p. 37
- **England** - Statistics Strand
- **Finland** - MAB5 Statistics and Probability
- **Hong Kong** - Data Handling Dimension
- **India** - Statistics and Probability Unit, Grade 11
- **Ireland** Discrete Mathematics and Counting
- **Japan** - Math A Course; Math C Course
- **Korea** - Strand E Probability and Statistics
- **Singapore** - Topic 3 Statistics and Probability
- Program for International Student Assessment (PISA), (2006) - Uncertainty Overarching Idea
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Data and Chance
- International Baccalaureate, Mathematics Standard Level, (2006) - Statistics and Probability, pgs. 6-8
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Handling Data

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Algebra II; Probability and Statistics
- **Florida** - State Standards – Probability
- **Georgia** - State Standards – Mathematics 3, Data Analysis and Probability
- **Massachusetts** - State Standards - Data Analysis, Statistics, and Probability
- **Minnesota** - State Standards - Data Analysis & Probability

11. Statistics

National Reports

- NAEP *Math Framework 2009* – Data Analysis, Statistics and Probability Strand (p. 24-25 description, standards follow)
- AMATYC, *Crossroads* - Standard C-6: Probability and Statistics
- NCTM, *Focal Points* - Data Analysis Focal Points
- NCTM Principles and Standards - Data Analysis & Probability Standard

Evidence for Individual Math Standards

College Readiness

- ACT *College Readiness Standards* - Probability, Statistics & Data Analysis
- Conley, D.T. (2008). *Knowledge and Skills for University Success* - Statistics (p.37)
- *College Board Standards for College Success*: Mathematics and Statistics. College Board, (2006) - Middle School Math Standards (p.iii); Algebra I Standards (p.v); Precalculus Standards (p.viii)
- *Ready or Not: Creating a High School Diploma That Counts*. American Diploma Project, (2004) - Data Interpretation, Statistics and Probability Strand

Illustrative International Benchmarks

- **Alberta** - General Outcomes - Statistics and Probability Strand
- **Belgium** - 5 Statistics
- **China** - Mathematics 3; Statistics and Probability Strand
- **Chinese Taipei** – Second Year, 6 Probability and Statistic, pg. 37-38
- **England** - Statistics Strand
- **Finland** - MAB5 Statistics and Probability
- **Hong Kong** - Data Handling Dimension
- **India** - Statistics and Probability Unit, Grade 11
- **Ireland** - Discrete Mathematics and Counting (p.27 and 28)
- **Japan** - Math B Course; Math C Course
- **Korea** - Strand E Probability and Statistics
- **Singapore** - Topic 3 Statistics and Probability
- Program for International Student Assessment (PISA), (2006) - Uncertainty Overarching Idea
- Trends in International Mathematics and Science Study (TIMSS), (2007) - Data and Chance
- International Baccalaureate, Mathematics Standard Level, (2006) - Statistics and Probability, pgs. 6-8
- EdExcel, General Certificate of Secondary Education, Mathematics, (2009) - Handling Data

Illustrative Alignment with State and Other Standards

- **California** - State Standards - Probability and Statistics
- **Florida** - State Standards – Statistics
- **Georgia** - State Standards - Mathematics 3, Data Analysis and Probability
- **Massachusetts** - State Standards - Data Analysis, Statistics, and Probability
- **Minnesota** - State Standards - Data Analysis & Probability

Appendix B1.4

Adoption Process Memo

To:	Kerri Briggs, Superintendent
Through:	Cathie Carothers, Assistant Superintendent
From:	Tamara Reavis
	Michael Clarke
CC:	Catherine Freeman
Date:	September 28, 2009
Re:	Common Core Standards Adoption

The Common Core States Standards Initiative is a historic opportunity to develop and adopt a set of core academic standards in math and English language Arts. Being led by NGA Center for Best Practices and the Council of Chief State School Officers in partnership with College Board, Achieve and ACT, the standards will focus on preparing students for college and career readiness. The standards are research and evidence based, and with 49 states and territories joining the effort, the initiative is the first step in transforming our national education system.

To be at the forefront of this reform, the Division of Assessment and Accountability proposes the following process for an accelerated panel review that guarantees the adoption of the core standards will have the greatest impact on student achievement, maximum stakeholder buy-in, strong LEA implementation, and effective integration into the state assessment system.

Recommended Review Process

Once the End of High School Expectations are released, OSSE will conduct a crosswalk to the current DC standards. The information found in this crosswalk will be presented to the State Superintendent, the State Advisory Standards Committee and the SBOE. Once the grade level standards are released, a complete crosswalk will be created with the input from educators and other stake holders. The final copy of the standards with findings from cross walk will be presented to the State Superintendent, the SASC and the SBOE. At that time, community forums and hearings will be held with the opportunity for public comment.

To develop this process OSSE considered the external peer review process recommended by the US Department of Education which considers stakeholder engagement a best practice, and the Education Reform Act requires the use of panel review. This process preserves OSSE's right to tailor certain standards to the specific needs of students in the DC area. Moreover, implementation fidelity at the LEA level will be greater because of the knowledge gleaned from the participation of a diverse group in the review process, and the panels will allow for greater input when integrating the standards into the state assessment system.

Recommended Panels

In preparation of the review process, the Division of Standards, Assessment and Accountability proposes to create two levels of review panels. The State Academic

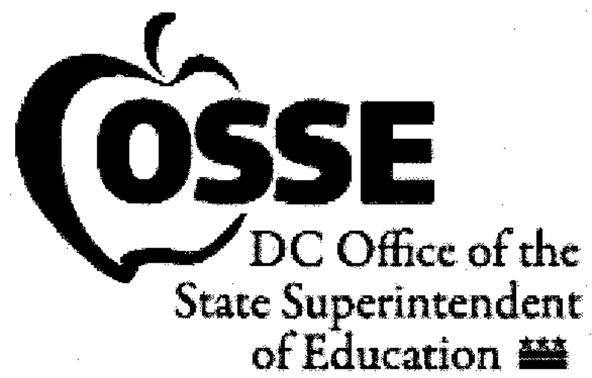
Standards Council (SASC) will advise and give approval throughout the adoption process. SASC will be chaired by the State Superintendent and be comprised of state and local leaders. The second level of panels, the State Advisory Math Panel (SAMP) and the State Advisory Panel for English Language Arts (SAP for ELA), will engage in the analysis and alignment of the standards. These panels will be chaired by OSSE personnel and comprised of K-12 educators, postsecondary personnel, business representatives, and LEA leaders.

Attachments:

1. Timeline
2. SASC member lists
3. Proposed Membership for SASC
4. Summary of ELA crosswalk
5. Summary of Math crosswalk

Appendix B1.5

Letter of Support for Common Core Standards



October 21, 2009

Gene Wilhoit, Executive Director
Council of Chief State School Officers
One Massachusetts Avenue, NW · Suite 700
Washington, DC 20001-1431

Dear Gene,

We have reviewed the College and Career Readiness Standards released on September 21, 2009 and agree with the revisions and the additions from the Council of Chief State School Officers (CCSSO) and National Governors Association (NGA). We are pleased to offer the continued support of the District of Columbia's Office of the State Superintendent of Education (OSSE) and State Board of Education (SBOE), and look forward to the release of the content standards for kindergarten through grade 12 early next year. We applaud the committee's efforts to move towards fewer, clearer, and higher standards and appreciate its review of the feedback provided and the changes made to strengthen the initiative.

OSSE and SBOE discussed the College and Career Readiness Standards with school districts, members of postsecondary community in DC, and the public, most of which were supportive of the work that's been done so far. For instance, Dr. Jonathan Gueverra, Chief Executive Officer of the Community College of the District of Columbia (CCDC) testified at a public hearing emphasizing the importance of aligning standards to college readiness expectations, particularly to mitigate the remediation rate. Dr. Robert Mayo, testifying on behalf of the District of Columbia Public Charter School Board, pledged their support of the standards and the importance of graduating students prepared for the demands of post-secondary education, meaningful careers and to be able to compete and contribute globally.

After reviewing the standards, we are pleased to note the close alignment of the District's current English/Language Arts Standards with the End of High School Expectations. While we will need to shift to using more informational text and an expectation that all teachers integrate reading skills in their instruction, the new standards will provide the basis for OSSE to call for stronger reading and analytical skills across the board. We particularly appreciated the strengthening of the English/Language Arts expectations and the sample reading passages. Providing such specificity permits OSSE to better plan for the eventual, and hopefully speedy, adoption of these standards.

One Judiciary Square, 441 4th Street, NW Suite 350 North, Washington, DC 20001
Phone: 202.727.6436 ◆ Fax: 202.727.2019 ◆ www.osse.dc.gov

The mathematics content standards represent a more profound shift from the current DC standards, as they suggest a conceptual shift from algorithmic fluency to conceptual understanding. This shift to a deeper conceptual understanding of fewer topic areas will better prepare our students to move into higher education and the workforce. These new standards are crucial building blocks for higher-level mathematics.

Our biggest obstacle for a successful implementation will be the investment in significant and on-going professional development for teachers. OSSE has begun to consider the options for addressing the areas of greatest concerns for teachers and providing the necessary supports as we transition to these new standards. As noted in our comments on the first draft of the standards, we hope that CCSSO and NGA will support states by disseminating strategies and best practices around the necessary professional development.

The college readiness standards represent a first step in the right direction for students across the country and particularly for students in the District of Columbia. Higher and fewer standards will result in greater achievements for students, increased transparency for schools, and reduced costs for states – permitting states to create better and more precise measures of school accountability. The city is proud to be part of this effort. On behalf of the District of Columbia, we would like to thank you for your commitment to a better education system for all kids.

We look forward to reviewing the content standards for kindergarten through grade 12 and to begin the hard work of adoption and implementation. We are confident that the District's educational stakeholders share our interest, which we know will be vital in ensuring successful implementation. If you have any questions or concerns, please contact Cathie Carothers, Assistant Superintendent of Elementary and Secondary Education, at cathie.carothers@dc.gov.

Sincerely,

Kerri L. Briggs, PhD.
State Superintendent of Education

Lisa Raymond
President, State Board of Education

cc: Mayor Adrian Fenty
Deputy Mayor Reinoso

Appendix B2.1

MOA Common Core Assessment

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 **the District of Columbia** ("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 continuously improve teaching and learning**. 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 improve the quality of learning and schooling. Assessments aim to encourage and support the learning of ambitious intellectual skills in the way they are designed and used for informing teaching, learning, and schooling. Accountability systems publicly report outcomes and take these into account, along with other indicators of school performance, in a well-designed system focused on continual improvement for schools.

6) Assessment and accountability systems use multiple measures 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) New technologies enable greater assessment quality 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.

State and Local Roles within a Consortium

States working within the Consortium would:

- Adopt and augment the Common Core standards as appropriate to their context.

- Create and deploy curriculum frameworks that address the standards—drawing on exemplars and tested curriculum models.
- Build and manage an assessment system that includes both on-demand and curriculum-embedded assessments that evaluate the full range of standards and allow evaluation of student progress. The Consortium may develop both joint assessments (commonly implemented by states) as well as other assessment tasks and items linked to the standards (and grounded in curriculum units) that can be incorporated into states' individual assessment plans for formative or summative purposes.
- Develop rubrics that embody the standards, and clear examples of good work, benchmarked to performance standards.
- Create oversight / moderation / audit systems for ensuring the comparability of locally managed and scored assessment components.
- Ensure that teacher and leader education and development infuse knowledge of learning, curriculum, and assessment.
- Implement high-quality professional learning focused on examination of student work, curriculum and assessment development, and moderated scoring.

Districts and schools would:

- Examine the standards and evaluate current curriculum, assessment, and instructional practice in light of the standards.
- Evaluate state curriculum guidance, and further develop and adapt curriculum to support local student learning, select and augment curriculum materials, and continually evaluate and revise curriculum in light of student learning outcomes.
- Incorporate formative assessments into the curriculum, organized around the standards, curriculum, and learning sequences to inform teaching and student learning.
- Participate in administering and scoring relevant portions of the on-demand and curriculum-embedded components of the assessment system, and examining student work and outcomes.
- Help design and engage in professional development around learning, teaching, curriculum, & assessment.
- Engage in review and moderation processes to examine assessments and student work, within and beyond the school.

Tasks the Consortium Would Undertake

The consortium of states would build on successful efforts already launched in a number of states, seeking to integrate the best knowledge and exemplars from existing efforts, so as to use resources efficiently, take advantage of well-tested approaches, and avoid reinventing the wheel. It would bring together leading curriculum and assessment experts to advise and support efforts to create a system for evaluating the Common Core, building on the most credible and well-vetted knowledge available in the field. With these supports, the Consortium could:

1. Support the Development of Curriculum Frameworks: When the Common Core standards have been released, vetted, and adopted, consortia of states would work with curriculum and assessment experts to develop (or adapt from previously successful work) curriculum frameworks, syllabi, and other materials mapped to the standards. There has been enormous investment in the United States in high-quality curriculum, for example through NSF and other

organizations at the national level, and in many states and districts. Other English-speaking nations have also developed high quality curriculum materials linked to standards and learning progressions that could be evaluated in this process. This effort would inventory and cull from efforts with a strong evidence base of success to support states in building out curriculum frameworks around which they can organize deeper curriculum development at the local level, state and local assessment development, instructional supports, and professional development.

2. Create a Digital Curriculum and Assessment Library: The results of this effort should ultimately be made available on-line in a digital platform that offers materials for curriculum building and, eventually, model syllabi for specific courses linked to the standards, formative and summative assessment tasks and instruments linked to the curriculum materials, and materials for training teachers and school leaders in both strategies for teaching specific curriculum concepts / units and assessment development and scoring. In addition, as described below, an electronic scoring platform supporting training, calibrating, benchmarking, and reporting would be developed and made available across the states.

3. Develop State and Local Assessments: The state consortium would work to create a **common reference examination, which includes selected-response, constructed response and performance components** aimed at higher-order skills, linked to the Common Core standards for grades 3-8, like the NECAP assessment recently developed by a set of New England states. This assessment would be designed to incorporate more rigorous and analytic multiple-choice and open-ended items than many tests currently include and would include strategically selected curriculum-embedded performance assessments at the classroom level that can be part of the summative evaluation, while also providing formative information.

These curriculum-embedded components would be developed around core concepts or major skills that are particularly salient in evaluating students' progress in English language arts and mathematics. (Eventually, work on science could be included.) Exemplars to evaluate and build upon are already available in many states and in nations like England that have developed a set of "tests and tasks" for use in classrooms that help teachers evaluate students' learning in relation to well-described learning progressions in reading, writing, mathematics, and other subjects.

Curriculum-embedded components would link to the skills evaluated in the "on-demand" test, allowing for more ambitious tasks that take more time and require more student effort than can be allocated in a 2 or 3-hour test on a single day; these components would evaluate skills in ways that expect more student-initiated planning, management of information and ideas, interaction with other materials and people, and production of more extended responses that reveal additional abilities of students (oral presentations, exhibitions, and product development, as well as written responses) that are associated with college and career success.

In the context of summative assessments, curriculum-embedded tasks would be standardized, scored in moderated fashion, and scores would be aggregated up to count as part of the external assessment. Curriculum-embedded assessments would also include marker tasks that are designed to be used formatively to check for essential understandings and to give teachers useful information and feedback as part of ongoing instruction. Thoughtful curriculum guidance would outline the scaffolding and formative assessment needed to prepare students to succeed on the summative assessments.

All components of the system would incorporate **principles of universal design** that seek to remove construct-irrelevant aspects of tasks that could increase barriers for non-native English speakers and students with other specific learning needs. In addition, designers who are skilled at developing linguistically supportive assessments and tests for students with learning disabilities would be engaged from the beginning in considering how to develop the assessments for maximum access, as well as how to design appropriate accommodations and modifications to enable as many students as possible to be validly assessed within the system.

The emphasis on evaluating **student growth over time** and on tying standards to a conception of learning progressions should encourage a growth oriented frame for both the "on-demand" examination and the more extended classroom assessments. The Consortium may consider the viability of incorporating computer-based adaptive testing that creates vertically scaled assessments based on the full range of learning progressions in ELA and math. This would allow students to be evaluated in ways that give greater information about their abilities and their growth over time. This approach would not preclude the evaluation of grade-level standards, which could be part of any students' assessment, nor would it preclude a significant number of constructed response, open-ended items, as the technology for machine-scoring structured open-ended items is now fairly well-developed. Strategic use of partial teacher scoring for these items would also be a desirable element of the system to support teachers' understanding of the standards and assessments, and their planning for instruction.

The emphasis on evaluating student growth should also inform the development of the curriculum-embedded elements of the system, which should be selected or developed to strategically evaluate students' progress along the learning continuum. Centrally developed tasks administered and scored by teachers with moderation (see below), using common rubrics, would be part of the set of reported scores. In states with experience and capacity, it may be possible to begin to incorporate information about student learning that teachers develop from their own classroom evidence, linked to the standards and learning progressions and guided by the curriculum frameworks. This could be an optional aspect of the Consortium's work for states and communities with interest and capacity.

At the **high school level**, the Consortium might explore one or both of two options for assessment:

- **Course- or syllabus-based systems** like those in England, Australia, Singapore, Hong Kong, Alberta (Canada), as well as the International Baccalaureate. Generally conceptualized as end-of-course-exams in this country, this approach should become a more comprehensive course assessment approach like that pursued in these other countries. Such an approach would include within-course performance assessments that count toward the examination score, as well as high-quality assessment end-of-course components that feature constructed response as well as selected response items. Within-course performance assessments would tap central modes of inquiry in the disciplines, ensuring that students have the opportunity to engage in scientific investigations, literary analyses and other genres of writing, speaking and listening; mathematical modeling and applications; social scientific research. Such an approach might require an ELA and math assessment at a key juncture that evaluates an appropriate benchmark level for high school standards, and then, as in high-achieving nations, allow for pursuit of other courses/ assessments that are selected by students

according to their interests and expertise. These could serve as additional information on the diploma for colleges and employers.

- **Standards-driven systems** that might include a more comprehensive benchmark assessment in ELA and mathematics complemented by collections of evidence that demonstrate students' abilities to meet certain standards within and across the disciplines. This set of assessments would allow more curriculum flexibility in how to meet the standards. Systems like these are used in some provinces in Canada and Australia, in states like Rhode Island, Wyoming, Nebraska, and New Hampshire, and in systems of schools like the New York Performance Standards Consortium, the Asia Society, and Envision Schools. Sometimes these sets of evidence are organized into structured portfolios, such as the Technology portfolio in New Hampshire and the broader Graduation portfolios in these sets of schools that require specific tasks in each content area, scored with common rubrics and moderation.

- **A mixed model** could combine elements of both course- and standards-driven models, allowing some demonstrations of proficiency to occur in any one of a range of courses (rather than a single, predetermined course) or even outside the bounds of a course, like the efforts by some states to allow students to pass courses via demonstrations of competence rather than seat time (e.g. NH, OH). Such a system could also include specific components intended to develop and display research and inquiry skills that might also be interdisciplinary, such as the Project Work requirements in England, Singapore, and the International Baccalaurate, and the Senior Project requirements in Pennsylvania and Ohio.

4. Develop Moderation and Auditing Systems for Teacher-Scored Work: The consortium would develop protocols for managing moderation and auditing systems and training scorers so as to enable comparable, consistent scoring of performance assessments. In other nations' and states' systems that include these features routinely, procedures have been developed to ensure both widespread teacher involvement – often as part of professional development time – and to create common standards and high levels of reliability in evaluating student work. A range of models are possible, and the consortium would serve as a resource to individual states in developing and implementing strong, efficient approaches.

5. Develop Technology to Support the Assessment System: Technology should be used to enhance these assessments in a number of ways: by delivering the assessments; in on-line tasks of higher-order abilities, allowing students to search for information or manipulate variables and tracking information about the students' problem-solving processes; in some cases, scoring the results or delivering the responses to trained scorers / teachers to assess from an electronic platform. Such a platform may also support training and calibration of scorers and moderation of scores, as well as efficient aggregation of results in ways that support reporting and research about the responses. This use of technology is already being used in the International Baccalaureate assessment system, which includes both on-demand and classroom-based components.

In order to gain the efficiency and cost benefits of machine scoring and the teaching and learning benefits of teachers' moderated scoring, a mixed system could be developed where computer-based scoring is incorporated on constructed response tasks where useful – though teachers would score some of these tasks for anchoring and learning purposes – while other tasks that require human scoring engage most teachers in scoring to support improvements in instruction.

RESPONSIBILITIES OF ALL SEAs PARTICIPATING IN THE CONSORTIUM

1) Each participating SEA in the Consortium will appoint a key contact person.

2) These key contacts from each State will maintain frequent communication with the parties administering the Balanced Assessment Consortium to facilitate cooperation under this MOU.

3) Participating SEA grant personnel will work together to determine appropriate timelines for project updates and status reports throughout the whole grant period.

This Non-binding Memorandum of Understanding shall be effective beginning with the date of the last signature hereon:

SEA Superintendent/- Participating State Chief/Commissioner (or equivalent authorized signatory)

Signature

Date

Kerri L. Briggs

Print Name

State Superintendent

Title

Please email this signed page to

Tammy Morrill
Tammy.Morrill@maine.gov

****PLEASE email this signed page only by January 7, 2010****

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 __the District of Columbia_____("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

Kerri L. Briggs
Print Name

State Superintendent, District of Columbia
Title

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

ASSESSMENT CONSORTIUM
MEMORANDUM OF AGREEMENT

This Memorandum of Agreement ("MOA") is entered into by and between the following States: Arkansas, Colorado, Florida, Illinois, Indiana, Louisiana, Massachusetts, Minnesota, North Carolina, Ohio, Pennsylvania, **the District of Columbia,** and Virginia (collectively the "Participating States" or "Assessment Consortium").

1. Purpose. The purpose of this MOA is to form a coalition of states with a shared vision for common assessments that are internationally-benchmarked; build toward college and career readiness by the time of high school graduation; measure a common core of standards for K-12 pursuant to the National Governors Association Center for Best Practices Memorandum of Understanding ("Common Core Standards"); utilize technology for efficiency of delivery and scoring; and are cost effective. An outcome of this shared vision will be a proposal for the federal Race to the Top Assessment Competition in 2010 to develop and implement common, high-quality assessments aligned with the Common Core Standards.

2. Lead State. The Participating States agree that Florida shall be designated as the Lead State, and Florida accepts the designation. The Lead State shall manage the work process under this MOA and competitively bid, when determined by the Assessment Consortium, for all services and commodities required to achieve the objectives of this MOA.. In particular, the Lead State shall:

a. Direct and oversee meetings of the Assessment Consortium and set the agendas.

b. Pursuant to the laws of the Lead State, procure any necessary goods and services needed to carry out the intent of this MOA, using the most reasonable form of competitive solicitation and by quotes if no competitive solicitation is required.

c. Although the Lead State shall manage and administer the primary contracts, each Participating State shall be a party to any multi-state agreement, by direct execution or by addendum,. However, each Participating State shall be responsible for enforcing their portion of the work on any multi-state contract. In addition, the Lead State shall not be responsible for any of the contractual obligations of a Participating State.

d. Coordinate, assist, and task the Management Entity as may be reasonably necessary.

e. Serve as liaison with the U.S. Department of Education, and all other third parties on behalf of the Assessment Consortium.

f. The Lead State may resign by notifying the Participating States at least 30 days in advance by written notice. A majority of the Participating States will then appoint a new Lead State.

g. The Participating States may remove the Lead State and appoint a new Lead State by vote of a majority of the Participating States. Upon the resignation or removal of the Lead State, all contracts and other rights and obligations of the Lead State shall be assigned to the new Lead State.

3. Management Entity. Services of a Management Entity will be procured and utilized to assist the Consortium in conducting its work. A majority vote of the Assessment Consortium is required to award a contract to the Management Entity.

The Management Entity shall perform the following services:

a. Assist the Lead State in coordinating and running the Assessment Consortium meetings, including acting as a facilitator at the meetings.

b. Perform research and draft reports necessary for developing Requests for Proposals for goods and services.

c. Assist the Lead State in procuring goods and services as agreed upon by Participating States.

d. Provide advice and grant-writing services to the Assessment Consortium to assist them in developing the proposal for the Race to the Top Assessment Competition.

e. Perform any other activities and services that are reasonably requested by the Lead State or any Participating State in order to achieve the purposes of this MOA.

4. Scope of Work and Responsibilities of the Participating States. Each Participating State in the Assessment Consortium shall adopt the Common Core Standards which were developed to be internationally benchmarked and to build toward college and career readiness by the time of high school graduation. The Assessment Consortium shall, if funded by Race to the Top Assessment Competition funds, develop common, high-quality assessments which are aligned with the Common Core Standards, utilize technology for efficiency of delivery and scoring, result in a common definition of proficiency, and are cost effective. In order to achieve these deliverables, the Assessment Consortium and the individual Participating States shall perform the following activities.

a. Each Participating State will adopt the Common Core Standards using their state-approved standards-adoption process.

b. The Assessment Consortium will meet to define the process for procuring the services of a Management Entity by April 30, 2010

c. The Assessment Consortium will develop and submit a proposal for funding through the Race to the Top Assessment Competition by June 2010 or the due date established by the U.S. Department of Education.

d. The Assessment Consortium will meet, with the assistance of a Management Entity, to review the status of each Participating State's Common Core Standards adoption by August 2, 2010.

e. The Assessment Consortium will develop a plan by December 10, 2010, for sharing of test items and tasks aligned with the Common Core Standards for use in Participating States' LEAs for formative and interim assessment purposes.

5. Meetings and Quorum. Meetings may be called by the Lead State or a majority of the Participating States. Meetings may either be in person or by conference call. Written notice of the meeting shall be sent to all Participating States at least 48 hours in advance, by email, facsimile, or certified mail.

a. A Quorum for any meeting shall consist of designated representatives from at least two-thirds of the Participating States. An individual state may appear by phone and be counted as part of the Quorum. Each Participating State shall have one vote.

b. All actions or decisions of the Assessment Consortium shall, unless otherwise designated elsewhere in this MOA, require a majority vote to pass.

c. Actions and decisions of the Assessment Consortium may also be taken by written directive executed by a majority of the Participating States without a formal meeting.

d. Notwithstanding the above, any amendment to this MOA shall require a unanimous vote of the Participating States.

6. Exam Results. Each Participating State shall own their respective assessment results and any other documentation which are developed as a result of any particular state assessment. All Participating States shall jointly own all deliverables produced as a result of this MOA, and shall have the right to utilize all deliverables and documents produced under this MOA for the benefit of their respective state, subject to all state and federal confidentiality laws and regulations.

7. Termination and Withdrawal of Parties.

a. This MOA may be terminated by agreement of all the Participating States.

b. Any Participating State may withdraw from this MOA upon thirty days written notice to all Participating States. In addition, any Participating State may immediately withdraw from this MOA upon notice of a loss of state funding to support the assessment

work. A notice specifying the reasons for immediate termination shall be sent as soon as possible after the termination to the Participating States.

c. A withdrawn Participating State may only participate in a contract or agreement it executed prior to its withdrawal from the Assessment Consortium and this MOA.

d. A Participating State may have their rights hereunder terminated in the event it fails to perform or comply with any of its material covenants or obligations contained in this MOA, and such failure is not remedied and cured in all material respects within fifteen (15) days after the date written notice of such failure is delivered to the Participating State by the Lead State. A termination for default under this provision shall effectively terminate all contracts and agreements entered into by the terminated Participating State which have been procured through this MOA. Upon demand by the Lead State, the terminated Participating State shall provide written proof that such agreements have been terminated. However, the determination of default must be made by a majority of the Participating States before the Lead State is authorized to take any action against a defaulting Participating State.

8. Confidential Information. The Participating States warrant they shall not disclose to any third party any personally identifiable information about any student, without the written consent of the Participating State that owns the data. This applies to information which came from any record or report used by the Assessment Consortium or from any education record which is subject to the Family Educational Rights and Privacy Act, 20 U.S.C. Section 1232g. The term "educational record" shall have the meaning prescribed in 20 U.S.C. Section 1232g(a)(4).

9. Expenses. It is the intent of the Participating States to seek funding from various third parties for the development of the common, high quality assessments and other shared deliverables under this MOA, and for the cost of a Management Entity. However, prior to obtaining such funds, the Participating States agree that they shall equally share these expenses. Decisions on whether to incur a shared expense and the amount to incur shall be decided by a majority vote of the Assessment Consortium. Notwithstanding the above, the Participating States also agree that they shall individually pay for any state specific expenses, including travel and the costs related to any state's use of an assessment.

10. Miscellaneous Provisions.

a. Rules of Interpretation. The Participating States waive application of the principle of contract construction that ambiguities are to be construed against a contract's drafter, and agree that this MOA is a joint product of all Participating States.

b. Assignment. No Participating State may assign any of its rights or obligations hereunder without the prior written consent of the Assessment Consortium.

c. Additional Documentation. Each Participating State agrees to take such action and to execute and deliver all documents necessary to carry out the terms and conditions of this MOA.

d. Invalidity and Severability. In the event that any provision of this Contract shall be held to be invalid, such provision shall be null and void. The validity of the remaining provisions of the MOA shall not in any way be affected thereby.

e. Counterparts. This Contract maybe executed in multiple counterparts, each of which shall be deemed to be an original and all of which shall constitute one contract, notwithstanding that all parties are not signatories to the original or the same counterpart, or that signature pages from different counterparts are combined, and the signature of any party to any counterpart shall be deemed to be a signature too and may be appended to any other counterpart.

f. Authority to Execute. Each Participating State warrants that it has the authority to enter into this MOA, and the party executing hereunder has the full authority to bind that state.

IN WITNESS WHEREOF, the Participating States have, through their duly authorized representative, executed this Memorandum of Agreement, which shall be effective, as of the last signature date below.

STATE OF ARKANSAS

By:_____

Name:_____
Title:_____
Date:_____

STATE OF COLORADO

By:_____

Name:_____
Title:_____
Date:_____

STATE OF FLORIDA

By:_____

Name:_____
Title:_____
Date:_____

STATE OF ILLINOIS

By:_____

Name:_____
Title:_____
Date:_____

STATE OF INDIANA

By:_____

Name:_____
Title:_____
Date:_____

STATE OF LOUISIANA

By:_____

Name:_____
Title:_____
Date:_____

COMMONWEALTH OF MASSACHUSETTS

By:_____

Name:_____
Title:_____
Date:_____

STATE OF MINNESOTA

By:_____

Name:_____
Title:_____
Date:_____

STATE OF NORTH CAROLINA

By:_____

Name:_____
Title:_____
Date:_____

STATE OF OHIO

By:_____

Name:_____
Title:_____
Date:_____

COMMONWEALTH OF PENNSYLVANIA

By:_____

Name:_____
Title:_____
Date:_____

COMMONWEALTH OF VIRGINIA

By:_____

Name:_____
Title:_____
Date:_____

DISTRICT OF COLUMBIA

By:_____

Name: Kerri L. Briggs
Title: State Superintendent
Date: January 11, 2010

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Peter Sayre
Controller
Prudential Financial, Inc.

January 15, 2010

Dr. Kerri Briggs
State Superintendent
Office of the State Superintendent of Education
441 4th Street, NW, Suite 350 North
Washington, DC 20001

Dear State Superintendent Briggs:

Achieve is pleased to confirm the District of Columbia's participation in an assessment partnership committed to pursuing the development and implementation of summative assessments that are aligned to the common core standards, that can be used within states as part of statewide assessment systems, and that will enable comparability of results across a maximum number of states.

We have received your formal request to join the other states in this partnership and acknowledge your acceptance of the attached Statement of Principles which will guide our collective work.

The District of Columbia's participation in this partnership is critical to its success. We look forward to continuing our important work together in the coming months.

Sincerely,

Michael Cohen
President

States Committed to Assessment Partnership
(As of 10:00 am EST on January 15, 2010)

1. Alabama
2. Arizona
3. Arkansas
4. California
5. Delaware
6. District of Columbia
7. Florida
8. Georgia
9. Hawaii
10. Illinois
11. Indiana
12. Kentucky
13. Louisiana
14. Maryland
15. Massachusetts
16. Michigan
17. Minnesota
18. New Hampshire
19. New Mexico
20. North Carolina
21. Ohio
22. Oklahoma
23. Pennsylvania
24. Rhode Island
25. Tennessee
26. Utah
27. Wisconsin

1775 Eye Street NW, Suite 410, Washington, D.C. 20006 Phone (202) 419-1540 Fax (202) 828-0911
www.achieve.org

Comparing Student Performance on Common College- and Career-Ready Standards
Statement of Principles

Our state is committed to an education system that prepares all of our students for success in college, careers, and life in the 21st century. We believe in setting *high* expectations for our students and schools that are firmly grounded in what it takes to be successful. We believe in setting *common* expectations across states, and are committed to working with like-minded states to adopt common standards and assessment systems anchored in college and career readiness.

Our state supports common assessments that meet the following principles:

- Aligned to the common core standards
- Anchored in college and career readiness
- Allow for comparison of student results across a maximum number of states
- Enable to the maximum extent possible benchmarking performance against NAEP and international standards
- Cover grades 3 through 8 and high school, including college/career ready measures at the end of high school
- Address three overarching goals: measuring student proficiency, ensuring accountability, and improving teaching and learning
- Enable measurement of student achievement and growth
- Are summative in nature but designed in a manner consistent with more comprehensive assessment systems that also include interim and formative assessments
- Provide valid and reliable measures of student knowledge, understanding of, and ability to apply crucial concepts through the use of a variety of item types and formats
- Leverage technology and economies of scale in order to minimize costs and create assessments that accurately measure student performance
- Provide for timely release of results to better inform practice and support decision-making
- Include the assessment of students identified with disabilities and English language learners and to the extent feasible, use universal design principles

We understand that Achieve will work with other national partners to build on the work of the common core standards and convene states to pursue a common assessment strategy that meets these principles. We are prepared to work with Achieve and its partners in as large a consortium of states as possible to explore the development and implementation of summative assessments that are aligned to the common core standards, that can be used within states as part of statewide assessment systems, and that will enable comparability of results across states. We understand that in pursuing this effort, Achieve and its partners will work closely with other consortia that have been formed to explore areas of common ground and determine whether and how efforts could be combined to achieve comparability of results.

Appendix B2.2

Common Core Assessment List of States

List of States Participating in Balanced Assessment Consortium (as of 1/15/2010)

1. Alabama
2. Arizona
3. Arkansas
4. California
5. Connecticut
6. Delaware
7. Illinois
8. Indiana
9. Georgia
10. Iowa
11. Kansas
12. Kentucky
13. Maine
14. Maryland
15. Massachusetts
16. Michigan
17. Mississippi
18. Missouri
19. Montana
20. Nebraska
21. New Hampshire
22. New Jersey
23. North Carolina
24. North Dakota
25. Ohio
26. Oklahoma
27. Pennsylvania
28. Rhode Island
29. South Carolina
30. South Dakota
31. Tennessee
32. Utah
33. Washington DC
34. West Virginia
35. Wisconsin
36. Wyoming

States participating in the SMARTER consortium (as of 1/13/2010)

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	Lead
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
Mississippi	January 11th, 2010	Participating
District of Columbia	January 11th, 2010	Participating
California	January 12th, 2010	Participating
Colorado	January 13th, 2010	Lead
Total # of states that have submitted signed MOUs for SMARTER	**22**	

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

State	Status of SMARTER MOU
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
Mississippi	Signed
District of Columbia	Signed
Colorado	Signed
California	Signed
Anticipated total # of states that will participate in SMARTER	**23**

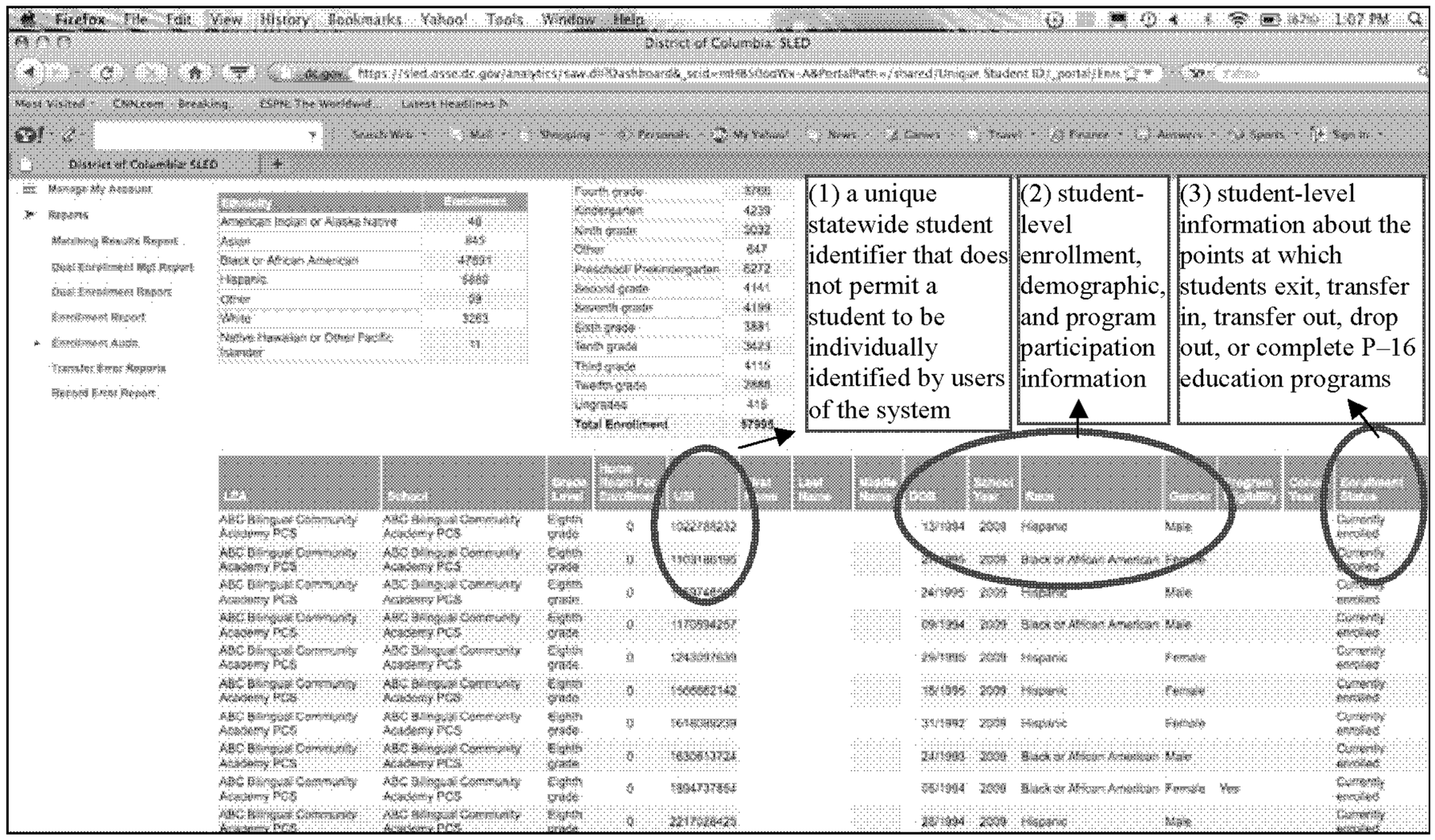
List of States Participating in Common Assessment Consortium (as of 1/15/2010)

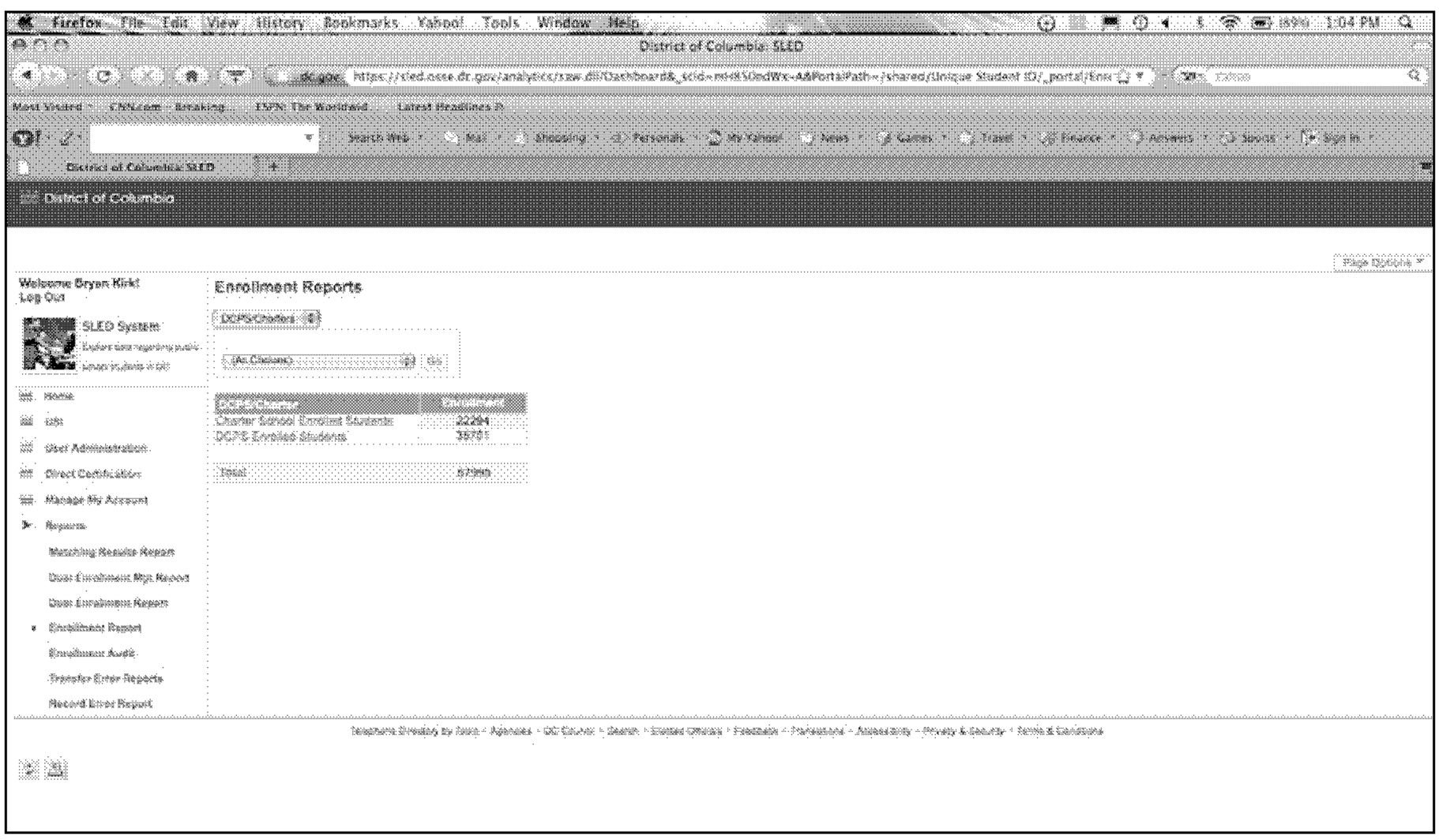
1. Arizona
2. District of Columbia
3. Florida
4. Illinois
5. Indiana
6. Kentucky
7. Louisiana
8. New Jersey
9. North Carolina
10. Pennsylvania
11. South Carolina
12. Tennessee

Appendix C1.1

SLED Screenshots

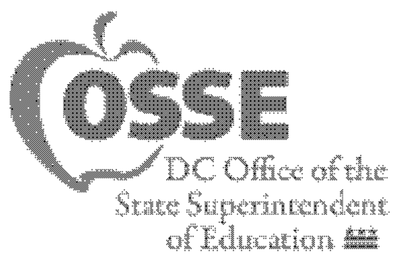
SLED Screenshots

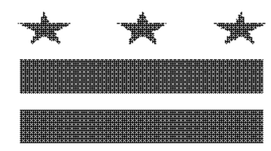




Appendix D1.1

State-Approved Educator Preparation Programs





District of Columbia

Office of the State Superintendent of Education

Request for Applications

State Approved Educator Preparation Programs

Division of Education Excellence
Office of Educator Licensure and Quality
51 N Street, N.E. 3rd Floor
Washington DC 20002

Release Date: January 2, 2009

Application Deadline: February 13, 2009

REQUEST FOR APPLICATIONS

STATE-APPROVED EDUCATOR PREPARATION PROGRAMS

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- **Mission/Philosophy**
- **Admissions**
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C. DISTRICT OF COLUMBIA EDUCATOR PREPARATION PROGRAM SUBJECT AREA STANDARDS

D. SUBJECT AREA STANDARDS MAPS

REQUEST FOR APPLICATIONS

STATE-APPROVED EDUCATOR PREPARATION PROGRAMS

I. INTRODUCTION and INSTRUCTIONS

A. OVERVIEW

The District of Columbia Office of the State Superintendent of Education (OSSE) is seeking applications from D.C. based institutions of higher education, local education agencies (LEAs), and non-profit organizations for the provision of post-baccalaureate, non-degree educator preparation programs. Candidates who complete approved programs will be eligible to seek licensure in the profession in the District of Columbia.

Organizations approved under this Request for Applications (RFA) will receive State Approval to operate as an educator preparation program that leads to state teacher or school administrator licensure. The State Approval process is limited to organizations seeking to prepare post-Baccalaureate, non-degree candidates for the profession. Organizations seeking state/national accreditation shall continue to utilize the process currently in place through the partnership between the OSSE and the National Council for the Accreditation of Teacher Education (NCATE).

The goal of OSSE in creating the State Approval process is to increase the number of high-quality candidates for teaching and administrator positions in the District of Columbia by allowing multiple routes for education preparation. The standards for State-approved programs insist on high selectivity and high standards for candidates. It is anticipated that programs approved under this RFA will be accelerated in nature, and include pre-service and intensive mentoring components.

Organizations approved under this RFA shall receive Initial Approval from the Superintendent on or about March 30, 2009. Initial Approval authorizes organizations to begin operations, hire staff and recruit students according to the approved application. By May 15, 2009 approved organizations shall submit a Program Implementation Progress Report to the OSSE describing initial progress on hiring staff, recruiting candidates, finalizing any partnership, pre-service, mentoring or operational and budgetary arrangements. Organizations shall include a discussion of any deviations from what was presented in the original application submitted under this RFA.

Upon receipt and review of the Progress Report, the Superintendent reserves the right to withdraw approval from any organization or program which substantially deviates from the terms under which approval was granted under this RFA. Organizations which in practice differ greatly from their application in terms of program offerings, fiscal stability and governance, admissions criteria, ability to offer adequate pre-service and mentoring

support or otherwise not able to demonstrate the capacity to carry-out the proposed activities of the applications risk losing approval.

The purpose of this approval structure is to ensure that applicants, including new providers, are able to gear up and operate according to their stated applications. In evaluating the progress report, the OSSE will not revisit issues of content, such as the organizational report and program proposals. The OSSE will evaluate only whether the organization has the capacity to carry out the program in a fashion consistent with that described in the organization's response to this RFA. It is the intent of the OSSE that Final Approval will be withheld only from organizations deviating from their proposal in a manner that is deemed to be detrimental to candidate progress.

Applications submitted in response to this RFA shall be complete and submitted to OSSE by noon (12:00pm) on February 13, 2009 according to terms herein.

B. APPLICATION REVIEW AND APPROVAL TIMELINE

STEPS	TIMELINE
• Request For Applications.	January 2, 2008
• Applicant conference, question/answer with OSSE staff.	2pm Monday, January 12, 2009 Location TBD and posted on the OSSE website
• Application deadline.	**12:00pm** February 13, 2009 51 N Street, 3rd Floor Washington DC 20002
• Initial findings /questions from OSSE.	Week of March 9, 2009
• Site visit, interviews of faculty and staff.	Week of March 16, 2009
• Recommendation to State Superintendent	March 23, 2009
• Superintendent Initial Approval	March 30, 2009
• Program Implementation Progress Report due to the OSSE.	May 15, 2009
• Superintendent's Final Approval.	June 1, 2009

C. APPLICATION SUBMISSION

Please submit one original; THREE copies; ONE digital copy of the completed application; and all additional materials described herein no later than 12:00pm, Friday, February 13, 2009 to:

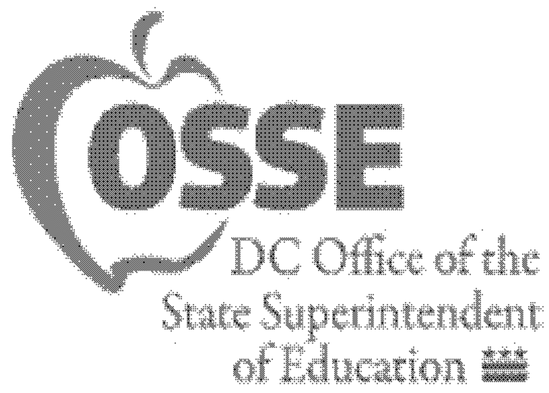
Office of the State Superintendent of Education
Division of Education Excellence
Office of Educator Licensure and Quality
51 N Street, NE – 3rd Floor
Washington, DC 20002

Submissions by mail or other delivery service are acceptable. However, applications must be received by the OSSE by the stated deadline day and time to be considered on time. The OSSE bears no responsibility for reviewing applications delayed in the general mail or OSSE mail system. Hand delivery is encouraged. Please note that photo identification is required for entry to the facility.

Applications shall be submitted in a tabbed three-ring binder including all requested sections as outlined below. Applications shall also be submitted on CD in digital format.

Tab A: General Information and Program Overview
Tab B: Organizational Report (use dividers to separate standards)
Tab C: Subject Area Program Proposal(s) (use dividers to separate subjects)
Tab D: Supplemental Materials (any additional information the applicant wishes to submit)

- Please include a Table of Contents and number pages within each section consecutively.
- All narrative responses shall be double-spaced.



II. APPLICATION FOR EDUCATOR PREPARATION PROGRAM STATE APPROVAL

Please complete all sections of the application. Applications shall be submitted consistent with instructions in Section I of the RFA, and throughout the application.

A. GENERAL INFORMATION AND PROGRAM OVERVIEW

GENERAL INFORMATION

Organization Name: _____

Executive Director: _____

Organization Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Contact Person: _____

Phone: _____ Email: _____

Subject Areas Applied For: _____

Key Partner LEAs; Schools and Organizations: _____

_____

Assurances

On behalf of the organization designated on this form, I verify that the information provided in this application is true, correct, and complete. I am duly and legally authorized to represent the applicant organization.

In accordance with the D.C. Human Rights Act of 1977, as amended, D.C. Official Code Section 2-1401.01et seq., (Act) all Educator Preparation Programs approved by the District of Columbia shall not discriminate against candidates, faculty and personnel on the basis of actual or perceived: race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, familial status, family responsibilities, matriculation, political affiliation, disability, source of income, or place of residence or business.

Print Name of Executive Officer	Date
Signature of Executive Officer	Date

PROGRAM OVERVIEW

Please provide an overview of the applicant organization and preparation program proposal. Include the organization's mission; philosophy of education preparation; subject area programs applied for; and other relevant information to provide an overall understanding of the preparation program's design. Since approved programs will produce educators for the District of Columbia's classrooms and schools, provide information in the overview on how the program will specifically meet the unique and diverse needs of students in the District of Columbia, and the academic challenges these students face. Please be advised that the OSSE reserves the right to distribute and post the Program Overview. Please limit your Program Overview response to 5-pages in length.

- *Mission/Vision/Philosophy*

Please provide a description of the organizational mission statement and education preparation philosophy. Include relevant background information and organizational history, qualifications of key staff, and a list of subject areas for which approval is sought.

- *Program Structure*

Provide anticipated program start date of the program, estimated tuition, and anticipated number of candidates. Describe the structure of the program, including course/contact hour requirements, and program length. Describe provisions for exiting participants from the program.

- *Field Experiences*

Provide a description of pre-service practice and mentoring components. Include a description of schools, local educational agencies, and other partners.

- *Admissions*

Provide information on the program's admission criteria and procedures (must meet minimum criteria in Appendix A). Include information on, recruitment and marketing plans, and ways in which the program is made accessible to mid-career and other post-college applicants. Describe screening activities to determine candidates' appropriateness for teaching or school administration. Describe degree requirements, or other academic and/or job related credentials required for program entry.

B. ORGANIZATIONAL REPORT

The Organizational Report shall consist of a narrative of the organization's ability to meet the organizational standards for D.C. state approval. For each of the six standards, please provide narrative describing how the organization demonstrates its capacity to meet the standard, emphasizing organizational approach to the standard's relevant indicators. Applicants shall refer to Appendix B for the standards and indicators, and use them as a guide in the narrative responses.

Standard 1: Knowledge Skills and Disposition

Candidates preparing to work in schools as teachers or other school professionals know and demonstrate the content knowledge, pedagogical content knowledge and skills, pedagogical and professional knowledge and skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards.

Educators need to possess content knowledge broadly and in their area of teaching; pedagogical skill in delivering that knowledge to students in a myriad of ways and the ability to function professionally in a classroom, school and community context. Provide narrative on how the applicant organization will ensure candidates meet this standard.

Standard 2: Assessment System

The organization has an assessment system that collects and analyzes data on applicant qualifications, candidate and graduate performance, and organization operations to evaluate and improve the performance of candidates, the organization, and its programs.

In order to grant state approval, it is vital that the OSSE understands how organizations assess whether individual candidates are meeting the required standards. As such, organizations shall describe their assessment system, and are required to maintain data on individual candidate progress. Organizations shall use data for the purposes of program evaluation and improvement. In addition, assessment data satisfactory to the OSSE will be required as part of annual reports, and for renewal purposes at the end of the three-year approval period.

Provide a narrative of the organization's assessment strategies, including the following: assessing candidates for program entry; after pre-service practice; during the intern year and/or first year of employment; and other relevant times within the program where the assessments occur. Explain how data from the assessments will be collected and used for program improvement. Include a description of how the assessment strategy was created and who was involved in its development. Please include any additional materials

(assessment rubrics, evaluation matrix, etc.). Please provide an indication of how organizations will maintain a program completer tracking system that includes:

- Average Praxis Scores for the program
- Evaluation by principals and school leaders
- Available measures of student achievement
- Retention rate of program completers for D.C.-based employer(s)

Standard 3: Field Experiences

The organization and its school partners design, implement, and evaluate field experiences so that teacher candidates and other school professionals develop and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn.

In accelerated preparation program structures, strong partnerships with LEAs, schools and other resources, and quality field-based experiences are critical for success. Field experiences are defined as observations, pre-service practice, and mentoring supports given during full-time employment. It is required that programs offer a direct, student-based pre-service teaching or equivalent field experience prior to candidates' employment as a teacher or administrator of record. As candidates transition to lead duties, it is required that programs provide solid mentoring to candidates with intensive front-loaded contact and support for the first eight weeks of employment and ongoing mentoring throughout the first year. Programs are encouraged to forge strong partnerships with schools and other institutions to assist in these crucial elements of educator preparation.

Please provide a narrative for how the organization provides supportive pre-service and mentoring experiences (setting, length, pay, type of activities, supervision provided, role of principal, etc.). Include discussion of mentor qualifications, training and selection of mentors, and how mentors and mentees are given sufficient flexibility for frequent and structured contact.

Standard 4: Diversity

The organization designs, implements, and evaluates curriculum and provides experiences for candidates to acquire and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates can demonstrate and apply proficiencies related to diversity. Experiences provided for candidates include working with diverse populations, including higher education and P–12 school faculty, candidates, and students in P–12 schools.

Provide an overview of the organization's diversity related components and considerations. Please provide a narrative of the experiences candidates will have that will

expose them to the District of Columbia's diverse socioeconomic and ethnic/racial groups, and provide for experiences and interactions with English language learners and students with disabilities. Describe how specifically how your organization will prepare teachers to accept and meet the challenges that students in the District of Columbia face in particular.

Standard 5: Faculty Qualifications

Faculty are qualified and model best professional practices in scholarship, service, and teaching, including the assessment of their own effectiveness as related to candidate performance; they also collaborate with colleagues in the disciplines and schools. The organization systematically evaluates faculty performance and facilitates professional development.

Programs need to demonstrate that faculty and staff delivering instruction and guidance to candidates are qualified. Faculty experiences directly relevant to classroom practice and evidence of previous success in similar settings are highly valued. Provide a brief overview of faculty qualifications and resumes for proposed faculty. Include a narrative of organization's hiring practices, hiring plan and progress to date, if any.

Standard 6: Organization Governance

The organization has the leadership, authority, budget, personnel, facilities, and resources, including information technology resources, for the preparation of candidates to meet professional, state, and institutional standards.

Successful candidate preparation is predicated upon competent organizational governance, operations, and sufficient resources. Please provide a narrative describing the organization's ability to meet each of the indicators in Appendix B, Standard 6. Include a description of the instructional environment, the facilities to be utilized; the nature of partnerships and descriptions of the utilization of partners' resources; the organization's financial plan, including sources and uses of funds, and rationale for projections; and a three-year forecast of the annual budget with supporting narrative.

C. SUBJECT AREA PROGRAM PROPOSAL

Organizations shall provide a detailed description of how they will prepare educators to teach the subject area(s) for which the applicant organization is applying for approval. It is the OSSE's assumption that most teacher candidates will demonstrate subject matter proficiency prior to program entry, therefore, the subject area program proposal should focus primarily on how the applicant organization will provide pedagogical instruction in the subject matter for which it is producing teachers. For organizations applying to create administrator programs, the organization shall provide a detailed description of how it will prepare candidates for school leadership positions. Subject area standards are located in Appendix C.

Organizations shall provide a narrative summary (does not need to be double-spaced in this section) of how the standard will be met. Include a discussion of how the program structure relates to organizational vision and philosophy, connecting theory to practice.

Include a description of the program, the plan of study for the program's subject area(s), distribution of course/contact hours, syllabi, texts to be used, reading lists, etc. as may be useful for reviewers to understand and assess the organization's ability to prepare candidates to meet the standards.

Organizations shall map candidate standards and indicators to the program's curricular and field experience activities, and describe the assessment strategies to be used to determine if candidates met the standard. Please see the sample map on the next page for guidance.

Standard 1: Knowledge of Mathematical Problem Solving			
Description	**Indicators**	**Map to Field Experiences/ Map to Curriculum and Course Experiences**	**Assessment Strategies**
Candidates know, understand, and apply the process of mathematical problem solving.	Candidates can: • Apply and adapt a variety of appropriate strategies to solve problems. • Solve problems that arise in mathematics and those involving mathematics in other contexts. • Build new mathematical knowledge through problem solving. • Monitor and reflect on the process of mathematical problem solving.	• Problem Solving Course designated MA 520. • Introduce candidates to heuristics for problem solving. • Involve candidates in problem solving activities via exploration and experimentation to allow students to construct (and reconstruct) mathematics understanding and knowledge.	Scores on Praxis II Subject Tests for Mathematics (Content Knowledge and Proofs, Models, and Problems, Part 1) GPA in undergraduate mathematics courses Results from candidate self assessments and mentor/faculty scoring guides on candidates ability to: • Approach problems from multiple perspectives and help their students become better problem solvers; • Use assorted counting techniques to solve problems; • Begin developing mathematical proofs. • Use mathematical language to correctly state mathematical definitions and theorems.

The evidence that standards and indicators will be met can be demonstrated in a variety of ways, including standardized test-based assessments and field-based assessments. In

reviewing whether a program has the ability to prepare candidates to meet the standards, the organization will need to demonstrate that a preponderance of the indicators for a given standard are being met and appropriately assessed. It is not the intention of OSSE to require a one-to-one mapping of each indicator of a given standard to a curricular or field-based instructional element. Applicants may cross-reference with other sections of the application as necessary to avoid duplication.

District of Columbia
Office of the State Superintendent of Education

Division of Education Excellence

APPENDICES FOR APPLICATION
STATE APPROVED EDUCATOR PREPARATION PROGRAMS

III. APPENDICES

- **A. ADMISSION AND PROGRAM STRUCTURE REQUIREMENTS**
- **B. DISTRICT OF COLUMBIA EDUCATOR PREPARATION PROGRAM ORGANIZATIONAL STANDARDS**
- **C. DISTRICT OF COLUMBIA EDUCATOR PREPARATION PROGRAM SUBJECT AREA STANDARDS**
- **D. SUBJECT AREA STANDARDS MAPS**

Division of Education Excellence
Office of Educator Licensure and Quality
51 N Street, N.E. 3rd Floor
Washington DC 20002

Release Date: December 19, 2008

APPENDIX A
STATE APPROVED EDUCATOR PREPARATION PROGRAMS

ADMISSION AND PROGRAM STRUCTURE REQUIREMENTS

Program Structure

This post-baccalaureate, non-degree program is designed to accommodate post-college and mid-career applicants. Programs must have a minimum of 12 credit hours (180 contact hours), and last for a minimum of one (1) year. The contact hours may include pre and in-service coursework.

Field Experiences

Successful field experiences require forging a strong partnership with schools and other institutions. Candidates must be placed in pre-service practice prior to taking on lead teaching responsibilities. Programs are required to offer a hands-on, student-based field experience. It is also required that programs provide at least one-year of intensive mentoring for candidates. The state requires programs to provide solid mentoring to candidates with intensive front-loaded contact and support for the first eight weeks of employment and ongoing mentoring throughout the first year.

Admissions

Programs demonstrate highly selective admissions criteria. Multiple-route educator preparation programs allow for diverse admissions criteria, such as evidence of successful work experience. The table below shows the grade point average requirements for program entry.

Minimum Undergraduate Grade-point-average	Successful Work Experience
3.0	Less than 5 years
3.25 last 60 hours	
3.25 in subject courses	
2.75	5 to 10 years
2.5	More than 10 years

The minimum grade-point-average standards above are subject to minor changes to accommodate candidates with exceptional qualifications.

In addition, teacher candidates must successfully complete the Praxis I: Pre-Professional Skills Test and Praxis II – Content assessment (where applicable) prior to taking on responsibilities as the teacher of record.

APPENDIX B
STATE APPROVED EDUCATOR PREPARATION PROGRAMS

ORGANIZATIONAL STANDARDS AND INDICATORS

Institutions and Organizations seeking State Approval for programs which prepare and result in the recommendation of candidates for teacher or school administrator licensure shall be required to demonstrate that they meet the following organizational standards. The Standards below are an adapted version of the 2007 Professional Standards of the National Council for the Accreditation of Teacher Education.

Standard 1: ***Candidate Knowledge, Skills, and Professional Dispositions***

Candidates preparing to work in schools as teachers or other school professionals know and demonstrate the content knowledge, pedagogical content knowledge and skills, pedagogical and professional knowledge and skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates meet professional and state standards.

Description	Indicator
1a. Pedagogical Content Knowledge and Skills for Teacher Candidates	Teacher candidates: • Know the content that they plan to teach • Can explain important principles and concepts delineated in professional and state standards. • Understand the relationship of content and content-specific pedagogy delineated in professional and state standards. • Have a broad knowledge of instructional strategies that draws upon content and pedagogical knowledge and skills delineated in professional and state standards to help all students learn. • Facilitate student learning of the content through presentation of the content in clear and meaningful ways and through the integration of technology. • Are able to select and use a broad range of instructional strategies and technologies that promote student learning and are able to clearly explain the choices they make in their practice.
1b. Professional and Pedagogical Knowledge and Skills for Teacher Candidates	Teacher candidates: • Can apply the professional and pedagogical knowledge and skills delineated in professional, state, and institutional standards to facilitate learning.

	• Have a thorough understanding of and consider the school, family, and community contexts in which they work and the prior experience of students to develop meaningful learning experiences. • Know major schools of thought about schooling, teaching, and learning. • Are able to analyze educational research findings and incorporate new information into their practice as appropriate. • Reflect on their practice and are able to identify their strengths and areas of needed improvement. • Engage in professional activities. • Collaborate with members of the professional community to create meaningful learning experiences for all students. • Are aware of current research and policies related to schooling, teaching, learning, and best practices. • Are able to analyze educational research and policies and can explain the implications for their own practice and for the profession.
1c. Student Learning for Teacher Candidates	Teacher candidates: • Assess and analyze student learning, make appropriate adjustments to instruction, and monitor student progress. • Focus on student learning. • Are able to develop and implement meaningful learning experiences for students based on their developmental levels and prior experience. • Analyze student, classroom, and school performance data and make data driven decisions about strategies for teaching and learning so that all students learn. • Are aware of and utilize school and community resources that support student learning.
1d. Knowledge and Skills for Other School Professionals	Candidates for other professional school roles have an adequate understanding of the knowledge expected in their fields and delineated in professional, state, and institutional standards. Candidates: • Know their students, families, and communities; • Use data and current research to inform their practices;

	• Use technology in their practices; • Support student learning through their professional services. Know and implement 'No Child Left Behind' requirements.
1e. Student Learning for Other School Professionals	Candidates: • Are able to create positive environments for student learning. • Understand and build upon the development levels of students with whom they work; the diversity of students families and communities; and the policy contexts within which they work.
1f. Professional Dispositions for All Candidates	Candidates: • Demonstrate classroom behaviors that are consistent with the ideal of fairness and the belief that all students can learn. • Work with students, families, colleagues and communities reflect these professional dispositions.

Standard 2: ***Assessment System and Organization Evaluation*** *The organization has an assessment system that collects and analyzes data on applicant qualifications, candidate and completer performance, and organization operations to evaluate and improve the performance of candidates, the organization, and its programs.*	
Description	**Indicator**
2a. Assessment System	The organization has: • An assessment system that reflects the overall organization's design and vision, and professional and state standards. • A system that includes comprehensive and integrated assessment and evaluation measures to monitor candidate performance and manage and improve the organization's operations. • Taken effective steps to eliminate bias in assessments and is working to establish the fairness, accuracy, and consistency of its assessment procedures and organization's operations. Decisions about candidate performance are based on multiple assessments at admission into programs, appropriate transition points, and program completion.
2b. Data Collection, Analysis, and Evaluation	The organization: • Maintains an assessment system that provides regular and comprehensive information on applicant qualifications, candidate proficiencies, effectiveness of completers, organization's operations, and program quality. • Uses multiple assessments from internal and external sources, and collects data from applicants, candidates, completers, faculty, and other members of the professional community. Assessment data are regularly and systematically collected, compiled, aggregated, summarized, and analyzed to improve candidate performance, program quality, and organization's operations. • Maintains records of formal candidate complaints and documentation of their resolution. • Maintains its assessment system through the use of

	information technologies appropriate to the size of the program and organization/institution.
2c. Use of Data in Organizational Improvement	The organization: • Regularly and systematically uses data, including candidate and completer performance information, to evaluate the efficacy of its courses, programs, and field experiences. • Analyzes program evaluation and performance assessment data to initiate changes in programs and organization operations. Faculty has access to candidate assessment data and/or data systems. Candidate assessment data are regularly shared with candidates and faculty to help them reflect on and improve their performance and programs.

Standard 3: ***Field Experiences***

The organization and its school partners design, implement, and evaluate field experiences and clinical practice so that teacher candidates and other school professionals develop and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn.

Description	Indicator
3a. Collaboration between Organization and LEA/School Partners	The organization program and its school partners: • Design, deliver, and evaluate field experiences and clinical practice to help candidates develop their knowledge, skills, and professional dispositions. • Jointly determine the specific placement of teachers and interns for other professional roles to provide appropriate learning experiences. • Share expertise to support candidates' learning in field experiences and clinical practice.
3b. Design, Implementation, and Evaluation of Field Experiences and Clinical Practice	Candidates participate in field experiences that: • Facilitate candidates' development as educators by providing opportunities for candidates to observe in schools and other agencies, tutor students, and participate in other educationally-related community events, such as interacting with families of students, attending school board meetings, and assisting teachers or other school professionals. • Analyze P–12 student learning, and reflect on their practice in the context of theories on teaching and learning. • Reflect the organization's overall design and vision and help candidates continue to develop the content, professional, and pedagogical knowledge, skills, and professional dispositions delineated in standards. • Engage in structured activities related to the roles for which they are preparing. These activities involve the analysis of data, the use of technology and current research, and the application of knowledge related to students, families and communities. • Allow candidates to participate as teachers or other professional educators, as well as learners in the school setting.

	• Is sufficiently extensive and intensive for candidates to develop and demonstrate proficiencies in the professional roles for which they are preparing and/or employed. Field Experience Supervisors • Use multiple measures and multiple assessments to evaluate candidate skills, knowledge, and professional dispositions in relation to professional and state standards. • Provide regular and continuing support for teachers and interns in conventional and distance learning programs through such processes as observation, conferencing, group discussion, email, and the use of other technology. • Are clear and known to all of the involved parties. • Are accomplished professionals who are prepared for their roles as mentors and supervisors. • Have schedules with the capacity to accommodate an intensive mentoring program.
3c. Candidates' Development and Demonstration of Knowledge, Skills, and Professional Dispositions To Help All Students Learn	Candidates: • Are assessed using multiple strategies to evaluate their performance and impact on student learning. • Have time for reflection and include feedback from peers and field experience supervisors. • Collect and analyze data on student learning, reflect on their work, and develop strategies for improving learning. • Participate in field experiences that include students with exceptionalities and students from diverse ethnic/racial, linguistic, gender, and socioeconomic groups. Field Experience Supervisors, Program and School-Based Staff: • Jointly conduct assessments of candidate performance throughout clinical practice. • Systematically examine results related to P–12 learning, using a process of continuous assessment, reflection, and action directed at supporting P–12 student learning.

Standard 4: ***Diversity***

The organization designs, implements, and evaluates curriculum and provides experiences for candidates to acquire and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates can demonstrate and apply proficiencies related to diversity. Experiences provided for candidates include working with diverse populations, including P-12 school faculty, candidates, and students in P–12 schools.

Description	Indicator
4a. Design, Implementation, and Evaluation of Curriculum and Experiences	The organization clearly articulates proficiencies related to diversity that candidates are expected to develop. Curriculum and field experiences provide a well-grounded framework for understanding diversity, including English language learners and students with exceptionalities. Candidates: • Are aware of different learning styles and adapt instruction or services appropriately for all students, including linguistically and culturally diverse students and students with exceptionalities. • Connect lessons, instruction, or services to students' experiences and cultures. • Communicate with students and families in ways that demonstrate sensitivity to cultural and gender differences. • Incorporate multiple perspectives in the subject matter being taught or services being provided. • Develop a classroom and school climate that values diversity. • Demonstrate classroom behaviors that are consistent with the ideas of fairness and the belief that all students can learn. Proficiencies related to diversity are assessed, and the data are used to provide feedback to candidates for improving their knowledge, skills, and professional dispositions for helping students from diverse populations learn.

4b. Experiences Working with Diverse Faculty	Candidates: • Interact with faculty, both male and female, from at least two ethnic/racial groups. • Work with Faculty in professional education classes and clinical practice have knowledge and experiences related to preparing candidates to work with diverse student populations, including English language learners and students with exceptionalities. Affirmation of the value of diversity is shown through good-faith efforts to increase or maintain faculty diversity.
4c. Experiences Working with Diverse Candidates	Candidates: • Engage with other male and female candidates from different socioeconomic groups, and at least two ethnic/racial groups. • Work together on committees and education projects related to education and the content areas. Affirmation of the value of diversity is shown through good-faith efforts the organization makes to increase or maintain a pool of candidates, both male and female, from diverse socioeconomic and ethnic/racial groups.
4d. Experiences Working with Diverse Students in P–12 Schools	Candidates: • Have field experiences that provide experiences with male and female P–12 students from different socioeconomic groups and at least two ethnic/racial groups. • Also work with English language learners and students with disabilities during some of their field experiences to develop and practice their knowledge, skills, and professional dispositions for working with all students. • Receive feedback from peers and supervisors to help candidates reflect on their ability to help all students learn.

Standard 5: Faculty Qualifications, Performance, and Development

Faculty are qualified and model best professional practices, including the assessment of their own effectiveness as related to candidate performance; they also collaborate with colleagues. The program systematically evaluates faculty performance and facilitates professional development.

Description	Indicator
5a. Qualified Faculty	Professional education faculty have expertise that qualifies them for their assignments. Faculty have: • Previous experience with similar educator preparation program instruction and professional development. • Appropriate educational background, relevant licenses or certifications. • Professional teaching experience in a variety of settings. • Professional teaching experience in the setting and content area directly relevant to the subject area for which candidates are being prepared. Other professional experiences that promote and reward qualities necessary for educators: working successfully with people of wide ranging skills and backgrounds; being well-prepared but also able to improvise and respond; and collaborating with others.
5b. Modeling Best Professional Practices in Teaching	Professional education faculty have a thorough understanding of the content they teach. Teaching by professional education faculty includes: • Helping candidates develop the proficiencies outlined in the state standards. • Guiding candidates in the application of research, theories, and current developments in their fields and in teaching. • Encouraging candidates' development of reflection, critical thinking, problem solving, and professional dispositions. Professional education faculty: • Value candidates' learning and assess candidate performance.

	• Use a variety of instructional strategies that reflect an understanding of different learning styles. • Integrate diversity and technology throughout their teaching. • Assess their own effectiveness as teachers, including the positive effects they have on candidates' learning and performance.
5c. Modeling Best Professional Practices in Service	Most professional education faculty: • Provide service to the broader community in ways that are consistent with the organization's mission. • Collaborate with the professional world of practice in P–12 schools and with colleagues to improve teaching, candidate learning, and the preparation of educators. • Are actively involved in professional associations or provide community or education-related services.
5d. Organization Evaluation of Professional Education Faculty Performance	The organization conducts: • Systematic and comprehensive evaluations of faculty teaching performance to enhance the competence and intellectual vitality of the professional education faculty. • Evaluations of professional education faculty are used to improve the faculty's teaching, scholarship and service.
5f. Organization Facilitation of Professional Development	Based upon needs identified in faculty evaluations, the organization provides opportunities for faculty to develop new knowledge and skills, especially as they relate to emerging practices.

Standard 6: *Organization* ***Governance and Resources***

The organization has the leadership, authority, budget, personnel, facilities, and resources, including information technology resources, for the preparation of candidates to meet professional and state standards.

Description	Indicator
6a. Organization Leadership and Authority	The organization: • Adequately plans, delivers, and operates coherent programs of study. • Effectively manages or coordinates all programs so that candidates are prepared to meet standards. Incorporates multiple perspectives in the subject matter being taught or services being provided. • Produces academic calendars, catalogs, publications, grading policies, and advertising are accurate and current.
6b. Organization Budget	The Organization ('s): • Budget supports pre-service work essential for preparation of professional educators. • Projected budgets are reasonable, consistent with similar programs, and apply realistic projections for sources and uses of funds. • Budgetary and fiscal operations are consistent with generally accepted accounting practices and employ effective internal controls. • Has a track record of solid financial performance.
6c. Personnel	The Organization ('s): • Workload policies allow faculty members to be effectively engaged in teaching, assessment, collaborative work in P–12 schools, and service. • Work together on committees and education projects related to education and the content areas. • Provides an adequate number of support personnel so that programs can prepare

	candidates to meet standards. • Provides adequate resources and opportunities for professional development of faculty.
6d. Organization's Facilities	The Organization: • Has adequate campus and school facilities to support candidates in meeting standards.
6e. Organization's Resources including Technology	The Organization: • Allocates resources across programs (where applicable) to prepare candidates to meet standards for their fields. • Has adequate information technology resources to support faculty and candidates. • Professional educational faculty and candidates have access both to sufficient and current library and curricular resources and electronic information, including resources available within surrounding community and through partners.

Appendix D1.2

DCMR Professional Education Requirements

District of Columbia Municipal Regulations (DCMR) Title 5, Chapter 16: Professional Education Requirements

Teachers, Section 1601.11: candidates for alternative preparation begin teaching under a Regular I Credential, a 2-year non-renewable credential available to candidates who:

1. have earned a bachelor's degree from an accredited institution of higher education;
2. are enrolled in a preparation program in the District of Columbia for practicing teachers approved by OSSE (such as those that meet the requirements above), or in a program approved by another state and recognized by OSSE;
3. have met qualifying scores on the Praxis I examination or another state-approved basic skills test (e.g., SAT, ACT, GRE);
4. have met qualifying scores on the Praxis II content examination or another state-approved content test in the content area of certification; and
5. are employed by a LEA in the District of Columbia (DCMR 1601.3). Once a teacher candidate has completed the teacher preparation program and has (where applicable) met qualifying scores on the Praxis II pedagogy examination or another state-approved test of pedagogy, the candidate becomes eligible for an upgrade to a four-year Regular II Teaching Credential (DCMR 1601.4), the standard license for all program completers whether traditional or alternate. All teachers who serve in DCPS are required to be licensed, while teachers in the state's public charter schools are exempt from this requirement.

Administrators, Section 1667.3: Like the teaching regulations, these regulations were also overhauled in 2008 and support alternatively prepared principals and assistant principals. To qualify for an Administrative Services Credential, a candidate must have

1. earned an advanced degree from an accredited institution of higher education or successfully completed the initial licensure requirements of a program for educational administrators approved by OSSE;
2. successfully completed two years of P-12 school-based experience, be it teaching or in the fields of counseling, social work psychological services, or rehabilitative services, or other educational leadership experience; and
3. met qualifying scores on the School Leaders Licensure Assessment

OSSE has developed policies related to objective and verifiable standards for the approval, renewal and revocation of approval for programs for all educators – including principals - in the District of Columbia.

Appendix D1.3

Alternative Preparation Programs

Teachers Enrolled in Alternative Preparation Programs by Subject Area, SY 2009-2010

Content Area	Program			
	TNTP/DCTF	Center for Inspired Teaching	Teach for America	Total
Science	12			12
English	16	6		22
Math	14		27	41
ESL	8			8
ECE	5	5	30	40
Elementary	22	8	17	47
Special Education	38		64	102
Total for SY09-10	**115**	**19**	**138** (plus 50 @ American U.)	**272**

TNTP's DC Practitioner Program (DCPTP) is the certification provider for the program's DC Teaching Fellows in all subjects except art. TNTP's pre-service institute is a mainstay of the organization's alternate certification programs. The curriculum for the institute is based on a framework called Teaching for Student Achievement (TfSA), which grew out of research on the experiences of TNTP teachers in high-need schools and the empirical research about effective classroom instruction. TNTP works with districts and states to focus on the certification of teachers for school districts' highest-need subject areas. The organization also utilizes a proprietary applicant-tracking system (TeacherTrack) to monitor new teachers' progress toward certification. Though the TNTP relationship with DC has been longstanding, with the new alternate certification approval, participants can now earn full state certification by completing TNTP's Teaching for Results content seminar series, successfully completing a year of full-time teaching and participating in DC mentorship programs.

Teach For America (TFA) recruits outstanding recent college graduates from all backgrounds and career interests to commit to teach for two years in urban and rural public schools. TFA provides the training and ongoing support necessary to ensure their success as teachers in low-income communities. The mission of TFA teachers, also called corps members, is to 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. As part of their training, TFA corps members attend a rigorous five-week summer training institute and throughout the year engage in practice, observation, coaching, and study — as well as careful planning and thoughtful reflection — in order to develop the foundational knowledge, skills, and mindsets needed to be highly effective beginning teachers. TFA has been partnering with Washington, DC, since 1992, but its corps members were formerly required to be certified through partnerships with institutions of higher education. TFA will now be able to directly

certify its DC teachers in the areas of math, early childhood education, elementary education, and special education.

Center for Inspired Teaching (CIT) is a new partner with DC as of 2009. CIT will certify teachers in the areas of: Early Childhood (PreK - 3), Elementary (1-6), and English Language Arts (7-12). The program offers a 15-month state-approved teacher certification program including, among other benefits, summer pre-service coursework, hands-on teaching experience with children, ongoing coursework and regular visits from a mentor throughout the first year of teaching.

New Leaders for New Schools (New Leaders) has trained and supported 103 school leaders in Washington, DC - in both DCPS and DC Charter Schools. A total of 72 principalships (30 Charter, 42 DCPS) and 30 assistant principalships (10 Charter, 20 DCPS) have been held by New Leaders. New Leaders for New Schools is focused on providing leaders prepared to lead in "shortage areas" for the principalship: schools in urban areas that are in significant need of improvement or are designated "turnaround" schools. The 09-10 cohort is the first to be certified through an alternate route; previously, certification was granted through a partnership with Trinity University. New Leaders prepares principals according to the characteristics of an alternative preparation program. Selective criteria include the state-required GPA and work experience minimums. New Leaders is based on a residency model, in which trainees are placed in schools to have school-based leadership experiences and mentoring by a veteran principal. Foundations is the year-long, intensive academic core of the New Leaders program, which is designed to equip residents with a comprehensive toolkit of knowledge and skills necessary to successfully lead and manage an urban public school.

Appendix D2.1

IMPACT Overview

Dear DCPS Community,

As a direct result of your diligence and commitment to excellence, DCPS has made dramatic student achievement gains over the past two years. Since 2007, our elementary students have increased 11 percentage points in reading proficiency and 20 percentage points in math. Our secondary students have also made dramatic gains: 11 percentage points in reading and 13 percentage points in math. Your collective hard work on behalf of our students has been *the* critical component in making these gains possible.

While we celebrate these achievements, we know that there is still much work to be done. Slightly more than half of our elementary children are still below grade level in both reading and math. The same is true of nearly 60% of our secondary students. We cannot rest until every child in our school system is achieving at the highest levels. As a DCPS community, we believe that we have both the power and the responsibility to overcome the obstacles that stand in the way of our success. In particular, we are motivated by a commitment to ensure that the gap in achievement that separates District of Columbia children by race, class, language of origin, and special education status is eliminated once and for all.

Research and experience tell us that the most important factor impacting our ability to close the achievement gap and increase student learning is *you*: the adults who serve our students each and every day. Recognizing the unparalleled importance of ensuring that talented and committed individuals are serving our students, we have developed IMPACT, the new DCPS effectiveness assessment system for school-based personnel.

We decided to call this new system "IMPACT" because each of you has a dramatic *impact* on the lives of the children in our nation's capital. Through IMPACT, we seek to create a culture in which DCPS school-based personnel have a clear understanding of what defines excellence in their work, are provided with constructive and data-based feedback about their performance, and receive support to increase their effectiveness.

IMPACT is the culmination of over a year's worth of research and design informed by extensive guidance and feedback from the DCPS community. Critical to the development process were over 40 question and answer sessions and over 50 focus groups that we held with school-based personnel. I want to extend my deep appreciation to the more than 500 members of the DCPS community who provided honest and thoughtful feedback in all of these sessions. Your guidance was invaluable.

Thank you again for your commitment to the children of the District of Columbia. You are the most important element of our reform agenda and the key to closing the achievement gap in the nation's capital. Please know that I am humbled by the work you do each and every day on behalf of our students.

Sincerely,
Michelle Rhee
Chancellor, District of Columbia Public Schools

Putting Growth First

How does IMPACT support my growth?
The primary purpose of IMPACT is to help you increase your effectiveness so that, as a system, we can dramatically increase student learning. IMPACT does this in three important ways.

- Clear Expectations — First and foremost, IMPACT attempts to outline clear performance expectations. We have worked very closely with teachers and other school-based personnel over the past year to draft clear rubrics for each of your IMPACT components. We wanted to ensure that performance expectations were transparent. As many of you voiced in the focus groups we held on the new assessment system: "Please tell me exactly what you expect."
- Clear Feedback — We also wanted you to have clear feedback about your performance. Towards that end, IMPACT does three things. First, as you will see in this guidebook, IMPACT has multiple assessment "cycles" over the course of the year, thereby providing multiple opportunities for feedback. Second, IMPACT calls for in-person assessment conferences as part of each cycle. And third, IMPACT is web-based. You will be able to log into the system at any time to review your ratings as well as written feedback about your performance.
- Clear Growth Plans — Finally, we felt it was important for all school-based personnel at all levels of experience and expertise to receive guidance on how to increase their effectiveness. Thus, as part of IMPACT, everyone will have a growth plan. The growth plan, initiated after the first assessment cycle, will outline key strengths and key growth areas as well as next steps for professional development.

What are the school system's plans for professional development?
Professional development is vital to our collective success. We want our schools to be true learning environments, for children and adults alike. This is why we are working aggressively to provide you with the highest quality support.

To start, over the past two years, we have increased spending on professional development by over 400%. But it is how we are using these funds that matters the most. We are investing in what the research tells us actually works: rigorous, job-embedded supports that help you address the unique challenges that you face. In short, we are moving aggressively away from the one-size-fits-all "seat hour" model towards the differentiated "practicum" model.

We know we still have far more work to do in this area, but are excited about the changes that we are already beginning to see in schools across the city. We ask for your continued participation in this reform effort. Getting professional development right is key to our goal of becoming one of the highest-performing school systems in America.

Group 1: Overview

Who is in Group 1?
Group 1 consists of all General Education Teachers for whom we can generate "value-added" data. Value-added is a sophisticated statistical measure of your impact on your students' achievement. To generate value-added data, we need both "before" and "after" DC CAS scores for your students. In other words, we need scores from before they entered your class as well as scores from after they spent a year learning with you.

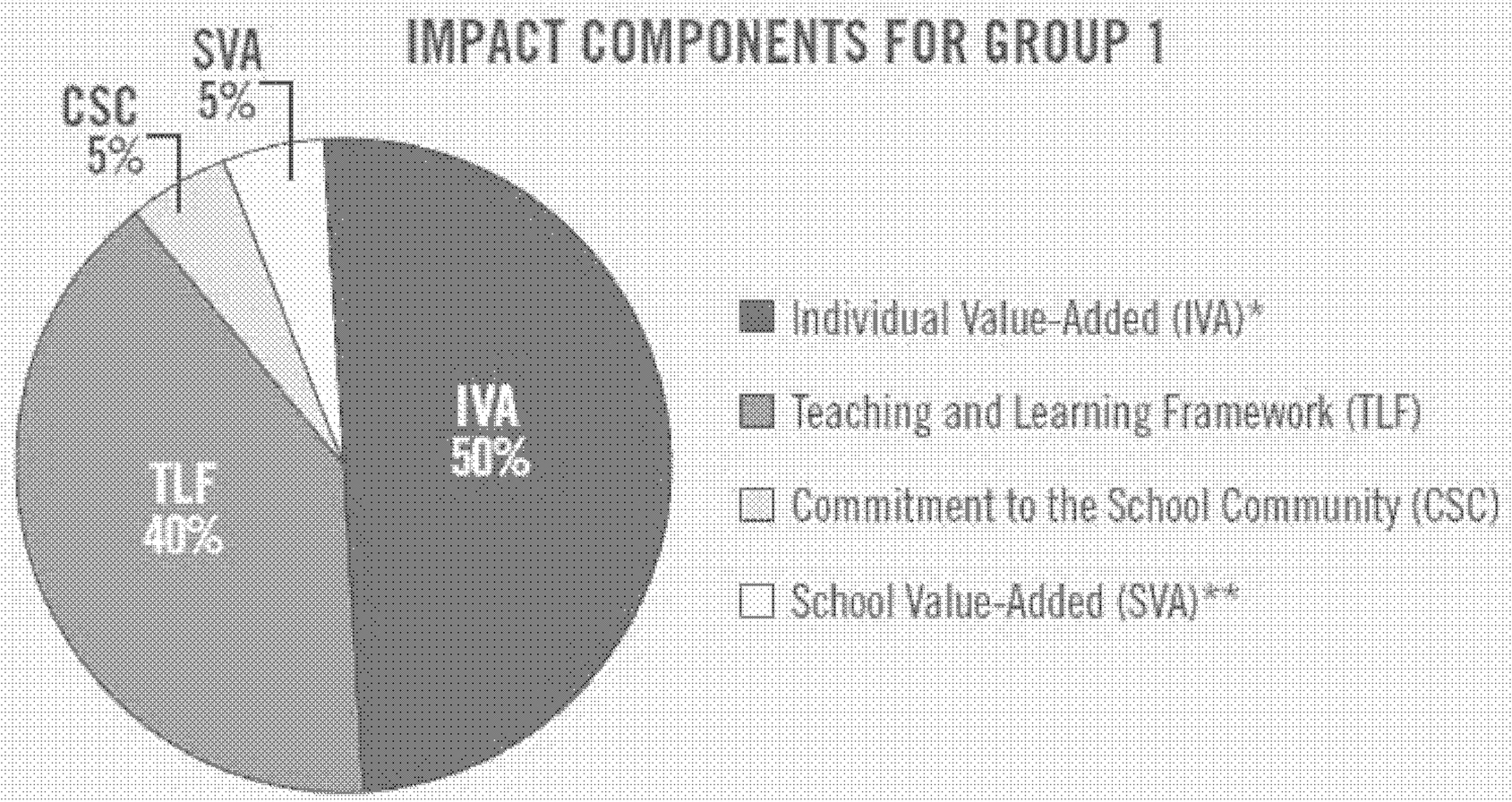
The only teachers in DCPS for whom we have both "before" and "after" DC CAS data are those who teach English or math in grades four through eight.

Even though we administer the DC CAS in the third and tenth grades, we cannot calculate value added data for teachers of these grades. This is because we have no "before" data for their students, as we do not test at the end of second grade or at the end of ninth grade.

Will DCPS be adding additional grades and subjects to the DC CAS to move more teachers into Group 1?
Yes. Over the next few years, we will be implementing developmentally appropriate standardized assessments for students in kindergarten, first grade, and second grade. We will also be adding end-of-course exams for secondary English, math, science, and social studies. As these assessments are rolled out, more teachers will be moved into Group 1.

What are the IMPACT components for members of Group 1?
There are five IMPACT components for members of Group 1. Each is explained in greater detail in the following sections of this guidebook.

- Individual Value-Added (IVA) — This is a sophisticated statistical measure of your impact on your students' achievement, as measured by the DC CAS. This component makes up 50% of your IMPACT score.
- Teaching and Learning Framework (TLF) — This is a measure of your instructional expertise. This component makes up 40% of your IMPACT score.
- Commitment to the School Community (CSC) — This is a measure of the extent to which you support your colleagues and your school's local initiatives. This component makes up 5% of your IMPACT score.
- School Value-Added (SVA) — This is a sophisticated statistical measure of your school's impact on student achievement, as measured by the DC CAS. This component makes up 5% of your IMPACT score.
- Core Professionalism (CP) — This is a measure of four basic professional requirements for all school-based personnel. This component is scored differently from the others, which is why it is not represented in the pie chart. For more information, please see the Core Professionalism section of this guidebook.



**If, for unanticipated technical reasons, Individual Value-Added (IVA) data cannot be generated for your class, you will be assessed as if you were part of Group 2.*

***If, for unanticipated technical reasons, School Value-Added (SVA) data cannot be generated for your school, the Commitment to the School Community component will expand to absorb the SVA portion of the pie.*

Individual Value Added (IVA)

What is value-added?
Value-added is a sophisticated statistical measure of how much you impact your students' learning over the course of the year. In DCPS, value-added is based on the DC CAS.

Is value-added the same as Adequate Yearly Progress (AYP)?
No. Adequate Yearly Progress is an "attainment" measure, meaning it is an absolute target that is required of all students, regardless of their current proficiency.

Value-added, on the other hand, is a "growth" measure. It is based on the gains that your students make, not whether they surpass an absolute target.

How does value-added work?
To explain value-added, it might be helpful to consider the following hypothetical scenario. Consider Teacher A, a seventh grade math teacher. Suppose that 50% of Teacher A's students were proficient on the math portion of the DC CAS at the end of sixth grade (before they entered Teacher A's class). Now suppose that 60% were proficient at the end of seventh grade (after they had spent a year in Teacher A's class). The change in proficiency for Teacher A's students would be 10 percentage points (50% to 60%).

Now let us consider Teacher B, another seventh grade math teacher. Just like Teacher A's students, suppose that 50% of Teacher B's students were proficient in math at the end of sixth grade (before they entered Teacher B's class). But let us suppose that 65% were proficient at the end of seventh grade (after they had spent a year in Teacher B's class). The change in proficiency for Teacher B's students would be 15 percentage points (50% to 65%).

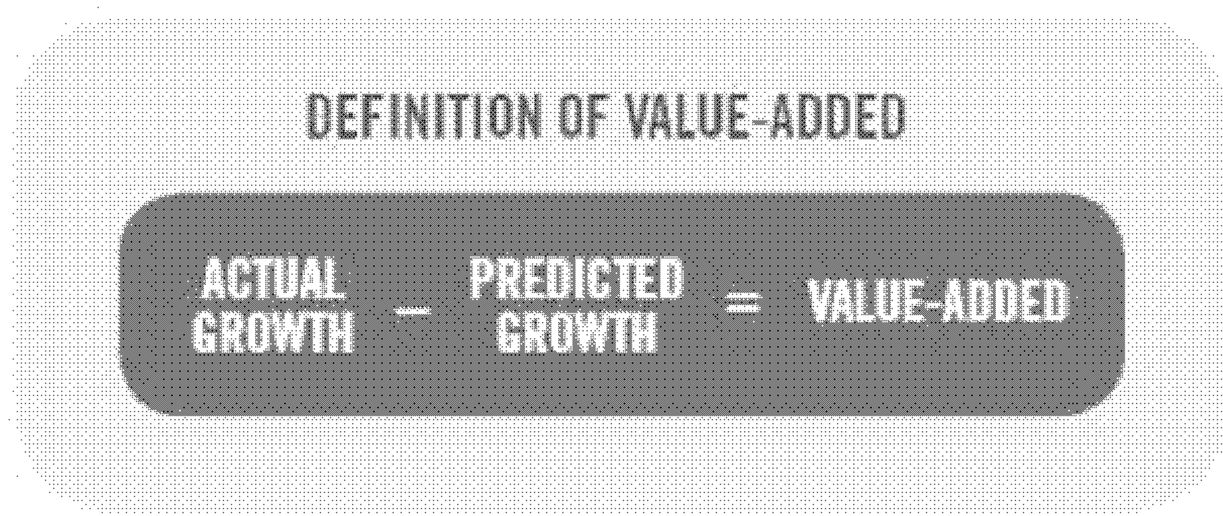
Which teacher was more successful? Teacher B's students grew more so we might be inclined to say that s/he was the more successful educator.

But what if *none* of Teacher B's students qualified for free or reduced price lunch, received special education services, or were English Language Learners? And what if *all* of Teacher A's students qualified for free or reduced price lunch, received special education services, and were English Language Learners?

Value-added attempts to address this complicated scenario by "controlling for," or taking into account, certain data about your students (e.g., the percentage who qualify for free or reduced price lunch). It does this by creating a "predicted growth" for each class of students. Each growth prediction is different as it depends on the characteristics of your own students.

To determine value-added, the predicted growth is compared against your students' "actual growth." The actual growth is simply how much they *actually* gained from one year to the next on the DC CAS. The difference between the predicted growth and the actual growth is the value-

added measurement. High value-added teachers are those whose students' actual growth exceeds their predicted growth.*



*As explained in the following pages, value-added is based on students' scale scores, not their proficiency levels. The example above is for illustrative purposes only.

How is the predicted growth calculated?
To explain the predicted growth, we first need to discuss two different kinds of information that are related to student learning.

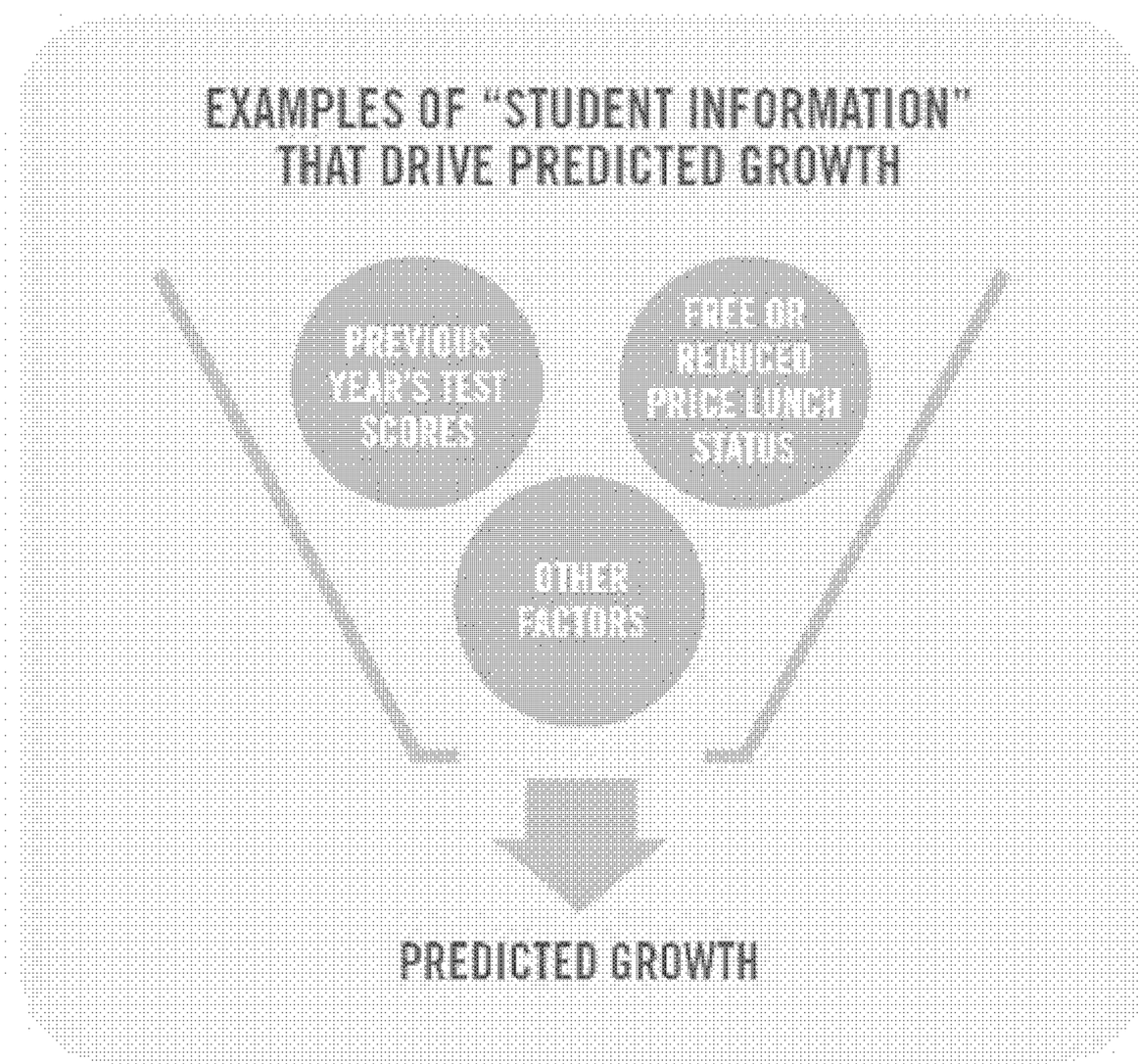
Let us call the first type of information "Student Information." This refers to measurable characteristics of your students that, on average, are related to student learning, but that you do not directly control as a classroom teacher. Included in this category are your students' test scores from the previous year, their free or reduced price lunch status, their special education status, their English Language Learner status, and other similar factors.

The second type of information, "Teacher Information," refers to all the things that are related to student learning that you do directly control as a classroom teacher. Included in this category are your instructional expertise, the rigor of your lessons, the expectations you set for your students, the degree to which you communicate with your students' families about your instruction, and other related factors.

"STUDENT INFORMATION" VS. "TEACHER INFORMATION"

EXAMPLES OF "STUDENT INFORMATION"	EXAMPLES OF "TEACHER INFORMATION"
■ Previous Year's Test Scores ■ Free or Reduced Price Lunch Status ■ Special Education Status ■ English Language Learner Status	■ Instructional Expertise ■ Rigor of Lessons ■ Ambitiousness of Expectations for Student Learning ■ Extent of Efforts to Communicate with Students' Families

The predicted growth for your students is calculated based on their "Student Information." At the end of the year, we calculate the average performance of students whose "Student Information" is just like that of the young people in your own class. That average is the predicted growth.



Let us suppose, for example, that you teach fifth grade and that you have 25 students. Suppose that 40% of your students were proficient on the DC CAS last spring, that 80% qualify for free or reduced price lunch, that 25% receive special education services, and that 10% receive English Language Learner services.

Based on the DC CAS data from all of the students in the school system, we can calculate what the average performance was that year for a class composed of students just like yours. That is what we call the predicted growth. It is how we would predict your class to perform with the average teacher based on its "Student Information" alone.

How is the actual growth calculated?
The actual growth for your students is calculated by comparing their *actual* scores from the end of last year with their *actual* scores from the end of the current year. Let us suppose that, on average, your students exceeded their predicted growth. Your students likely did so because of your impact as their teacher. This is the "Teacher Information" that we discussed above.

If your students exceeded the predicted growth, you likely provided exceptional instruction, had incredibly rigorous lessons, set the highest of expectations, and went above and beyond to communicate with your students' families. In short, the "value you added" was substantial and led to growth that was higher than what was predicted, on average, for your students.

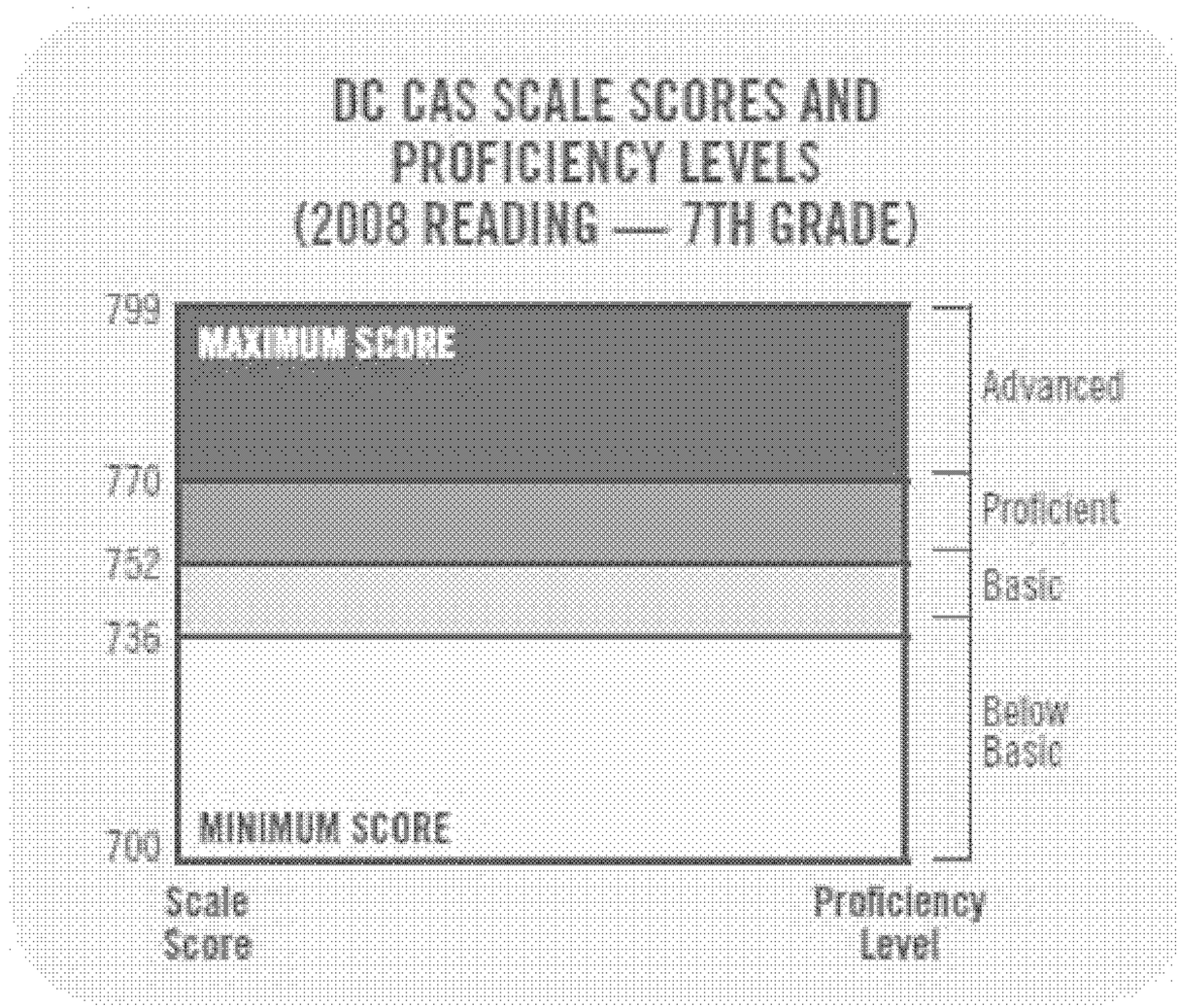
So how exactly does this work with the DC CAS?
Before going any further, it might be helpful to clarify a few points about the DC CAS. First, it is important to note the difference between "proficiency level" and "scale score." The proficiency levels on the DC CAS are Below Basic, Basic, Proficient, and Advanced. They are derived from the scale score.

Each grade has a scale score with a 100-point range. For example, the fourth grade scale score begins at 400 and ends at 499; the fifth grade scale score begins at 500 and ends at 599; and so on.

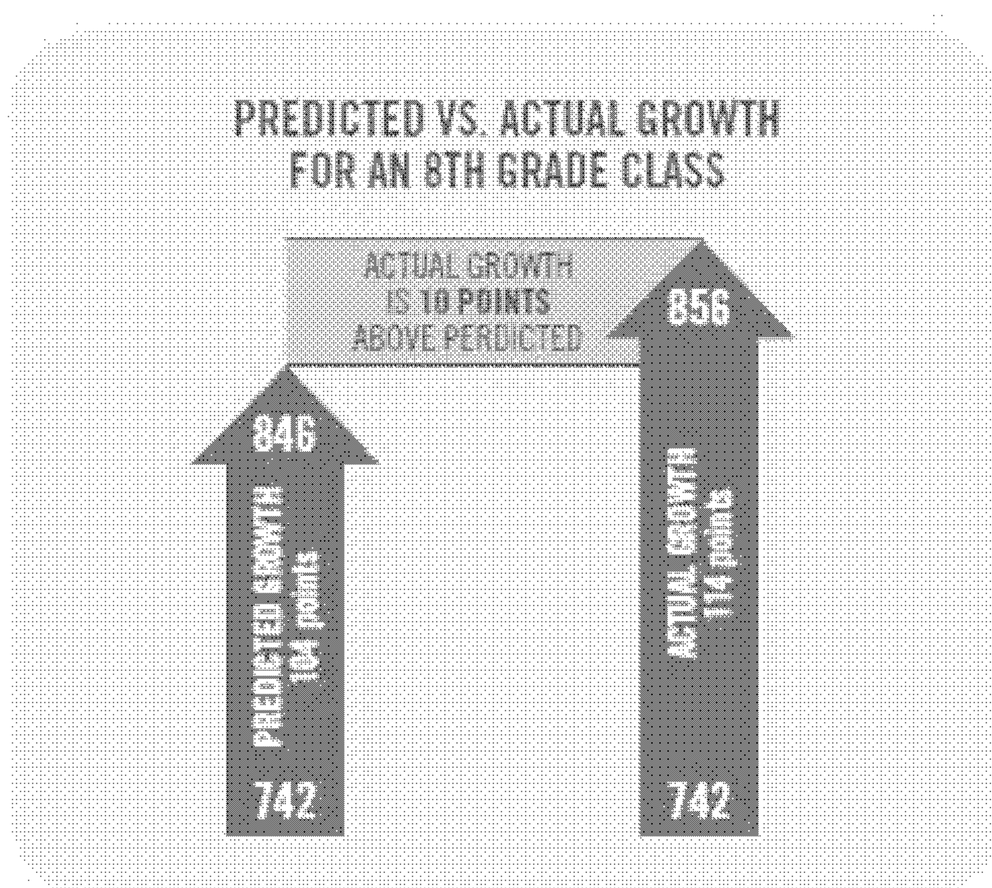
DC CAS SCALE SCORE RANGES

GRADE	MINIMUM SCALE SCORE	MAXIMUM SCALE SCORE
4	400	499
5	500	599
6	600	699
7	700	799
8	800	899

As noted above, the proficiency levels are created from the scale score. For example, in 2008, Below Basic in seventh grade reading was a scale score between 700 and 736. Basic was a scale score between 736 and 752, and so on. To determine value-added, we use the scale score, not the proficiency level.



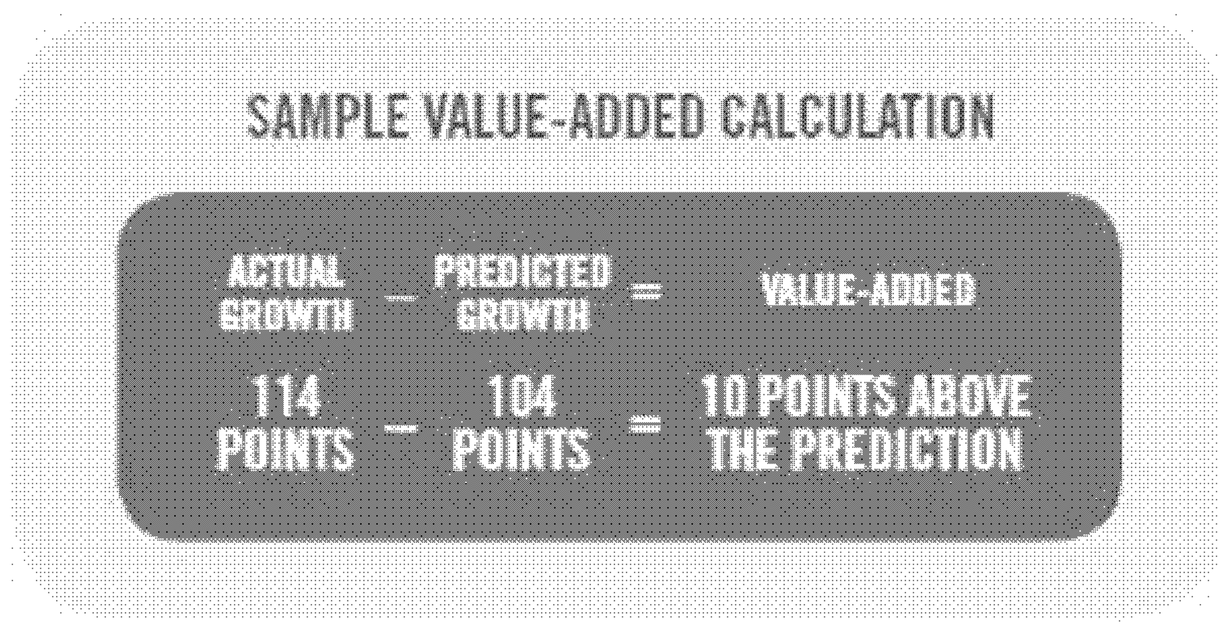
Now let us return to how we calculate a value-added score. Recall that we do so by comparing a class's average predicted growth with its average actual growth. Take a look at the example below for an eighth grade math teacher.



At the end of seventh grade (before these students entered this teacher's class), the class average was 742 points (on a scale of 700–799). The predicted growth (left arrow) for this class was 104 points, which would place it at 846 points (on a scale of 800 to 899) by the end of eighth grade.

The class's actual growth (right arrow) was 114 points, which actually placed the class at 856 points (on a scale of 800–899) at the end of eighth grade.

If we subtract the predicted growth (104 points) from the actual growth (114 points) we arrive at the teacher's value added: 10 points above the prediction.



Why are the proficiency levels not used in value-added?
The proficiency levels do not provide enough detail about a student's performance. A student could grow significantly, from 700 to 736 in scale score points, for example, but still be in the Below Basic category. We want to be more precise in assessing your impact on student performance. Using the scale scores to calculate value-added helps us do that.

What is a "good" value-added score?
We want to see value-added scores that are above the prediction. Such scores indicate teachers who are, on average, helping their students "beat the odds." From the school system's perspective, the value-added score of the hypothetical eighth grade math teacher we have been discussing (10 points above the prediction) is quite respectable.

Appendix D2.2

Questions for Growth Measure Task Force

Sample Questions for Growth Measure Task Force

- Is the student growth measure formula used in DCPS' IMPACT approach appropriate for charter schools?
- Who will do the calculation of charter growth?
    - Will OSSE support DCPS in building out its own infrastructure to include charters (so as not to reinvent the wheel?)
    - Will OSSE build capacity in-house to do the calculation for everyone? For charters only?
- Experts in the field note that roster validation is one of the most cumbersome components of using student growth data to inform teacher evaluation, because it is critical to ensure that teachers are evaluated based on students they actually taught.
    - As DC coordinates its approach across sectors, who will support the roster validation process?
- What will the denominator be for DCPS teachers, if charters are included in the calculation?
    - Will the consequences of IMPACT scores for DCPS teachers (see below) be based on their relation to all teachers in DC or just the teachers in DCPS?

Appendix D5.1

PLaCEs Impact

Summary of Four-Year Impact for Professional Learning Communities of Effectiveness (PLaCEs)

Specific Information for Each Year						
Year 1, SY 2010-2011	Power of Planning	DC Collaborative for Change	Project A	Project B	Project C	TOTAL
Number of Schools Participating	3	10				13
Number of School and Teacher Leaders Participating	30	100				130
Number of Teachers Participating	90	200				290
Number of Students Impacted	1200	2500				3700
Year 2, SY 2011-2012	POP	DC3	Project A	Project B	Project C	
Number of Schools Participating	6	10	5	5	5	31
Number of School and Teacher Leaders Participating	60	100	50	50	50	310
Number of Teachers Participating	180	200	100	100	100	680
Number of Students Impacted	2400	2500	1250	1250	1250	8650
Year 3, SY 2012-2013	POP	DC3	Project A	Project B	Project C	
Number of Schools Participating	9	10	5	5	5	34
Number of School and Teacher Leaders Participating	90	100	50	50	50	340
Number of Teachers Participating	270	200	100	100	100	770
Number of Students Impacted	3600	2500	1250	1250	1250	9850
Year 4, SY 2013-2014	POP	DC3	Project A	Project B	Project C	
Number of Schools Participating	9	10	5	5	5	34
Number of School and Teacher Leaders Participating	90	100	50	50	50	340
Number of Teachers Participating	270	200	100	100	100	770
Number of Students Impacted	3600	2500	1250	1250	1250	9850

Appendix E1.1

PCSB Letter of Support

DISTRICT OF COLUMBIA
PUBLIC CHARTER SCHOOL BOARD

January 13, 2010

Superintendent Kerri Briggs
Office of the State Superintendent of Education
Government of the District of Columbia
One Judiciary Square
441 4th Street NW
Suite 350N
Washington, DC 20001

Dear Superintendent Briggs,

On behalf of the DC Public Charter School Board (PCSB), I am pleased to express our support for the District of Columbia's Race to the Top Fund application. The application reflects support for the bold reforms currently underway in DC, including those within the charter school sector, which is working to provide students and parents across the city with quality public school options. The application also reflects the spirit of collaboration and innovation that has reinvigorated our reform efforts in the District, and I am pleased to have your commitment that we will continue down this path going forward.

As you know, the PCSB is committed to ensuring school quality. Our new Performance Management Framework ensures a process for holding accountable charter schools that do not meet a rigorous bar for quality in terms of academic and non-academic results for students. Consistent with our Framework, we will implement a plan for closure of any charter school on the list of "persistently lowest-achieving schools," as defined in the District's Race to the Top application.

In order to identify the schools that are persistently lowest-achieving, we will work with you and your office to review the criteria and to ensure that the appropriate definition and methodology are in place. We are committed to meeting the goals of turnaround in the Race to the Top application, and welcome the partnership with the Office of the State Superintendent in this endeavor.

The Public Charter School Board is pleased to be a part of the effort to transition DC to a system of high-achieving schools.

Sincerely,

(b)(6)

Thomas A. Nida
Board Chair

3333 14th St., NW • Suite 210 • Washington, DC 20010 • Office 202-328-2660 • Fax 202-328-2661 • www.dcpubliccharter.com

Appendix E2.1

School Ranking Formula

Definition of Persistently Lowest-Achieving Schools

December 17, 2009

Issue

What criteria should the District of Columbia use to identify the persistently lowest-achieving schools, which are then singled out for significant reform (e.g., turnaround, closure, re-start, or transformation)?

Background

The Race to the Top, State Fiscal Stabilization Fund, and School Improvement Grant applications released by the U.S. Department of Education (USDE) all require the state to define the "persistently lowest-achieving schools." The applications use the following definition:

> Persistently lowest-achieving schools means, as determined by the state:
>
> (i) Any Title I school in improvement, corrective action, or restructuring that
>
> (a) Is among the lowest-achieving five percent of Title I schools in improvement, corrective action, or restructuring or the lowest-achieving five Title I schools in improvement, corrective action, or restructuring in the State, whichever number of schools is greater; or
>
> (b) Is a high school that has had a graduation rate as defined in 34 CFR 200.19(b) that is less than 60 percent over a number of years; and
>
> (ii) Any secondary school that is eligible for, but does not receive, Title I funds that
>
> (a) Is among the lowest-achieving five percent of secondary schools or the lowest-achieving five secondary schools in the State that are eligible for, but do not receive, Title I funds, whichever number of schools is greater; or
>
> (b) Is a high school that has had a graduation rate as defined in 34 CFR 200.19(b) that is less than 60 percent over a number of years.
>
> To identify the lowest-achieving schools, a state must take into account both
>
> (i) The academic achievement of the "all students" group in a school in terms of proficiency on the state's assessments under section 1111(b)(3) of the ESEA in reading/language arts and mathematics combined; and
>
> (ii) The school's lack of progress on those assessments over a number of years in the "all students" group.

There is only one secondary school in the District of Columbia that is eligible for but does not receive Title I funds (Roots PCS – in improvement year 1).

There are 173 Title I schools in the District of Columbia; 133 are identified for improvement. Five percent of all Title I schools identified for improvement is 7 schools. In the District of Columbia, 38 schools are implementing restructuring and 21 schools are planning for restructuring this year, (44 percent of all Title I schools identified for improvement).

Definition

The District needs to identify two types of schools:

- Schools with graduation rates below 60 percent over a number of years. There are 3 high schools (Anacostia, Eastern, and Luke Moore) with graduation rates below 60 percent in each of the past two years.
- The lowest-achieving five percent of Title I schools identified for improvement. To determine this group, the state should consider using only statewide criteria and making the definition clear and transparent.

A definition of persistently low achieving should include:

- The number of years the school has not made AYP.
- The overall growth in achievement in the school.
- The overall achievement level of the school, separate and apart from whether the school is improving achievement.

1. Improvement status. This measure assigns points based on the current year's improvement status.
   - This has the heaviest weight (50 points) because the measure incorporates a factor of persistence. For example, schools in restructuring have missed AYP for six years.
   - Schools receive:
     - 10 points if they are in improvement year 1;
     - 20 points if they are in improvement year 2;
     - 30 points if they are corrective action;
     - 40 points if they are in restructuring planning; or
     - 50 points if they are in restructuring implementation.
2. Overall growth. This measures the progress schools have made increasing their percentage of students scoring proficient or above.
   - This measure assigns points based on the change in the percentage of students scoring proficient or above on the DC CAS in the school overall from 2007 to 2009.
   - Schools receive 10 points each for reading and mathematics if there is a decrease from 2007 to 2009.
3. Distance from the AMO. This measure combines the overall low percentage of proficiency with a persistence factor.
   - Points are assigned based on the distance between the percentage of students scoring proficient or above and the annual measurable objective (AMO) used for AYP determinations. Schools are flagged if the percentage of students proficient or above is less than half the AMO.
   - Schools receive 5 points each for reading and mathematics if the percentage proficient is less than half the AMO for two consecutive years and 10 points for reading and mathematics if the percentage is less than half the AMO for three consecutive years.

Points would be given to schools based on their achievement in each of the categories. The persistently lowest achieving schools will have higher scores. OSSE would annually publish a ranking of all schools in the District of Columbia based on this scale.

If schools have identical point totals, the schools will be sorted based on the combination of the percentage of students scoring proficient and above in reading and mathematics in the most recent school year. For example, Prospect ranks above Bancroft because it had 4 percent proficient in reading and 3 percent proficient in mathematics in 2009 (7.6 percent total), compared with 38 and 47 percent, respectively, in Bancroft (85 percent total).

Appendix E2.2

History of School Turnarounds

School	Year of Turnaround	Turnaround Model
Eliot	2008	Turnaround
Shaw	2008	Turnaround
Stanton	2008	Turnaround
Truesdell	2008	Turnaround
Wheatley	2008	Turnaround
Hart	2009	Turnaround
MacFarland	2009	Turnaround
Oak Hill	2007	Restart
Anacostia	2009	Restart
Coolidge	2009	Restart
Dunbar	2009	Restart
Fletcher Johnson	2006	Closure
McGogney	2006	Closure
R.H. Terrell	2006	Closure
Shadd	2006	Closure
Van Ness	2006	Closure
Adams	2007	Closure
Backus ES	2008	Closure
Benning ES	2008	Closure
Bowen ES	2008	Closure
Browne Center	2008	Closure
Bunker Hill ES	2008	Closure
Clark ES	2008	Closure
Douglass Transition Academy	2008	Closure
Gage-Eckington ES	2008	Closure
Garnet- Patterson MS	2008	Closure
Gibbs ES	2008	Closure
Green ES	2008	Closure
Hine JHS	2008	Closure
J.F. Cook ES	2008	Closure
Merritt MS	2008	Closure
Meyer ES	2008	Closure
MM Washington Center	2008	Closure
MM Washington HS	2008	Closure
Moten Center	2008	Closure
P.R. Harris ES	2008	Closure
Park View ES	2008	Closure
Rudolph ES	2008	Closure
Slowe ES	2008	Closure
Spingarn Center	2008	Closure
Stevens ES	2008	Closure
Taft Center	2008	Closure
Wilkinson ES	2008	Closure
Young ES	2008	Closure

Birney ES	2009	Closure
Draper ES	2009	Closure
Colin L Powell	2006	Closure-charter
Jos-Arz	2006	Closure-charter
New School for Enterprise and Development	2006	Closure-charter
Sasha Bruce	2006	Closure-charter
Hope Academy	2007	Closure-charter
Colin Powell International	2008	Closure-charter
Tri-Community (Wm E Dorr)	2008	Closure-charter
Washington Academy	2008	Closure-charter
Academia Bilingue de la Comunidad (ABC) PCS	2009	Closure-charter
Barbara Jordan PCS	2009	Closure-charter
CityLights	2009	Closure-charter
MEI Futures	2009	Closure-charter
Ballou	2008	Transformation
Cardozo	2008	Transformation
Francis	2008	Transformation
Jefferson	2008	Transformation
Roosevelt	2008	Transformation
Sousa	2008	Transformation
Walker-Jones	2008	Transformation
Wilson	2008	Transformation
Bancroft	2009	Transformation
Garfield	2009	Transformation
Johnson	2009	Transformation
Kelly Miller	2009	Transformation
Spingarn	2009	Transformation
Total Schools Turned Around (04-05 to 09-10)	**71**	

Appendix F1.1

DC Cluster-Level Funding

DC BUDGET BY MAJOR FUNDING CATEGORY			
	FY08	**FY09**	
Education[1]	1,284,308,000	1,401,649,000	
Health and Human Services	1,541,417,000	1,598,864,000	
Government Direction and Support	337,173,000	361,397,000	
Public Works	409,248,000	451,135,000	
Public Safety	963,108,000	956,087,000	
Economic Development	241,755,000	269,075,000	
Financing and Other	990,832,000	925,884,000	
TOTAL	5,767,841,000	5,964,091,000	
EDUCATION BUDGET BREAKOUT[2]	**FY08**	**FY09**	
Elementary and Secondary	801,808,655	855,204,181	
Higher Education	62,569,786	62,070,000	
	14.99%	**15.38%**	
FUNDING PER STUDENT BY SUBGROUP DCPS	**FY07**	**FY08**	**FY09**
SPED	83884000 for 7825 students	76626000 for 7019 students	77,640,643 for 7019 students
ELLL	12547000 for 3920 students	13,169,000 for 3956 students	13,877,211 for 3508 students
FUNDING PER STUDENT BY SUBGROUP CHARTERS	**FY07**	**FY08**	**FY09**
SPED	25,904,347 for 2707 students	28,616,973 for 2819 students	29,297,479 for 2819 students
ELL	4,183,477 for 3201 students	5,903,115 for 1530 students	4,953,141 for 1412 students

1 Education Cluster includes Libraries, Office of Public Education Facilities Modernization, Non-Public Tuition, Special Education Transportation
Public Charter School Board, Teachers' Reitrement System, DC Public Schools, and DC Charter Schools

2 Local Funds for LEAs (DCPS plus DC Charter Schools)

Appendix F1.2

USPFF Allocation Chart

District of Columbia Public Schools FY 2010 Approved Budget
Per Pupil Funding Allocation Analysis
Uniform Per Student Funding Formula (D.C. Official Code § 38-29) & Local Funds Appropriations

UPSFF Foundation Level: $8,770 / student

	Weighting Factor	FY 2010 Budgeted Enrollment	Per Pupil Allocation (Rounded)		Total Budget (Rounded)
General Education					
Pre-School	1.34	1,519	$11,752	$	17,851,288
Pre-Kindergarten	1.30	2,494	$11,401	$	28,500,894
Kindergarten	1.30	3,537	$11,401	$	38,045,137
Grades 1-3	1.00	10,654	$8,770	$	93,419,380
Grades 4-5	1.00	6,389	$8,770	$	55,978,010
Ungraded Elementary	1.00	-	$8,770	$	-
Grades 6-8	1.03	7,192	$9,033	$	64,694,016
Ungraded Middle/Jr. High School	1.03	-	$9,033	$	-
Grades 9-12	1.16	11,595	$10,173	$	117,955,935
Ungraded Sr. High School	1.16	38	$10,173	$	386,579
Alternative	1.17	999	$10,261	$	10,299,695
Special Education Schools	1.17	141	$10,261	$	1,446,801
Adult/Other	0.73	-	$6,378	$	-
Subtotal for General Education				**$**	**428,348,030**
Total Budgeted Student Enrollment		**44,308**			
Special Education Add-On					
Level 1	0.52	1,346	$4,560	$	6,131,460
Level 2	0.79	2,116	$6,928	$	14,659,648
Level 3	1.56	696	$13,681	$	9,521,976
Level 4	2.83	1,666	$24,819	$	41,368,454
Subtotal for Special Education		**5,824**		**$**	**71,681,518**
Other Add-On Categories					
English Language Learner	0.45	4,272	$3,947	$	16,861,584
Summer School	0.17	3,572	$1,491	$	8,753,152
Summer School Special Education		-		$	853,414
Subtotal for Other Categories				**$**	**26,469,150**
Total UPSFF Funding				**$**	**526,498,698**

For FY 2010, the Uniform Per Student Funding in the District of Columbia Public Schools agency budget is provided through two sources: $510,000,511 from Local funds, and $39,498,416 in Intra-District funds via the Office of the State Superintendent of Education, representing State Fiscal Stabilization grant funds received by the District under provisions of Public Law 111-5, the American Recovery & Reinvestment Act of 2009. Refer to Table 5.

Additional FY 2010 DCPS Local Funds Adjustments:

Net effect of State Fiscal Stabilization grant funds under the provisions of Public Law 111-5, the ARRA and Local funds changes detailed on Table 5.	**$**	**23,678,429**
Total FY 2010 DCPS Local Education Agency Budget	**$**	**550,177,127**

Note: Totals may not add up due to rounding.

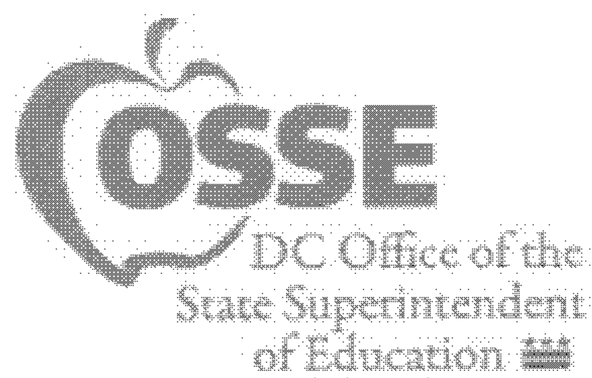
District of Columbia All Public Charter Schools FY 2010 Approved Budget
Per Pupil Funding Allocation Analysis (D.C. Official Code § 38-29)
TOTAL FOR 59 SCHOOLS

UPSFF Foundation Level: $8,770 / student

Grade Level	Total Budgeted Weighted	Total Budgeted Enrollment	FY 2010 Total Budgeted Enrollment	Per Pupil Allocation	Total Funding Dollars
Pre-School	1.34	1,296	1,296	$ 11,752	$ 15,112,815
Pre-Kindergarten	1.30	2,059	2,059	$ 11,401	$ 23,474,659
Kindergarten	1.30	1,854	1,854	$ 11,401	$ 21,583,494
Grades 1-3	1.00	4,869	4,869	$ 8,770	$ 42,701,130
Grades 4-5	1.00	3,094	3,094	$ 8,770	$ 27,046,880
Ungraded Elementary School	1.00	-	-	$ 8,770	$ -
Grades 6 -8	1.03	6,897	6,897	$ 9,033	$ 62,301,291
Ungraded Middle/Jr. High School	1.03	-	-	$ 9,033	$ -
Grades 9 -12	1.16	5,465	5,465	$ 10,173	$ 55,586,536
Ungraded Sr. High School	1.16	-	-	$ 10,173	$ -
Alternative	1.17	423	423	$ 10,261	$ 4,340,381
Special Education Schools	1.17	225	225	$ 10,261	$ 2,308,703
Adult-Other	0.75	1,865	1,865	$ 8,578	$ 12,367,038
Subtotal General Education		28,067	28,067		$ 268,742,707
Special Education Add-On					
Level 1	0.52	857	857	$ 4,560	$ 4,364,303
Level 2	0.79	1,038	1,038	$ 6,928	$ 7,191,575
Level 3	1.50	439	439	$ 13,661	$ 6,000,047
Level 4	2.83	543	543	$ 24,819	$ 13,478,771
Subtotal for Special Education		2,977	2,977		$ 31,038,696
Other Add-On					
English Language Learner	0.45	1,791	1,791	$ 3,947	$ 7,069,207
Special Education-Residential Add-On					
Level 1 Residential	0.374	6	6	$ 3,280	$ 19,690
Level 2 Residential	1.360	22	22	$ 11,827	$ 262,388
Level 3 Residential	2.941	16	16	$ 25,793	$ 412,681
Level 4 Residential	2.924	-	-	$ 25,843	$ -
Level 5 Residential	9.40	-	-	$ 82,438	$ -
Subtotal for Special Ed Residential		44	44		$ 694,759
English Language Learner Residential Add-On					
ELL Residential	0.68	0	0	$ 5,864	$ -
Residential Room & Board Add-On					
Residential	1.70	387	387	$ 14,909	$ 5,769,743
Summer School	0.17	4,363	4,363	$ 1,491	$ 6,504,797
Total FY 2010 Instructional Dollars					$ 317,810,949
American Recovery and Reinvestment Act					$ 7,385,008
Facilities Allotment:					
Non-Residential Facilities Allotment		27,680	27,680	$ 2,800	$ 77,504,000
Residential Facilities Allotment		387	387	$ 8,395	$ 3,248,865
			Total FY 2010 Facilities Allotment		$ 80,752,865
			Total FY 2010 Budget		$ 485,957,822

The FY 2010 proposed budget funds the Uniform Per Student Formula allocation for the District of Columbia Public Charter Schools from three sources: $373,968,702 from Local Funds, and in Intra-District Funds transferred from the Office of the State Superintendent of Education, $7,385,008 for Special Education grants under IDEA and $24,604,112 in State Fiscal Stabilization Funding, representing funding pursuant to the American Recovery and Reinvestment Act of 2009, Public Law 111-5.

Note: Numbers may not add up due to rounding



January 19, 2010

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

Dear Secretary Duncan:

It is with great excitement that I submit to you the District of Columbia's application for the U.S. Department of Education Race to the Top (RTTT) grant competition. I believe our proposal meets the challenges you set forth in announcing RTTT. It builds on the reforms that have been in place since Mayoral takeover of the schools in 2007 and incorporates the innovative approaches designed by our vast network of charter schools. While we are pleased with the results we have seen in the past two years, an RTTT grant award will help us take the next steps to cement the progress to date, eliminate the achievement gap, improve the quality of the teacher workforce, and ensure every child graduates from a District of Columbia school ready for postsecondary education or the workforce.

With those goals in mind, our application was developed with broad stakeholder input. The Office of the State Superintendent of Education (OSSE) worked closely with members from District of Columbia Public Schools and charter school local education agencies to determine the proposals laid out in this application. They reflect the work occurring throughout the city and the spirit of collaboration that will be necessary to meet the ambitious goals you have set for this program.

The District's small size, compact geography, support from the majority of its LEAs, and clear commitment to reform in the past two years indicate our strong city-wide commitment to this application and the goals of the RTTT program. I look forward to the Department's consideration of OSSE's RTTT application. I am excited about the potential RTTT presents and appreciate your support for strong education reform.

Sincerely,

Kerri L. Briggs, Ph.D.
State Superintendent of Education

One Judiciary Square, 441 4th Street, NW Suite 350 North, Washington, DC 20001
Phone: 202.727.6436 ◆ Fax: 202.727.2019 ◆ www.osse.dc.gov